Global Ecology and Biogeography

A
Mac

Sylvan Seeds, a database and shiny app to explore the seed germination ecology of the temperate broadleaf and mixed forest biome

Journal:	*Global Ecology and Biogeography*
Manuscript ID	Draft
Manuscript Type:	Data Paper
Keywords:	temperate deciduous forests, seed traits, germination database, seed dormancy, germination temperature, alternating temperatures, light germination, dark germination, temperate evergreen forests, temperate coniferous forests

Title: Sylvan Seeds, a database and shiny app to explore the seed germination ecology of the temperate broadleaf and mixed forest biome

Running title: Sylvan Seeds, a forest germination database

Abstract

Motivation Recent discussion on the utility of seed traits in ecology has highlighted the unavailability of reliable germination databases of wide geographical scope. This data paper presents a first global dataset of raw germination data, encompassing an ecologically and biogeographically coherent unit: the Temperate Broadleaf and Mixed Forests biome as defined by the World Wildlife Fund. Data has been gathered using a meta-analytical approach to search the literature.

Main types of variable contained Proportion of seeds germinated in different experimental combinations of scarification, stratification, light or darkness, constant or alternating germination temperatures.

Spatial location and grain Seed lots collected across the biome and beyond, provided with approximate geographical coordinates in decimal degrees.

Time period and grain Seed lots collected between 1920 and today.

Major taxa and level of measurement 326 frequent species of the biome, representing 74 families of seed plants (gymnosperms and angiosperms).

Software format The database is provided as a single csv file. A shiny web app, Sylvan Seeds, has been written to explore the database and make it accessible to the wide public.

Keywords: temperate deciduous forests, temperate evergreen forests, temperate coniferous forests, seed traits, germination database, seed dormancy, germination temperature, alternating temperatures, light germination, dark germination

Introduction

Recent discussion on the utility of seed traits in ecology has highlighted the unavailability of reliable germination databases of wide geographical scope (Jiménez-Alfaro, Silveira, Fidelis, Poschlod, & Commander, 2016; Saatkamp et al., 2019). Germination is a complex transition of plant life which is driven by a combination of environmental signals. Amongst these are temperature (Fernández-Pascual, Mattana, & Pritchard, 2019), diurnal temperature alternation (Thompson, Mason, & Grime, 1977), light (Carta, Skourti, Mattana, Vandelook, & Thanos, 2017) and seed dormancy inductors and relievers (Finch-Savage & Leubner-Metzger, 2006). All these

signals interact to produce a coarse- and fine-scale regulation of germination timing, integrating inputs from both seasonal climatic cycles (Jurado & Flores, 2005) and local environmental gradients (Fernández-Pascual, Pérez-Arcoiza, Prieto, & Díaz, 2017). The practical consequence of this is that the response of seeds to - for example - light will depend on other conditions set by the experimenter. This makes it difficult to summarise germination "traits" into a single value in a way comparable to seed mass, specific leaf area or plant height (Pérez-Harguindeguy et al., 2013). Another complication of germination "traits" is that they are most frequently reported as a proportion, i.e. a number of seeds germinated out of seeds sown, which implies a set of derived complications in the analytical treatment of the data (Stijnen, Hamza, & Özdemir, 2010). These technical considerations may explain the scarcity of global germination databases. Germination compilations with a biogeographical background, of which the prime example today is the cornerstone book of C. C. Baskin and Baskin (2014), only provide summary information, for instance the interpreted optimal germination temperature instead of the proportion of seeds germinated at this and that temperature.

For this reason, this data paper compiles a first global dataset of raw germination data for an ecologically and biogeographically coherent unit: the Temperate Broadleaf and Mixed Forests biome as defined by the World Wildlife Fund classification of terrestrial ecoregions (Olson et al., 2001). This biome was chosen because it is the home of many of the classical research groups in seed ecology, and therefore it can be expected to provide the widest scope of available data. As a methodology to gather data, a meta-analytical approach (Koricheva, Gurevitch, & Mengersen, 2013) was taken to search the literature for a list of frequent species representing the flora of the biome. The database is made accessible both as the full file and as a shiny web app (Sylvan Seeds) developed to explore the data.

Methods

Species list

A list of species for which to search germination data was created using vegetation relevés. These relevés were provided by sPlot (Bruelheide et al., 2019), specifically by sPlot's project #12. They had been recorded in 17 ecoregions of the Temperate Broadleaf and Mixed Forests biome (Appalachian mixed mesophytic forests, Atlantic mixed forests, Cantabrian mixed forests, Caspian Hyrcanian mixed forests, Central Korean deciduous forests, Dinaric Mountains mixed forests, Euxine-Colchic broadleaf forests, Hokkaido deciduous forests, Manchurian mixed forests, Nihonkai evergreen forests, Nihonkai montane deciduous forests, Pindus Mountains mixed forests, Southeastern mixed forests, Taiheiyo evergreen forests, Taiheiyo montane

deciduous forests, Western European broadleaf forests, Western Great Lakes forests), plus three neighbouring ecoregions of the Temperate Coniferous Forest biome (Cascade Mountains leeward forests, Central and Southern Cascades forests, Eastern Cascades forests). All relevés came from the Northern Hemisphere and were classified as forest plots by sPlot. The taxa names were standardized to species level with The Plant List (2013) using the 'Taxonstand' package (Cayuela, Stein, & Oksanen, 2019) in R version 3.6.2 (R Core Team, 2019). The final vegetation database contained 17,852 relevés and 7,670 standardized species names, considering only seed plants, and encompassing all forest layers. To obtain the final list of species, only species that were present in at least 5% of the relevés of an ecoregion were kept, rendering a list of 1,393 frequent species.

Web of Science literature search

The list of frequent species (plus the synonyms recorded in the relevés) was incorporated into a Boolean search string, together with the words "(seed OR seeds) AND (dormancy OR germination)". This string was searched in the Thompson Reuters Web of Science on 5 Mar 2019, returning 6,791 results. A first filter of the results by the relevance of the title retained 1,490 references, which were accessed to retrieve relevant germination data to build the database. Of these references, 611 provided relevant data, 643 were non-relevant, and for 236 it was impossible to access the full text. The references were considered to contain relevant germination data when they described the results of a laboratory germination experiment in which at least the germination temperature had been controlled and recorded.

Recording of the database

For each relevant reference, three blocks of information were recorded. The first block described the plant material, including the species, the populations that had been sampled, the year of sampling (or the year of publication if that information was missing), the country, the geographical coordinates (if not provided in the reference, the closest available toponyms were searched in Google Maps; in some cases the only geographical information was the country, in these cases the coordinates of the capital were recorded). The second block described the experimental conditions: length of the germination incubations, use of stratification (none, cold [< 15ºC], warm [>= 15ºC] or combinations of cold and warm), use of scarification, photoperiod, maximum germination temperature, minimum germination temperature, and weighted average germination temperature. The minority of cases in which GA3 had been applied were excluded. The third block contained the response variable, the final germination proportion: the reported final germination percentages (retrieved from the text, tables or figures) and the

reported number of replicates and seeds per replicate were used to calculate a count of seeds sown and a count of seeds germinated.

Description of the database

Summary of contents

The final database contains 4,814 records (germination proportions for a given seed lot of a species, recorded in a set of experimental conditions) from 611 references. The plant materials had been collected across the Temperate Broadleaf and Mixed Forest biome and beyond (Fig. 1). The oldest record was from 1920 and the top three contributing countries were the USA (1,351), the UK (591) and Japan (525). There were 362 species represented, from 74 seed plant families. The total estimate of seeds used in the experiments was 946,942. The range of germination temperatures (weighted average of the daily thermoperiod) went from -4 to 43ºC, with 2,101 records of constant temperatures and 2,713 of alternating temperatures. Light was used in 2,840 records, darkness in 1,224 and 750 did not provide information on this parameter. The experiments were performed with unstratified seeds in 3,224 records, and of the rest, the majority (1,410) went through cold stratification. Scarification was applied to 252 records.

Database file

The database is provided as a csv file, comma separated, named “Supplementary material 1 - Database” (see online supplementary materials). The first row of the file contains the header data, with the following variables: *Species* (The Plant List species names), *Reference* (bibliographic source of the record), *Population* (geographical information of the seed lot), *Year* (year the seed lot was collected), *Country* (country where the seed lot was collected), *Latitude* (approximated latitude where the seed lot was collected, in decimal degrees), *Longitude* (approximated longitude where the seed lot was collected, in decimal degrees), *Scarification* (binary variable indicating whether the seed lot was scarified before the test), *Stratification_days* (number of days the seed lot was exposed to any type of stratification, before the test), *Stratification_type* (type of stratification, which can be none, cold, warm or combinations of cold and warm), *Stratification* (binary variable indicating whether the seed lot was stratified or not before the test), *Light* (binary variable indicating whether the seed lot was germinated in light or in darkness), *Photoperiod* (number of hours of light in the daily photoperiod), *Alternating* (binary variable indicating whether the germination test was conducted under constant or alternating temperatures), *Tdif* (difference in degrees between the hottest and the coldest temperatures of the daily thermoperiod), *Tmax* (hottest temperature in the daily thermoperiod), *Tmin* (coldest temperature in the daily thermoperiod), *Tmean* (mean

germination temperature, weighted by the length of each phase of the daily thermoperiod), *Temperature* (aggregation of the mean germination temperature in 5 ºC intervals), *Length.experiment* (number of days between the start of the experiment, not including stratification, and the day when germinated seeds were counted), *Germinated* (count of seeds that germinated during the experiment), *Germinable* (count of seeds used in the experiment). Each row below the header represents a record for a seed lot germinated in a given set of experimental conditions.

Sylvan Seeds app

To facilitate the visualization of the database, the Sylvan Seeds app was written using the 'shiny' package (Chang, Cheng, Allaire, Xie, & Mcpherson, 2020). It is publicly accessible at http://sylvanseeds.shinyapps.io/sylvanseeds/. The app uses the 'tidyverse' package (Wickham et al., 2019) to aggregate and show results for species and experimental treatments (i.e., aggregating all seed lots of the same species germinated in the same experimental conditions). To facilitate comparisons, germination temperatures are aggregated to 5 ºC intervals. When there is only one seed lot per species and combination of experimental conditions, the binomial 95% confidence interval is calculated using the Wilson method in the 'binom' package (Dorai-Raj, 2014). When there is more than one seed lot per species and combination of experimental conditions, the aggregate proportion and binomial confidence intervals are calculated using binomial-normal meta-analysis models (Stijnen et al., 2010) as implemented in the package 'metaphor' (Viechtbauer, 2010). By visiting the app, users can consult the available germination information for a species (Fig. 2), the origin of its seed lots, and the bibliographical references for the species.

Utility of the database

The database provided in this article, and the web app to visualize it, can have a wide applicability in science and beyond. The data can be used to extend to seed germination the current trend in global analyses of plant traits and functions, both at the species (Díaz et al., 2016) and community levels (Bruelheide et al., 2018). The ecological determinants of seed germination are also valuable information for species distribution models (Bykova, Chuine, Morin, & Higgins, 2012). The visualization of the database with the Sylvan Seeds app can help plant ecologists to select experimental treatments that are adequate for their experiments (Carol C. Baskin, Thompson, & Baskin, 2006). Outside of academia, the data is useful for seed industries (De Vitis et al., 2017), restoration practitioners (Ladouceur et al., 2018) and the implementation of regional schemes for seed-based landscape intervention (Jiménez-Alfaro,

Frischie, Stolz, & Gálvez-Ramírez, 2020). The app is accessible to citizens in general who are interested in germinating wild plants. Finally, apart from the dataset itself, this article can bring two innovations to the seed ecology community, helping to advance the agenda of functional seed ecology (Saatkamp et al., 2019). First, the meta-analysis-inspired methodology used to compile the dataset can be extended to other biomes and lists of species, contributing to the creation of a global database for ecologically and biogeographically coherent floras. Second, the database and the app can serve as a standard in further efforts to compile and standardize seed germination data.

References

Baskin, C. C., & Baskin, J. M. (2014). *Seeds. Ecology, Biogeography and Evolution of Dormancy and Germination. Second Edition*. San Diego: Academic Press.

Baskin, C. C., Thompson, K., & Baskin, J. M. (2006). Mistakes in germination ecology and how to avoid them. *Seed Science Research, 16*(03), 165-168.

Bruelheide, H., Dengler, J., Jiménez-Alfaro, B., Purschke, O., Hennekens, S. M., Chytrý, M., . . . Sandel, B. (2019). sPlot–A new tool for global vegetation analyses. *Journal of Vegetation Science, 30*(2), 161-186.

Bruelheide, H., Dengler, J., Purschke, O., Lenoir, J., Jiménez-Alfaro, B., Hennekens, S. M., . . . Jansen, F. (2018). Global trait–environment relationships of plant communities. *Nature Ecology & Evolution, 2*(12), 1906-1917.

Bykova, O., Chuine, I., Morin, X., & Higgins, S. I. (2012). Temperature dependence of the reproduction niche and its relevance for plant species distributions. *Journal of Biogeography, 39*(12), 2191-2200.

Carta, A., Skourti, E., Mattana, E., Vandelook, F., & Thanos, C. A. (2017). Photoinhibition of seed germination: occurrence, ecology and phylogeny. *Seed Science Research, 27*(2), 131-153.

Cayuela, L., Stein, A., & Oksanen, J. (2019). Taxonstand: taxonomic standardization of plant species names. R package version 2.2.

Chang, W., Cheng, J., Allaire, J., Xie, Y., & Mcpherson, J. (2020). shiny: web application framework for R. R Package Version 1.4.0.2.

De Vitis, M., Abbandonato, H., Dixon, K. W., Laverack, G., Bonomi, C., & Pedrini, S. (2017). The European native seed industry: characterization and perspectives in grassland restoration. *Sustainability, 9*(10), 1682.

Díaz, S., Kattge, J., Cornelissen, J. H. C., Wright, I. J., Lavorel, S., Dray, S., . . . Gorné, L. D. (2016). The global spectrum of plant form and function. *Nature, 529*(7585), 167-171.

Dorai-Raj, S. (2014). binom: binomial confidence intervals for several parameterizations. R package version 1.1-1.

Fernández-Pascual, E., Mattana, E., & Pritchard, H. W. (2019). Seeds of future past: climate change and the thermal memory of plant reproductive traits. *Biological Reviews, 94*(2), 439-456.

Fernández-Pascual, E., Pérez-Arcoiza, A., Prieto, J. A., & Díaz, T. E. (2017). Environmental filtering drives the shape and breadth of the seed germination niche in coastal plant communities. *Annals of Botany, 119*(7), 1169-1177.

Finch-Savage, W. E., & Leubner-Metzger, G. (2006). Seed dormancy and the control of germination. *New Phytologist, 171*, 501-523.

Jiménez-Alfaro, B., Frischie, S., Stolz, J., & Gálvez-Ramírez, C. (2020). Native plants for greening Mediterranean agroecosystems. *Nature Plants, 6*(3), 209-214.

Jiménez-Alfaro, B., Silveira, F. A. O., Fidelis, A., Poschlod, P., & Commander, L. E. (2016). Seed germination traits can contribute better to plant community ecology. *Journal of Vegetation Science, 27*, 637-645.

Jurado, E., & Flores, J. (2005). Is seed dormancy under environmental control or bound to plant traits? *Journal of Vegetation Science, 16*(5), 559-564.

Koricheva, J., Gurevitch, J., & Mengersen, K. L. (2013). *Handbook of Meta-Analysis in Ecology and Evolution*: Princeton University Press.

Ladouceur, E., Jiménez-Alfaro, B., Marin, M., De Vitis, M., Abbandonato, H., Iannetta, P. P. M., . . . Pritchard, H. W. (2018). Native seed supply and the restoration species pool. *Conservation Letters, 11*(2), e12381-e12381.

Olson, D. M., Dinerstein, E., Wikramanayake, E. D., Burgess, N. D., Powell, G. V., Underwood, E. C., . . . Morrison, J. C. (2001). Terrestrial Ecoregions of the World: A New Map of Life on Earth: A new global map of terrestrial ecoregions provides an innovative tool for conserving biodiversity. *Bioscience, 51*(11), 933-938.

Pérez-Harguindeguy, N., Díaz, S., Garnier, É., Lavorel, S., Poorter, H., Jaureguiberry, P., . . . Gurvich, D. (2013). New handbook for standardised measurement of plant functional traits worldwide. *Australian Journal of Botany, 61*, 167-234.

R Core Team. (2019). R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from https://www.r-project.org/

Saatkamp, A., Cochrane, A., Commander, L., Guja, L. K., Jimenez-Alfaro, B., Larson, J., . . . Cross, A. T. (2019). A research agenda for seed-trait functional ecology. *New Phytologist, 221*(4), 1764-1775.

Stijnen, T., Hamza, T. H., & Özdemir, P. (2010). Random effects meta-analysis of event outcome in the framework of the generalized linear mixed model with applications in sparse data. *Statistics in medicine, 29*(29), 3046-3067.

The Plant List. (2013). Version 1.1. http://www.theplantlist.org/, accessed Feb 2020

Thompson, J. P., Mason, G. K., & Grime. (1977). Seed germination in response to diurnal fluctuations of temperature. *Nature, 267*(5607), 147-149.

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software, 36*(3), 1-48.

Wickham, H., Averick, M., Bryan, J., Chang, W., McGowan, L., François, R., . . . Hester, J. (2019). Welcome to the Tidyverse. *Journal of Open Source Software, 4*(43), 1686.

Data accessibility statement

All persons can use the database providing they cite this data paper properly in any publications or in the metadata of any derived products that are produced using the database. The database is provided as supplementary material and will be stored in Dryad. It can be visualized with the Sylvan Seeds app at http://sylvanseeds.shinyapps.io/sylvanseeds/. The code of the app is stored at (note: the GitHub page is kept private until publication of the manuscript).

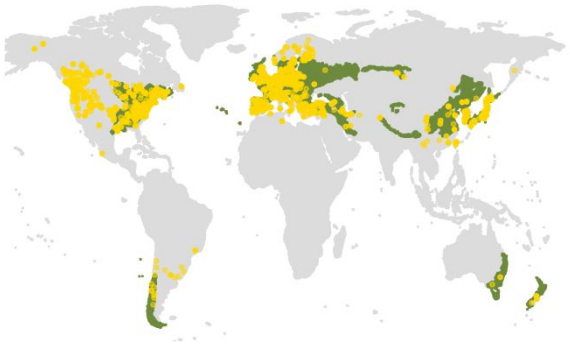

Figure 1 Geographical distribution of the germination records in the database. Each golden circle is a record. The green areas correspond to the extension of the Temperate Broadleaf and Mixed Forests biome.

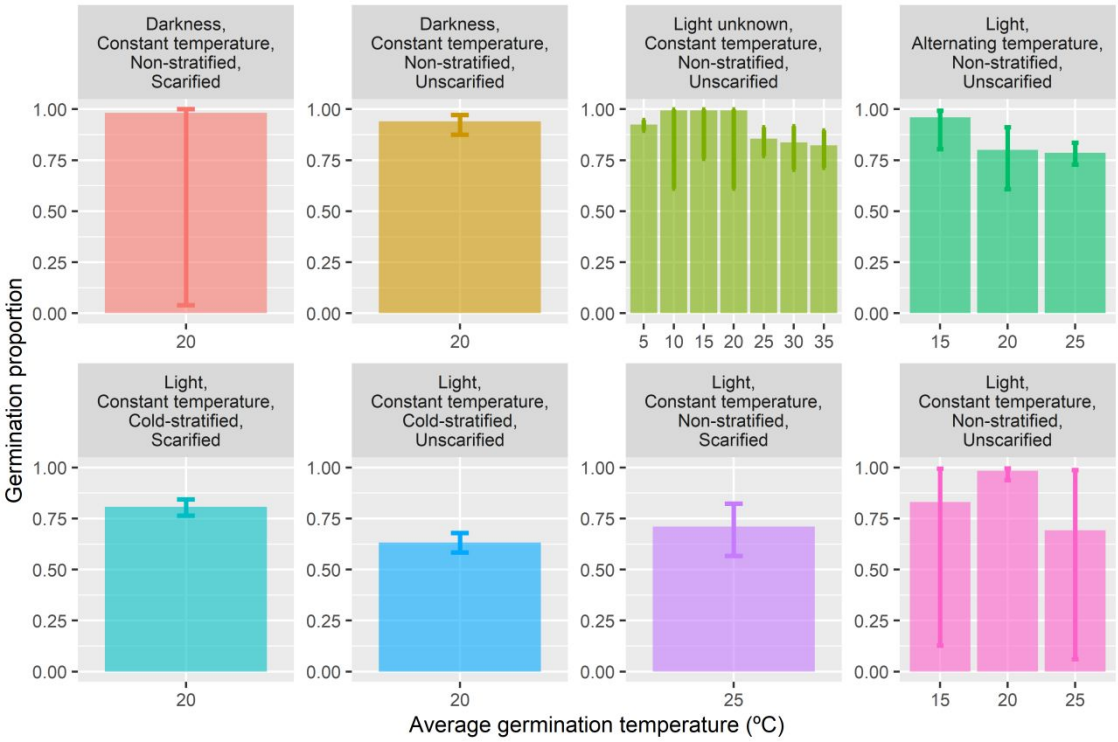

Figure 2 Example of the germination records as shown by the Sylvan Seeds app. Records for one species, the European pedunculate oak, *Quercus robur*. Each panel shows the results for a combination of experimental conditions, with the germination temperature varying within each panel. Bars represent the mean germination proportion and brackets the 95% binomial confidence interval.

Appendix 1 – Data sources. List of references used to build the germination database.

Note: References are provided as they were exported from Web of Science to Endnote, and exactly as they are in the database and the Sylvan Seeds app. They can be edited for final publication.

Aalders, L. E. and I. V. Hall (1979). "Germination of Lowbush Blueberry Seeds as Affected by Sizing, Planting Cover, Storage, and Pelleting." Canadian Journal of Plant Science 59(2): 527-530.

Acharya, S. N. C., C. B.; Hermesh, R.; Schaalje, G. B. (1992). "Factors affecting red-osier dogwood seed germination." Canadian Journal of Botany 70(5): 1012-1016.

Acharya, S. N., et al. (1989). "EFFECTS OF POPULATION, ENVIRONMENT AND THEIR INTERACTION ON SASKATOON BERRY (Amelanchier alnifolia Nutt.) SEED GERMINATION." Canadian Journal of Plant Science 69(1): 277-284.

Adams, C. A., et al. (2005). "Trait stasis versus adaptation in disjunct relict species: evolutionary changes in seed dormancy-breaking and germination requirements in a subclade of <I>Aristolochia</I> subgenus <I>Siphisia</I> (<I>Piperales</I>)." Seed Science Research 15(2): 161-173.

Adams, C. A., et al. (2011). "Using size-class structure to monitor growth of underdeveloped embryos in seeds of three Aristolochia species: implications for seed ecology." Seed Science Research 21(02): 159-164.

Afroze, F. and C. O'Reilly (2015). "Effect of harvest date, drying, short-term storage and freezing after chilling on the germination of rowan seeds." Scandinavian Journal of Forest Research 31(4): 339-346.

Afroze, F. and C. O'Reilly (2013). "Breaking seed dormancy in European rowan seeds and its implications for regeneration." New Forests 44(4): 547-557.

Afroze, F. O. R., C. (2016). "Effects of seed moisture content, warm, chilling, and exogenous hormone treatments and germination temperature on the germination of blackthorn seeds." Plant Biosystems - An International Journal Dealing with all Aspects of Plant Biology 151(3): 474-483.

Ahmad, H. H., J. D. (2007). "Germination and emergence of understorey and tall canopy forbs used in naturalistic sowing mixes. A comparison of performance in vitro v the field." Seed Science and Technology 35(3): 624-637.

Ahn, S.-Y., et al. (2014). "Effect of Pre-treatment Methods and Germination Promoter on the Seed Emergence of Zanthoxylum schinifolium." Journal of Agriculture & Life Science 48(5): 9-17.

Ahola, V. and K. Leinonen (1999). "Responses of Betula pendula, Picea abies, and Pinus sylvestris seeds to red/far-red ratios as affected by moist chilling and germination temperature." Canadian Journal of Forest Research 29(11): 1709-1717.

Albrecht, M. A. and B. C. McCarthy (2006). "Seed germination and dormancy in the medicinal woodland herbs Collinsonia canadensis L. (Lamiaceae) and Dioscorea villosa L. (Dioscoreaceae)." Flora - Morphology, Distribution, Functional Ecology of Plants 201(1): 24-31.

Albrecht, M. A. and B. C. McCarthy (2011). "Variation in dormancy and germination in three co-occurring perennial forest herbs." Plant Ecology 212(9): 1465-1477.

Allen, R. F., R. E. (1977). "Germination of Silky Dogwood." The Journal of Wildlife Management 41(4): 767-770.

Alp, S., et al. (2009). "The effects of different warm stratification periods on the seed germination of some Rosa taxa." African Journal of Biotechnology 8(21): 5838-5841.

Alvarez, R., et al. (2007). "Effect of high temperatures on seed germination and seedling survival in three pine species (Pinus pinaster, P. sylvestris and P. nigra)." International Journal of Wildland Fire 16(1): 63-70.

Aoki, C. F. R., William H.; Rocca, Monique E. (2011). "Lodgepole Pine Seed Germination Following Tree Death from Mountain Pine Beetle Attack in Colorado, USA." The American Midland Naturalist 165(2): 446-451.

Aou-ouad, H., et al. (2014). "Seed germination at different temperatures and seedling emergence at different depths of Rhamnus spp." Open Life Sciences 9(5): 569-578.

Araki, S. and I. Washitani (2000). "Seed dormancy/germination traits of seven Persicaria species and their implication in soil seed-bank strategy." Ecological Research 15(1): 33-46.

Arcamone, J. R. and P. Jaureguiberry (2018). "Germination response of common annual and perennial forbs to heat shock and smoke treatments in the Chaco Serrano, central Argentina." Austral Ecology 43(5): 567-577.

Artola, A. C. C., G. (2005). "Accelerated aging time estimation for birdsfoot trefoil seed." Seed Science and Technology 33(2): 493-497.

Babenko, L. M., NV; Norvajšene, EE (2016). "Izucenie laboratornoj vshožesti semjan zjuznika evropejskogo (Lycopus europaeus L.)." Voprosy biologiceskoj, medicinskoj i farmacevticeskoj himii(8): 44-47.

Bae, J., et al. (2016). "Effect of heavy metals on seed germination and seedling growth of common ragweed and roadside ground cover legumes." Environ Pollut 213: 112-118.

Baeten, L., et al. (2015). "Intraspecific variation in flowering phenology affects seed germinability in the forest herb Primula elatior." Plant Ecology and Evolution 148(2): 283-288.

Baeten, L., et al. (2015). "The phosphorus legacy of former agricultural land use can affect the production of germinable seeds in forest herbs." Ecoscience 17(4): 365-371.

Baldwin, H. I. (1934). "Effect of After-Ripening Treatment on Germination of White Pine Seeds of Different Ages." Botanical Gazette 96(2): 372-376.

Ballegaard, T. K. W., E. (1985). "OBSERVATIONS ON AUTOTOXIC EFFECTS ON SEED-GERMINATION AND SEEDLING GROWTH IN CIRSIUM-PALUSTRE FROM A SPRING AREA IN JUTLAND, DENMARK." Holarctic Ecology 8(1): 63-65.

Barden, C. J., et al. (2017). "Promoting Red Elm (Ulmus rubra Muhl.) Germination with Gibberellic Acid." Journal of Forestry 115(5): 393-396.

Barnett, P. E. F., R. E. (1978). "ALTITUDINAL VARIATION IN GERMINATION CHARACTERISTICS OF YELLOW-POPLAR IN THE SOUTHERN APPALACHIANS." Silvae Genetica 27(3-4): 101-104.

Baskin, C. C. B., Jerry M. (1995). "Warm plus cold stratification requirement for dormancy break in seeds of the woodland herb Cardamine concatenata (Brassicaceae), and evolutionary implications." Canadian Journal of Botany 73(4): 608-612.

Baskin, C. C. M., Per; Andersson, Lars; Baskin, Jerry M. (2000). "Germination studies of three dwarf shrubs (Vaccinium, Ericaceae) of Northern Hemisphere coniferous forests." Canadian Journal of Botany 78(12): 1552-1560.

Baskin, C. C. M., Susan E.; Baskin, Jerry M. (1995). "Two Types of Morphophysiological Dormancy in Seeds of Two Genera (Osmorhiza; and Erythronium;) with an Arcto-Tertiary Distribution Pattern." American Journal of Botany 82(3): 293-298.

Baskin, J. M. and C. C. Baskin (1979). "Promotion of Germination of Stellaria Media Seeds by Light from a Green Safe Lamp." New Phytologist 82(2): 381-383.

Baskin, J. M. B., C. C. (1992). "SEED-GERMINATION BIOLOGY OF THE WEEDY BIENNIAL ALLIARIA-PETIOLATA." Natural Areas Journal 12(4): 191-197.

Baskin, J. M. B., Carol C. (1986). "Seed Germination Ecophysiology of the Woodland Herb Asarum canadense." American Midland Naturalist 116(1): 132-139.

Baskin, J. M. B., Carol C. (1986). "Temperature requirements for after-ripening in seeds of nine winter annuals." Weed Research 26(6): 375-380.

Basto, S., et al. (2013). "Effect of pH buffer solutions on seed germination of Hypericum pulchrum, Campanula rotundifolia and Scabiosa columbaria." Seed Science and Technology 41(2): 298-302.

Baturin, S. O. (2009). "Seed germination of Fragaria vesca L. From atypical ecotopes of West Siberia." Contemporary Problems of Ecology 2(6): 556-559.

Bauer, M. (1998). "A simulation model to predict seed dormancy loss in the field for Bromus tectorum L." Journal of Experimental Botany 49(324): 1235-1244.
Bavcon, J. D., B.; Papes, D. (1994). "GERMINATION OF SEEDS AND CYTOGENETIC ANALYSIS OF THE SPRUCE IN DIFFERENTLY POLLUTED AREAS OF SLOVENIA." Phyton-Annales Rei Botanicae 33(2): 267-277.
Bean, E. W. S., S.; Tyler, B. F. (1984). "The germination of grass seeds after storage at different temperatures in aluminium foil and manilla paper packets." Annals of Applied Biology 105(2): 399-403.
Beardmore, T., et al. (2008). "Effects of seed water content and storage temperature on the germination parameters of white spruce, black spruce and lodgepole pine seed." New Forests 36(2): 171-185.
Beckmann, M., et al. (2011). "Germination responses of three grassland species differ between native and invasive origins." Ecological Research 26(4): 763-771.
Beckstead, J. M., Susan E.; Allen, Phil S. (1996). "Bromus tectorum seed germination: between-population and between-year variation." Canadian Journal of Botany 74(6): 875-882.
Benedetti, S., et al. (2012). "An analysis of the physical and germination parameters of the sweet Chestnut (Castanea sativa)." Ciencia E Investigacion Agraria 39(1): 185-192.
Benvenuti, S. and A. Pardossi (2016). "Germination ecology of nutraceutical herbs for agronomic perspectives." European Journal of Agronomy 76: 118-129.
Bertsouklis, K. F. and M. Papafotiou (2013). "Seed Germination of Arbutus unedo, A-andrachne and Their Natural Hybrid A-andrachnoides in Relation to Temperature and Period of Storage." Hortscience 48(3): 347-351.
Bevington, J. (1986). "Geographic Differences in the Seed Germination of Paper Birch (Betula Papyrifera)." American Journal of Botany 73(4): 564-573.
Bevington, J. M. (1981). "Phytochrome Action during Prechilling Induced Germination of Betula papyrifera Marsh." Plant Physiol 67(4): 705-710.
Bezd??ková, L., et al. (2013). "Practical implications of inconsistent germination and viability results in testing stored Fagus sylvatica seeds." Dendrobiology 71: 35-47.
Bicknell, S. H. S., William H. (1975). "Influence of soil salt, at levels characteristic of some roadside environments, on the germination of certain tree seeds." Plant and Soil 43(1-3): 719-722.
Bischoff, A. and H. Müller-Schärer (2010). "Testing population differentiation in plant species - how important are environmental maternal effects." Oikos 119(3): 445-454.
Bischoff, A., et al. (2006). "Seed provenance matters — Effects on germination of four plant species used for ecological restoration." Basic and Applied Ecology 7(4): 347-359.
Biswas, P. K. B., P. A.; Paul, K. B. (1972). "Germination Promotion of Loblolly Pine and Baldcypress Seeds by Stratification and Chemical Treatments." Physiologia Plantarum 27(1): 71-76.
Black, M. W., P. F. (1955). "Growth Studies in Woody Species VII. Photoperiodic Control of Germination in Betula pubescens Ehrh." Physiologia Plantarum 8(2): 300-316.
Blossey, B., et al. (2017). "Climate and rapid local adaptation as drivers of germination and seed bank dynamics of Alliaria petiolata (garlic mustard) in North America." Journal of Ecology 105(6): 1485-1495.
Boberg, P., et al. (2010). "The effect of high temperatures on seed germination of one native and two introduced conifers in Patagonia." Nordic Journal of Botany 28(2): 231-239.
Bochenek, A., et al. (2016). "Do the seeds of Solidago gigantea Aiton have physiological determinants of invasiveness?" Acta Physiologiae Plantarum 38(6).
Boedeltje, G., et al. (2016). "Effect of gut passage in fish on the germination speed of aquatic and riparian plants." Aquatic Botany 132: 12-16.
Bolin, J. F. (2009). "Heat Shock Germination Responses of Three Eastern North American Temperate Species." Castanea 74(2): 160-167.
Boncaldo, E., et al. (2010). "Germinability and fungal occurrence in seeds ofAbies albaMill. populations in southern Italy." Plant Biosystems - An International Journal Dealing with all Aspects of Plant Biology 144(3): 740-745.
Bonner, F. (1996). "Responses to Drying of Recalcitrant Seeds ofQuercus nigraL." Annals of Botany 78(2): 181-187.
Bonner, F. T. (1967). "GERMINATION OF SWEETGUM SEED IN RESPONSE TO LIGHT." Journal of Forestry 65(5): 339-&.
Booth, D. T. (1999). "Imbibition temperatures affect bitterbrush seed dormancy and seedling vigor." Journal of Arid Environments 43(1): 91-101.
Booth, D. T. B., Yuguang (1999). "Imbibition Temperature Affects on Seedling Vigor: In Crops and Shrubs." Journal of Range Management 52(5): 534-538.
Bourgeois, J. M., L. (1991). "Metabolic changes related to the acceleration of jack pine germination by osmotic priming." Tree Physiology 8(4): 407-413.
Bourgoin, A. and J. D. Simpson (2004). "Soaking, moist-chilling, and temperature effects on germination of Acer pensylvanicum seeds." Canadian Journal of Forest Research 34(10): 2181-2185.
Bouteiller, X. P. P., Annabel J.; Mariette, Stéphanie; Monty, Arnaud (2017). "Using automated sanding to homogeneously break seed dormancy in black locust (Robinia pseudoacacia L., Fabaceae)." Seed Science Research 27(03): 243-250.
Boyd, N. S. H., A. (2011). "Germination and Emergence Characteristics of Spreading Dogbane (Apocynum androsaemifolium)." Weed Science 59(04): 533-537.
Boyd, N. V. A., Rene (2017). "Seed germination of common weed species as affected by oxygen concentration, light, and osmotic potential." Weed Science 52(04): 589-596.
Bradbeer, J. W. (1968). "Studies in seed dormancy : IV. The role of endogenous inhibitors and gibberellin in the dormancy and germination of Corylus avellana L. seeds." Planta 78(3): 266-276.
Bradbeer, J. W. A., Ingrid E.; Nirmala, Ilango S. (1978). "The role of chilling in the breaking of seed dormancy inCorylus avellanaL." Pesticide Science 9(2): 184-186.
Bradbeer, J. W. and B. Colman (1967). "Studies in Seed Dormancy. I. The Metabolism of [2-14c] Acetate by Chilled Seeds of Corylus Avellana L." New Phytologist 66(1): 5-15.
Bram, M. R. M., James N. (2004). "Seed germinability and its seasonal onset of Japanese knotweed (Polygonum cuspidatum)." Weed Science 52(5): 759-767.
Brändel, M. and W. Schütz (2005). "Temperature effects on dormancy levels and germination in temperate forest sedges (Carex)." Plant Ecology 176(2): 245-261.
Brunvatne, J. O. (1998). "Influence of light quality on the germination of Betula papyrifera seeds." Scandinavian Journal of Forest Research 13(1-4): 324-330.
Bujarska-Borkowska, B. and P. Chmielarz (2010). "Stratification, germination and emergence of mazzard seeds following 15- or 20-year storage." Forestry 83(2): 189-194.
Bulut, Y. and M. Demir (2007). "The allelopathic effects of Scots pine (Pinus sylvestris L.) leaf extracts on turf grass seed germination and seedling growth." Asian Journal of Chemistry 19(4): 3169-3177.
Bungard, R. (1997). "Effects of Chilling, Light and Nitrogen-containing Compounds on Germination, Rate of Germination and Seed Imbibition ofClematis vitalbaL." Annals of Botany 79(6): 643-650.
Butler, T. J., et al. (2017). "Germination in Cool-Season Forage Grasses under a Range of Temperatures." Crop Science 57(3): 1725-1731.
Butnor, J. R., et al. (2018). "Ethanol exposure can inhibit red spruce (Picea rubens) seed germination." Seed Science and Technology 46(2): 259-265.
Cabra-Rivas, I. and P. Castro-Diez (2016). "Comparing the Sexual Reproductive Success of Two Exotic Trees Invading Spanish Riparian Forests vs. a Native Reference." Plos One 11(8): e0160831.
Cain, M. D. and M. G. Shelton (1998). "Viability of litter-stored Pinus taeda L seeds after simulated prescribed winter burns." New Forests 16(1): 1-10.
Cain, M. D. and M. G. Shelton (2003). "Fire effects on germination of seeds from Rhus and Rubus: competitors to pine during natural regeneration." New Forests 26(1): 51-64.

Cain, M. D. S., M. G. (1998). “Viability of Litter-Stored Quercus falcata Michx. Acorns After Simulated Prescribed Winter Burns.” International Journal of Wildland Fire 8(4): 199-203.
Çali?kan, O., et al. (2012). “Influences of presowing treatments on the germination and emergence of fig seeds (Ficus carica L.).” Acta Scientiarum. Agronomy 34(3): 293-297.
Caliskan, S. (2014). “Germination and seedling growth of holm oak (Quercus ilex L.): effects of provenance, temperature, and radicle pruning.” iForest - Biogeosciences and Forestry 7(2): 103-109.
Camberato, J. J. M., S. B. (2004). “Salinity slows germination of rough bluegrass.” Hortscience 39(2): 394-397.
Campbell, M. H. (1985). “Germination, emergence and seedling growth of Hypericum perforatum L.” Weed Research 25(4): 259-266.
Campbell, R. A. D., Donald J. (1979). “Laser activation of phytochrome-controlled germination in Pinusbanksiana.” Canadian Journal of Forest Research 9(4): 522-524.
Carles, S., et al. (2009). “Genetic Variation in Seed Size and Germination Patterns and their Effect on White Spruce Seedling Characteristics.” Silvae Genetica 58(1-6): 152-161.
Carlson, C. E. (1994). “Germination and early growth of western larch (Larixoccidentalis), alpine larch (Larixlyallii), and their reciprocal hybrids.” Canadian Journal of Forest Research 24(5): 911-916.
Caron, G. E. W., B. S. P.; Schooley, H. O. (1990). “Effect of Tree Spacing, Cone Storage, and Prechilling on Germination of Picea glauca Seed.” The Forestry Chronicle 66(4): 388-392.
Castoldi, E. and J. A. Molina (2014). “Effect of seed mass and number of cotyledons on seed germination after heat treatment in Pinus sylvestris L. var. iberica Svob.” Forest Systems 23(3): 483-489.
Catana, R., et al. (2018). “Effect of the storage at low temperatures on the germination and antioxidant activity of Geum urbanum seeds.” Romanian Biotechnological Letters 23(3): 13599-13606.
Chachalis, D. R., Krishna N. (2000). “Factors affectingCampsis radicansseed germination and seedling emergence.” Weed Science 48(2): 212-216.
Chen, H., et al. (2012). “Post desiccation germination of mature seeds of tea (Camellia sinensis L.) can be enhanced by pro-oxidant treatment, but partial desiccation tolerance does not ensure survival at -20 degrees C.” Plant Sci 184: 36-44.
Chen, S. Y. K., S. R.; Chien, C. T. (2007). “Storage behaviour of seeds of Cinnamomum osmophloeum and Neolitsea aciculata var. variabillima (Lauraceae).” Seed Science and Technology 35(1): 237-243.
Chen, S. Y., et al. (2008). “Roles of gibberellins and abscisic acid in dormancy and germination of red bayberry (Myrica rubra) seeds.” Tree Physiol 28(9): 1431-1439.
Chen, S. Y., et al. (2010). “Storage behavior and changes in concentrations of abscisic acid and gibberellins during dormancy break and germination in seeds of Phellodendron amurense var. wilsonii (Rutaceae).” Tree Physiol 30(2): 275-284.
Chien, C. T. C., S. Y.; Chang, S. H.; Chung, J. D. (2006). “Dormancy and germination in seeds of the medicinal Asian tree species Phellodendron amurense var. wilsonii (Rutaceae).” Seed Science and Technology 34(3): 561-571.
Ching, T. M. (1959). “Activation of Germination in Douglas Fir Seed by Hydrogen Peroxide.” Plant Physiol 34(5): 557-563.
Chmielarz, P. (2009). “Cryopreservation of conditionally dormant orthodox seeds of Betula pendula.” Acta Physiologiae Plantarum 32(3): 591-596.
Chmielarz, P. (2009). “Cryopreservation of dormant European ash (Fraxinus excelsior) orthodox seeds.” Tree Physiol 29(10): 1279-1285.
Chmielarz, P. (2010). “Cryopreservation of dormant orthodox seeds of European hornbeam (Carpinus betulus).” Seed Science and Technology 38(1): 146-157.
Chmielarz, P. (2010). “Cryopreservation of orthodox seeds of Alnus glutinosa.” Cryo Letters 31(2): 139-146.
Chmielarz, P. (2010). “Cryopreservation of the non-dormant orthodox seeds of Ulmus glabra.” Acta Biol Hung 61(2): 224-233.
Cho, J. S. and C. H. Lee (2018). “Effect of germination and water absorption on scarification and stratification of kousa dogwood seed.” Horticulture, Environment, and Biotechnology 59(3): 335-344.
Cho, J. S., et al. (2014). “Several Factors Affecting Seed Germination of Hydrangea petiolaris Siebold & Zucc.” Korean Journal of Plant Resources 27(5): 534-539.
Choi, D., et al. (2009). “Seed germination and seedling physiology of Larix kaempferi and Pinus densiflora in seedbeds with charcoal and elevated CO2.” Landscape and Ecological Engineering 5(2): 107-113.
Choi, G. E., et al. (2016). “Scarification and stratification protocols for breaking dormancy of Rubus (Rosaceae) species in Korea.” Seed Science and Technology 44(2): 239-252.
Chunhui, W. (2011). “Effects of drought and salt stress on seed germination of three leguminous species.” African Journal of Biotechnology 10(78): 17954-17961.
Cicek, E. and F. Tilki (2007). “Seed germination of three Ulmus species from Turkey as influenced by temperature and light.” Journal of Environmental Biology 28(2): 423-425.
Clifton-Brown, J., et al. (2011). “Thermal requirements for seed germination in Miscanthus compared with Switchgrass (Panicum virgatum), Reed canary grass (Phalaris arundinaceae), Maize (Zea mays) and perennial ryegrass (Lolium perenne).” GCB Bioenergy 3(5): 375-386.
Cóbar-Carranza, A. J., et al. (2015). “Efecto de la alta temperatura en la germinación y supervivencia de semillas de la especie invasora Pinus contorta y dos especies nativas del sur de Chile.” Bosque (Valdivia) 36(1): 53-60.
Conner, P. J. (2008). “Effects of stratification, germination temperature, and pretreatment with gibberellic acid and hydrogen peroxide on germination of ‘Fry’ muscadine (Vitis rotundifolia) seed.” Hortscience 43(3): 853-856.
Connolly, B. M., et al. (2017). “Interactive Effects of Contact Fungicide and Cold Stratification on the Germination Rate for Five Dominant Temperate Tree Species.” Forest Science 63(3): 303-309.
Connor, K. F. and F. T. Bonner (2001). “The effects of desiccation on seeds of Acer saccharinum and Aesculus pavia: recalcitrance in temperate tree seeds.” Trees 15(3): 131-136.
Connor, K. F. and S. Sowa (2003). “Effects of desiccation on the physiology and biochemistry of Quercus alba acorns.” Tree Physiol 23(16): 1147-1152.
Conversa, G. and A. Elia (2009). “Effect of seed age, stratification, and soaking on germination of wild asparagus (Asparagus acutifolius L.).” Scientia Horticulturae 119(3): 241-245.
Conversa, G., et al. (2010). “Effects of after-ripening, stratification and GA3 on dormancy release and on germination of wild asparagus (Asparagus acutifolius L.) seeds.” Scientia Horticulturae 125(3): 196-202.
Corbineau, F., et al. (2002). “Breakage of Pseudotsuga menziesii seed dormancy by cold treatment as related to changes in seed ABA sensitivity and ABA levels.” Physiologia Plantarum 114(2): 313-319.
Couvillon, G. A. (2002). “Cercis canadensis L. seed size influences germination rate, seedling dry matter, and seedling leaf area.” Hortscience 37(1): 206-207.
Crowe, A. U., et al. (2002). “Effects of an industrial effluent on plant colonization and on the germination and post-germinative growth of seeds of terrestrial and aquatic plant species.” Environ Pollut 117(1): 179-189.
Dacasa Rudinger, M. C. and A. Dounavi (2008). “Underwater germination potential of common ash seed (Fraxinus excelsior L.) originating from flooded and non-flooded sites.” Plant Biol (Stuttg) 10(3): 382-387.
Dalgleish, H. J., et al. (2012). “Weevil seed damage reduces germination and seedling growth of hybrid American chestnut.” Canadian Journal of Forest Research 42(6): 1107-1114.
Daskalakou, E. N., et al. (2017). “Interannual variability of germination and cone/seed morphometric characteristics in the endemic Grecian fir (Abies cephalonica) over an 8-year-long study.” Seed Science Research 28(01): 24-33.
David, A. (2002). “Germination percentage and germination speed of European larch (Larix decidua Mill.) seed after prolonged storage.” Northern Journal of Applied Forestry 19(4): 168-170.
Davidson, R. H. E., D. G. W.; Sziklai, O.; ElKassaby, Y. A. (1996). “Genetic variation in germination parameters among populations of Pacific silver fir).” Silvae Genetica 45(2-3): 165-171.

Davis, O. H. (1927). "Germination and Early Growth of Cornus florida, Sambucus canadensis, and Berberis thunbergii." Botanical Gazette 84(3): 225-263.
Daws, M. I. and H. W. Pritchard (2008). "The development and limits of freezing tolerance in Acer pseudoplatanus fruits across Europe is dependent on provenance." Cryoletters 29(3): 189-198.
Daws, M. I., et al. (2006). "Pressure – time dependency of vacuum degassing as a rapid method for viability assessment using tetrazolium chloride: a comparative study of 17 Pinus species." Seed Science and Technology 34(2): 475-483.
Daws, M. I., et al. (2006). "Variable desiccation tolerance in Acer pseudoplatanus seeds in relation to developmental conditions: a case of phenotypic recalcitrance?" Functional Plant Biology 33(1): 59-66.
De Atrip, N., et al. (2007). "Target seed moisture content, chilling and priming pretreatments influence germination temperature response in Alnus glutinosa and Betula pubescens." Scandinavian Journal of Forest Research 22(4): 273-279.
De Frenne, P., et al. (2010). "Significant effects of temperature on the reproductive output of the forest herb Anemone nemorosa L." Forest Ecology and Management 259(4): 809-817.
Dello Jacovo, E., et al. (2018). "Towards a characterisation of the wild legume bitter vetch (Lathyrus linifolius L. (Reichard) Bassler): heteromorphic seed germination, root nodule structure and N-fixing rhizobial symbionts." Plant Biol (Stuttg).
Dillon, K. R., Sarah Hayden (2014). "Effect of Temperature on the Seed Germination of Garden Loosestrife (Lysimachia vulgarisL.)." Natural Areas Journal 34(2): 212-215.
Doescher, P. M., Richard; Winward, Alma (1985). "Effects of Moisture and Temperature on Germination of Idaho Fescue." Journal of Range Management 38(4): 317-320.
Doody, C. N. and C. O'Reilly (2008). "Drying and soaking pretreatments affect germination in pedunculate oak." Annals of Forest Science 65(5): 509-509.
Doody, C. N. and C. O'Reilly (2011). "Effect of long-phase stratification treatments on seed germination in ash." Annals of Forest Science 68(1): 139-147.
Doody, P. O. R., C. (2005). "Effect of moist chilling and priming treatments on the germination of Douglas-fir and noble fir seeds." Seed Science and Technology 33(1): 63-76.
Dorning, M. and D. Cipollini (2005). "Leaf and root extracts of the invasive shrub, Lonicera maackii, inhibit seed germination of three herbs with no autotoxic effects." Plant Ecology 184(2): 287-296.
Dow, M. A. S., Christa R. (1999). "Seed germination, seedling emergence, and seed bank ecology of sweet fern (Comptonia peregrina (L.) Coult.)." Canadian Journal of Botany 77(9): 1378-1386.
Downie, B. B., J. D. (1996). "Dormancy in white spruce (Picea glauca Moench Voss) seeds is imposed by tissues surrounding the embryo." Seed Science Research 6(1): 9-15.
Downie, B. C., J.; Scheer, G.; Wang, B. S. P.; Jensen, M.; Dhir, N. (1998). "Alleviation of seed dormancy in white spruce (Picea glauca Moench. Voss.) is dependent on the degree of seed hydration." Seed Science and Technology 26(3): 555-569.
Downie, B. W., Ben S. P. (1992). "Upgrading germinability and vigour of jack pine, lodgepole pine, and white spruce by the IDS technique." Canadian Journal of Forest Research 22(8): 1124-1131.
Draghici, C. and I. V. Abrudan (2011). "The Effect of Different Stratification Conditions on the Germination of Fraxinus angustifolia Vahl. and F. ornus L. Seeds." Notulae Botanicae Horti Agrobotanici Cluj-Napoca 39(1): 283-287.
Dunlap, J. R. B., J. P. (1983). "Influence of seed size on germination and early development of loblolly pine (Pinustaeda L.) germinants." Canadian Journal of Forest Research 13(1): 40-44.
Dwiyanti, M. S., et al. (2014). "Natural variation inMiscanthus sinensisseed germination under low temperatures." Grassland Science 60(3): n/a-n/a.
Edwards, D. G. W. E., Y. A. (1996). "The effect of stratification and artificial light on the germination of mountain hemlock seeds." Seed Science and Technology 24(2): 225-235.
Ehlenfeldt, M. K. (1996). "Sequential style removal in highbush blueberry, Vaccinium corymbosum L: Effects on fertilization success and seed germination." Sexual Plant Reproduction 9(3): 170-174.
El-Kassaby, Y. A. E., D. G. W. (1998). "Genetic control of germination and the effects of accelerated aging in mountain hemlock seeds and its relevance to gene conservation." Forest Ecology and Management 112(3): 203-211.
El-Kassaby, Y. A. E., D. G. W. (2001). "Germination ecology in mountain hemlock (Tsuga mertensiana (Bong.) Carr.)." Forest Ecology and Management 144(1-3): 183-188.
Elbers, J. P. and D. Moll (2011). "Ingestion by a Freshwater Turtle Alters Germination of Bottomland Hardwood Seeds." Wetlands 31(4): 757-761.
Endoh, K. M., Michinari; Kimura, Megumi K.; Hanaoka, So; Kurita, Yuko; Hanawa, Eiichi; Kinoshita, Satoshi; Abe, Namio; Yamada, Hiroo; Ubukata, Masatoshi (2018). "Cryopreservation of Fagus crenata seeds: estimation of optimum moisture content for maintenance of seed viability by Bayesian modeling." Canadian Journal of Forest Research 48(2): 192-196.
Erfmeier, A. and H. Bruelheide (2005). "Invasive and nativeRhododendron ponticumpopulations: is there evidence for genotypic differences in germination and growth?" Ecography 28(4): 417-428.
Ertekin, M. and E. Kirdar (2010). "Breaking Seed Dormancy of Strawberry Tree (Arbutus unedo)." International Journal of Agriculture and Biology 12(1): 57-60.
Ervin, G. N. and R. G. Wetzel (2002). "Effects of sodium hypochlorite sterilization and dry cold storage on germination of Juncus effusus L." Wetlands 22(1): 191-195.
Escarré, J. H., C. (1988). "Aptitudes germinatives comparées de graines de Rumex acetosella issues de populations correspondant à des stades distincts d'une succession postculturale." Canadian Journal of Botany 66(7): 1381-1390.
Escudero, A., et al. (1997). "Effects of high temperatures and ash on seed germination of two Iberian pines (Pinus nigra ssp salzmannii, P sylvestris var iberica)." Annales Des Sciences Forestieres 54(6): 553-562.
Escudero, A., et al. (1999). "Probability of germination after heat treatment of native Spanish pines." Annals of Forest Science 56(6): 511-520.
Esen, D., et al. (2007). "Effects of different pretreatments on germination of Prunus serotina seed sources." J Environ Biol 28(1): 99-104.
Esen, D., et al. (2009). "EFFECTS OF CITRIC ACID PRESOAKING AND STRATIFICATION ON GERMINATION BEHAVIOR OF PRUNUS AVIUM L. SEED." Pakistan Journal of Botany 41(5): 2529-2535.
Etherington, J. R. (1983). "Control of Germination and Seedling Morphology by Ethene: Differential Responses, Related to Habitat of Epilobium hirsutum L. and Chamerion angustifolium (L.) J. Holub." Annals of Botany 52(5): 653-658.
Evans, R. A. Y., James A. (1977). "Bitterbrush Germination with Constant and Alternating Temperatures." Journal of Range Management 30(1): 30-32.
Ewald, A. Z., S.; Porzelt, M. (1998). "Investigations of seed quality of Primula vulgaris Huds." Agribiological Research-Zeitschrift Fur Agrarbiologie Agrikulturchemie Okologie 51(2): 109-115.
Falleri, E. (2004). "Dormancy breaking in Cornus sanguinea seeds." Seed Science and Technology 32(1): 1-4.
Farhadi, M., et al. (2013). "Pre-sowing treatment for breaking dormancy in Acer velutinum Boiss. seed lots." Journal of Forestry Research 24(2): 273-278.
Farmer, R. E. B., F. T. (1967). "Germination and Initial Growth of Eastern Cottonwood as Influenced by Moisture Stress, Temperature, and Storage." Botanical Gazette 128(3/4): 211-215.
Farmer, R. E. C., Paul; Searle, Ian E.; Tarjan, David P. (1984). "Interaction of light, temperature, and chilling in the germination of black spruce." Canadian Journal of Forest Research 14(1): 131-133.
Faron, M. L. B., et al. (2004). "Temperatura, nitrato de potássio e fotoperíodo na germinação de sementes de Hypericum perforatum L. e H. Brasiliense Choisy." Bragantia 63(2): 193-199.
Fazal, H., et al. (2016). "FACTORS INFLUENCING IN VITRO SEED GERMINATION, MORPHOGENETIC POTENTIAL AND CORRELATION OF SECONDARY METABOLISM WITH TISSUE DEVELOPMENT IN PRUNELLA VULGARIS L." Pakistan Journal of Botany 48(1): 193-200.

Fechner, G. H. B., Karen E.; Myers, Joseph F. (1981). "Effects of storage, temperature, and moisture stress on seed germination and early seedling development of trembling aspen." Canadian Journal of Forest Research 11(3): 718-722.
Feurtado, J. A. X., J. H.; Ma, Y.; Kermode, A. R. (2003). "Increasing the temperature of the water soak preceding moist-chilling promotes dormancy-termination of seeds of western white pine (Pinus monticola Dougl.)." Seed Science and Technology 31(2): 275-288.
Feurtado, J. A., et al. (2004). "Dormancy termination of western white pine (Pinus monticola Dougl. Ex D. Don) seeds is associated with changes in abscisic acid metabolism." Planta 218(4): 630-639.
Feurtado, J. A., et al. (2007). "Disrupting Abscisic Acid Homeostasis in Western White Pine (Pinus monticola Dougl. Ex D. Don) Seeds Induces Dormancy Termination and Changes in Abscisic Acid Catabolites." Journal of Plant Growth Regulation 26(1): 46-54.
Finch-Savage, W. (1998). "Nuclear Replication Activity During Seed Development, Dormancy Breakage and Germination in Three Tree Species: Norway Maple (Acer platanoidesL.), Sycamore (Acer pseudoplatanusL.) and Cherry (Prunus aviumL.)." Annals of Botany 81(4): 519-526.
Finch-Savage, W. E. (1992). "Seed development in the recalcitrant species Quercus robur L.: germinability and desiccation tolerance." Seed Science Research 2(1): 17-22.
Finch-Savage, W. E. C., H. A. (1994). "Water relations of germination in the recalcitrant seeds of Quercus robur L." Seed Science Research 4(03): 315-322.
Finnerty, T. L. Z., J. M.; Hussey, M. A. (1992). "USE OF SEED PRIMING TO BYPASS STRATIFICATION REQUIREMENTS OF 3 AQUILEGIA SPECIES." Hortscience 27(4): 310-313.
Flannigan, M. D. W., F. I. (1993). "A laboratory study of the effect of temperature on red pine seed germination." Forest Ecology and Management 62(1-4): 145-156.
Flores, P., et al. (2017). "Ruptura de la dormición y exigencias de luz para la germinación de semillas de Juglans nigra." Fave. Sección ciencias agrarias 16(2): 33-46.
Froud-Williams, R. J. F., R. (1987). "Germination of proximal and distal seeds of Poa trivialis L. from contrasting habitats." Weed Research 27(4): 245-250.
Froud-Williams, R. J., et al. (1984). "The Influence of Burial and Dry-Storage Upon Cyclic Changes in Dormancy, Germination and Response to Light in Seeds of Various Arable Weeds." New Phytologist 96(3): 473-481.
Froud-Williams, R. J., et al. (1986). "Evidence for an Endogenous Cycle of Dormancy in Dry Stored Seeds of Poa Trivialis L." New Phytologist 102(1): 123-131.
Fu, X. X., et al. (2013). "Seed dormancy mechanism and dormancy breaking techniques for Cornus kousa var. chinensis." Seed Science and Technology 41(3): 458-463.
Galinato, M. I. V., A. G. (1986). "SEED-GERMINATION TRAITS OF ANNUALS AND EMERGENTS RECRUITED DURING DRAWDOWNS IN THE DELTA MARSH, MANITOBA, CANADA." Aquatic Botany 26(1-2): 89-102.
Gange, A. C. B., V. K.; Farmer, L. M. (1992). "Effects of Pesticides on the Germination of Weed Seeds: Implications for Manipulative Experiments." The Journal of Applied Ecology 29(2): 303-310.
Geneve, R. L. (1991). "SEED DORMANCY IN EASTERN REDBUD (CERCIS-CANADENSIS)." Journal of the American Society for Horticultural Science 116(1): 85-88.
Giménez-Benavides, L., et al. (2005). "Seed germination of high mountain Mediterranean species: altitudinal, interpopulation and interannual variability." Ecological Research 20(4): 433-444.
Giuliani, C., et al. (2015). "Temperature-related effects on the germination capacity of black locust (Robinia pseudoacacia L., Fabaceae) seeds." Folia Geobotanica 50(3): 275-282.
Gleiser, G., et al. (2004). "Seed dormancy in relation to seed storage behaviour in Acer." Botanical Journal of the Linnean Society 145(2): 203-208.
Golle, D. P., et al. (2009). "Subsídio hídrico fornecido por substratos alternativos usados na germinação in vitro de Pinus taeda L." Ciencia Rural 39(7): 2218-2221.
González?Andrés, F. and J. M. Ortiz (2010). "Potential ofCytisusand allied genera (Genisteae: Fabaceae) as forage shrubs." New Zealand Journal of Agricultural Research 39(2): 195-204.
Gonzlez-Rabanal, F. C., Mercedes (1995). "Effect of high temperatures and ash on germination of ten species from gorse shrubland." Vegetatio 116(2): 123-131.
Goodwin, J. R. D., P. S.; Eddleman, L. E. (1996). "Germination of Idaho fescue and cheatgrass seeds from coexisting populations." Northwest Science 70(3): 230-241.
Goodwin, J. R. D., Paul S.; Eddleman, Lee E. (1995). "After-Ripening in Festuca idahoensis Seeds: Adaptive Dormancy and Implications for Restoration." Restoration Ecology 3(2): 137-142.
Gorai, M., et al. (2006). "Seed germination characteristics of Phragmites communis: Effects of temperature and salinity." Belgian Journal of Botany 139(1): 78-86.
Gorian, F., et al. (2007). "Seed size and chilling affect germination of Larix decidua Mill. seeds." Seed Science and Technology 35(2): 508-513.
Gosling, P. G. (1988). "THE EFFECT OF MOIST CHILLING ON THE SUBSEQUENT GERMINATION OF SOME TEMPERATE CONIFER SEEDS OVER A RANGE OF TEMPERATURES." Journal of Seed Technology 12(1): 90-98.
Gosling, P. G. (1989). "The Effect of Drying Quercus robur Acorns to Different Moisture Contents, followed by Storage, either with or without Imbibition." Forestry 62(1): 41-50.
Gosling, P. G. (2004). "Six chemicals with animal repellent or insecticide properties are screened for phytotoxic effects on the germination and viability of ash, birch, Corsican pine and sycamore seeds." Forestry 77(5): 397-403.
Gosling, P. G. S., Y.; Peace, A. (2003). "The effect of moisture content and prechill duration on dormancy breakage of Douglas fir seeds (<I>Pseudotsuga menziesii</I> var. <I>menziesii</I> [Mirb.] Franco)." Seed Science Research 13(3): 239-246.
Gosling, P. G., et al. (2009). "Seed dormancy and germination characteristics of common alder (Alnus glutinosa L.) indicate some potential to adapt to climate change in Britain." Forestry 82(5): 573-582.
Graae, B. J., et al. (2015). "Germination requirements and seed mass of slow- and fast- colonizing temperate forest herbs along a latitudinal gradient." Ecoscience 16(2): 248-257.
Gresta, F., et al. (2007). "Effect of maturation stage, storage time and temperature on seed germination of Medicago species." Seed Science and Technology 35(3): 698-708.
Groeneveld, E., et al. (2014). "Sexual reproduction of Japanese knotweed (Fallopia japonica s.l.) at its northern distribution limit: new evidence of the effect of climate warming on an invasive species." Am J Bot 101(3): 459-466.
Grundy, A. C. (1997). "The influence of temperature and water potential on the germination of seven different dry-stored seed lots of Stellaria media." Weed Research 37(4): 257-266.
Grundy, A. C., et al. (2000). "Modelling the germination of Stellaria media using the concept of hydrothermal time." New Phytologist 148(3): 433-444.
Guney, K., et al. (2016). "INFLUENCE OF GERMINATION PERCENTAGE AND MORPHOLOGICAL PROPERTIES OF SOME HORMONES PRACTICE ON Lilium martagon L. SEEDS." Oxidation Communications 39(1): 466-474.
Guo, Y., et al. (1998). "Effects of flood duration and season on germination of black, cherrybark, northern red, and water oak acorns." New Forests 15(1): 69-76.
Haasis, F. W. T., Adrian C. (1931). "Temperature Relations of Lodgepole-Pine Seed Germination." Ecology 12(4): 728-744.
Hale, A. N., et al. (2017). "Reduced Seed Germination after Pappus Removal in the North American Dandelion (Taraxacum officinale; Asteraceae)." Weed Science 58(04): 420-425.
Hallgren, S. W. (1989). "Effects of osmotic priming using aerated solutions of polyethylene glycol on germination of pine seeds." Annales Des Sciences Forestieres 46(1): 31-37.

Hanley, M. E. (2009). "Thermal shock and germination in North-West European Genisteae: implications for heathland management and invasive weed control using fire." Applied Vegetation Science 12(3): 385-390.
Hanslin, H. M. H., Hans Martin; Eggen, Trine (2005). "Salinity tolerance during germination of seashore halophytes and salt-tolerant grass cultivars." Seed Science Research 15(1): 43-50.
Hardegree, S. P. (1994). "Drying and Storage Effects on Germination of Primed Grass Seeds." Journal of Range Management 47(3): 196-199.
Hardegree, S. P., et al. (2003). "Hydrothermal germination response and the development of probabilistic germination profiles." Ecological Modelling 167(3): 305-322.
Hardin, E. D. (1984). "Variation in Seed Weight, Number per Capsule and Germination in Populus deltoides Bartr. Trees in Southeastern Ohio." American Midland Naturalist 112(1): 29-34.
Harniss, R. O. M., W. T. (1976). "Yearly Variation in Germination in Three Subspecies of Big Sagebrush." Journal of Range Management 29(2): 167-168.
Harris, S. M. D., D. J.; Gordon, R. J.; Jensen, K. I. N. (1998). "The effect of thermal time and soil water on emergence of Ranunculus repens." Weed Research 38(6): 405-412.
Hassell, R. L., et al. (2004). "Influence of temperature gradients on pale and purple coneflower, feverfew, and Valerian germination." Horttechnology 14(3): 368-371.
Haunold, A. Z., Charles E. (1974). "Pollen Collection, Crossing, and Seed Germination of Hop1." Crop Science 14(5): 774-776.
Hawkins, K. K., et al. (2017). "Secondary dormancy induction and release in Bromus tectorum seeds: the role of temperature, water potential and hydrothermal time." Seed Science Research 27(01): 12-25.
Hawkins, T. S., et al. (2010). "Morphophysiological dormancy in seeds of three eastern North American Sanicula species (Apiaceae subf. Saniculoideae): evolutionary implications for dormancy break." Plant Species Biology 25(2): 103-113.
Hellum, A. K. (1973). "Seed Storage and Germination of Black Poplar." Canadian Journal of Plant Science 53(1): 227-228.
Hellum, A. K. H., Lisa (1988). "Variable dormancy in seed of Pinus contorta." Scandinavian Journal of Forest Research 3(1-4): 137-146.
Helsper, H. P. G. K., G. A. M. (1984). "Germination of Calluna Vulgaris (L.) Hull in Vitro under Different Ph-Conditions." Acta Botanica Neerlandica 33(3): 347-353.
Henning, K., et al. (2017). "The reproductive potential and importance of key management aspects for successful Calluna vulgaris rejuvenation on abandoned Continental heaths." Ecol Evol 7(7): 2091-2100.
Herranz, J. M., et al. (1998). "Influence of heat on seed germination of seven Mediterranean Leguminosae species." Plant Ecology 136(1): 95-103.
Herranz, J. M., et al. (2005). "Effect of allelopathic compounds produced by Cistus ladanifer on germination of 20 Mediterranean taxa." Plant Ecology 184(2): 259-272.
Hidayati, S. N. B., J. M.; Baskin, C. C. (2000). "Dormancy-breaking and germination requirements of seeds of four Lonicera species (Caprifoliaceae) with underdeveloped spatulate embryos." Seed Science Research 10(4): 459-469.
Hidayati, S. N. B., J. M.; Baskin, C. C. (2002). "Effects of dry storage on germination and survivorship of seeds of four Lonicera species (Caprifoliaceae)." Seed Science and Technology 30(1): 137-148.
Hidayati, S. N. B., Jerry M.; Baskin, Carol C. (2000). "Dormancy-breaking and germination requirements for seeds of Diervilla lonicera (Caprifoliaceae), a species with underdeveloped linear embryos." Canadian Journal of Botany 78(9): 1199-1205.
Hidayati, S. N., et al. (2000). "Morphophysiological dormancy in seeds of two North American and one Eurasian species of Sambucus (Caprifoliaceae) with underdeveloped spatulate embryos." Am J Bot 87(11): 1669-1678.
Hidayati, S. N., et al. (2001). "Dormancy-breaking and germination requirements for seeds of Symphoricarpos orbiculatus (Caprifoliaceae)." Am J Bot 88(8): 1444-1451.
Hidayati, S. N., et al. (2005). "Epicotyl Dormancy in Viburnum acerifolium (Caprifoliaceae)." The American Midland Naturalist 153(2): 232-244.
Hill, M. J. L., R. (1991). "The effect of temperature on germination and seedling growth of temperate perennial pasture legumes." Australian Journal of Agricultural Research 42(1): 175-189.
Hilli, A., et al. (2003). "Germination of pretreated Scots pine seeds after long-term storage." Canadian Journal of Forest Research 33(1): 47-53.
Himanen, K., et al. (2013). "Soaking effects on seed germination and fungal infection inPicea abies." Scandinavian Journal of Forest Research 28(1): 1-7.
Hirao, A. S. (2010). "Kinship between parents reduces offspring fitness in a natural population of Rhododendron brachycarpum." Ann Bot 105(4): 637-646.
Hoffman, G. R. (1985). "Germination of Herbaceous Plants Common to Aspen Forests of Western Colorado." Bulletin of the Torrey Botanical Club 112(4): 409-413.
Hong, T. D. and R. H. Ellis (1990). "A comparison of maturation drying, germination, and desiccation tolerance between developing seeds of Acer pseudoplatanus L. and Acer platanoides L." New Phytologist 116(4): 589-596.
Hopley, T. Y., Andrew G. (2015). "Knowledge of the reproductive ecology of the invasive Salix cinerea, in its invaded range, assists in more targeted management strategies." Australian Journal of Botany 63(6): 477-483.
Hu, X., et al. (2013). "Seed dormancy in four Tibetan Plateau Vicia species and characterization of physiological changes in response of seeds to environmental factors." Seed Science Research 23(02): 133-140.
Huebner, C. D. (2017). "Seed Mass, Viability, and Germination of Japanese Stiltgrass (Microstegium vimineum) under Variable Light and Moisture Conditions." Invasive Plant Science and Management 4(03): 274-283.
Husband, B. C. and J. E. Gurney (1998). "Offspring fitness and parental effects as a function of inbreeding in Epilobium angustifolium (Onagraceae)." Heredity 80(2): 173-179.
Iakovoglou, V. and K. Radoglou (2015). "Breaking seed dormancy of three orthodox Mediterranean Rosaceae species." J Environ Biol 36(2): 345-349.
Ibyeongtae and Bakjongmin (2006). "Effects of Seed Coating, Slope Control and Soil Mulching onSeed Germination and Seedling Growth of Rehabilitation Plants." Journal of the Korea Society of Environmental Restoration Technology 9(6): 38-51.
Ijongseok and Hanseungwon (2007). "Studies on Seed Germination of Miscanthus sinensis Native to Jeju Island." Journal of the Korea Society of Environmental Restoration Technology 10(1): 9-15.
Ives, S. A. (1923). "Maturation and Germination of Seeds of Ilex opaca." Botanical Gazette 76(1): 60-77.
Jaderlund, A. Z., O.; Nilsson, M. C. (1996). "Effects of bilberry (Vaccinium myrtillus L.) litter on seed germination and early seedling growth of four boreal tree species." J Chem Ecol 22(5): 973-986.
Jankowska-Blaszczuk, M. and M. I. Daws (2007). "Impact of red : far red ratios on germination of temperate forest herbs in relation to shade tolerance, seed mass and persistence in the soil." Functional Ecology 21(6): 1055-1062.
Jarvis, B. C. (1975). "The Role of Seed Parts in the Induction of Dormancy of Hazel (Corylus Avellana L.)." New Phytologist 75(3): 491-494.
Jastrz?bowski, S., et al. (2017). "Effects of thermal-time artificial scarification on the germination dynamics of black locust (Robinia pseudoacacia L.) seeds." European Journal of Forest Research 136(3): 471-479.
Jauzein, P. and A. Mansour (1992). "Principaux facteurs de la germination de Heracleum sphondylium L : importance de l'oxygène." Agronomie 12(1): 85-96.
Javanmard, T. Z., Z.; Keshavarz Afshar, R.; Hashemi, M.; Struik, P. C. (2014). "Seed washing, exogenous application of gibberellic acid, and cold stratification enhance the germination of sweet cherry (Prunus aviumL.) seed." The Journal of Horticultural Science and Biotechnology 89(1): 74-78.
Jensen, M. (2010). "Temperature Relations of Germination in Acer platanoides L. Seeds." Scandinavian Journal of Forest Research 16(5): 404-414.
Joseph, H. C. (1929). "Germination and Vitality of Birch Seeds." Botanical Gazette 87(1): 127-151.
Julin-Tegelman, Å. P., Neville (1983). "Changes in the Levels of Endogenous Cytokinin-like Substances During Cold-induced Germination of Acer platanoides L. Seeds." Zeitschrift Fur Pflanzenphysiologie 110(1): 89-95.

Junttila, O. (1972). "EFFECT OF GIBBERELLIC-ACID ON DARK AND LIGHT GERMINATION AT DIFFERENT TEMPERATURES OF CALLUNA, LEDUM AND RHODODENDRON SEEDS." Physiologia Plantarum 26(2): 239-&.

Junttila, O. (1976). "Effects of Red and Far-red Irradiation on Seed Germination in Betula verrucosa and B. pubescens." Zeitschrift Fur Pflanzenphysiologie 80(5): 426-435.

Kabouw, P., et al. (2010). "Activated carbon addition affects substrate pH and germination of six plant species." Soil Biology and Biochemistry 42(7): 1165-1167.

Kalemba, E. M. and E. Ratajczak (2018). "The effect of a doubled glutathione level on parameters affecting the germinability of recalcitrant Acer saccharinum seeds during drying." J Plant Physiol 223: 72-83.

Kaliniewicz, Z. and P. Tylek (2018). "Influence of Scarification on the Germination Capacity of Acorns Harvested from Uneven-Aged Stands of Pedunculate Oak (Quercus robur L.)." Forests 9(3).

Kaliniewicz, Z., et al. (2013). "Correlations between the Germination Capacity and Selected Physical Properties of Scots Pine (Pinus sylvestris L.) Seeds." Baltic Forestry 19(2): 201-211.

Kaliniewicz, Z., et al. (2018). "Correlations between Germination Capacity and Selected Properties of Black Alder (Alnus glutinosa Gaertn.) Achenes." Baltic Forestry 24(1): 68-76.

Kang, H.-K. Y., Ja-Yeon; Cho, Yong-Hyeon; Song, Hong-Seon (2016). "Germination Characteristics by Temperature and Production Time to Poaceae Plant Seed." Journal of the Korea Society of Environmental Restoration Technology 19(2): 71-81.

Kang, H.-K., et al. (2014). "Germination Characteristics and Maturity by Production Time of Chamaecrista nomame, Lespedeza cuneata and Lespedeza bicolor Seed in Fabaceae Plant." Korean Journal of Plant Resources 27(4): 359-364.

Kang, H., et al. (2012). "A Study on Characteristics of Seed Germination of Native Plants for Revegetation on the Slope of River bank." Journal of the Korea Society of Environmental Restoration Technology 15(2): 103-115.

Kang, S.-Y., et al. (2005). "Seed Germination and Seedling Growth of Rhododendron Species by Gamma Rays Irradiation." Flower Research Journal 13(2): 116-120.

Karlin, E. F. B., L. C. (1983). "Germination Ecology of Ledum groenlandicum and Ledum palustre ssp. decumbens." Arctic and Alpine Research 15(3): 397-404.

Kashiwagi, Y. (1991). "Successional development from stands ofMiscanthus sinensis to stands ofPinus densiflora and elements of microclimates: The seed germination and seedling establishment conditions ofP. densiflora." Theoretical and Applied Climatology 43(3): 149-158.

Kemball, K. J., et al. (2010). "Laboratory assessment of the effect of forest floor ash on conifer germination." Canadian Journal of Forest Research 40(4): 822-826.

Kettenring, K. M. and D. F. Whigham (2009). "Seed viability and seed dormancy of non-native Phragmites australis in suburbanized and forested watersheds of the Chesapeake Bay, USA." Aquatic Botany 91(3): 199-204.

Kim, D. H. and S. H. Han (2018). "Direct Effects on Seed Germination of 17 Tree Species under Elevated Temperature and CO2 Conditions." Open Life Sciences 13(1): 137-148.

Kim, D. H. H., Sim Hee (2018). "Seed coat and aging conditions affect germination and physiological changes of aging Korean pine seeds." Journal of Forest Research 23(6): 372-379.

Kim, D. H., et al. (2009). "Effects of Cryoprotectants and Post-storage Priming on Seed Germination of Sugi (Cryptomeria japonica." Silvae Genetica 58(1-6): 162-168.

Kim, J. J., et al. (2014). "Effects of Temperature and Shading on Germination and Early Growth in Pimpinella brachycarpa." Protected Horticulture and Plant Factory 23(4): 342-348.

Kim, J. S., et al. (2015). "Effect of Environmental Factors on Sprout Germination, Growth, and Storage of Six Aster Species." Korean Journal of Horticultural Science and Technology 33(5): 638-646.

Kim, r., et al. (2006). "Vegetation Distribution Near Abandoned Metalliferous Mines and Seed Germination Properties of Woody Plants by the Contaminated Soils." The Korean Society of Environmental Agriculture 25(1): 47-57.

Kirdar, E. E., M. (2008). "The role of polystimulin hormone application and stratification temperature to break the dormancy and improve seed germination for Abies nordmanniana (Stev.) Spach." Seed Science and Technology 36(2): 301-310.

Kolodziejek, J. (2017). "Effect of seed position and soil nutrients on seed mass, germination and seedling growth in Peucedanum oreoselinum (Apiaceae)." Sci Rep 7(1): 1959.

Kolodziejek, J., et al. (2017). "Effect of light, gibberellic acid and nitrogen source on germination of eight taxa from dissapearing European temperate forest, Potentillo albae-Quercetum." Sci Rep 7(1): 13924.

Kondo, T., et al. (2015). "Morphophysiological dormancy in seeds of Convallaria keiskei and a proposal to recognize two types of double dormancy in seed dormancy classification." Seed Science Research 25(02): 210-220.

Kosi?ski, I. (2007). "Long-term variability in seed size and seedling establishment of Maianthemum bifolium." Plant Ecology 194(2): 149-156.

KÖVendi-JakÓ, A. (2017). "Relationship of Germination and Establishment for Twelve Plant Species in Restored Dry Grassland." Applied Ecology and Environmental Research 15(4): 227-239.

Krauss, N. K., Karl-Hermann (1985). "Ein Beitrag zur Kenntnis über die Stratifikation und Keimung von Eschensamen (Fraxinus excelsior L.)." Flora 177(1-2): 91-105.

Krawiarz, K. and Z. Szczotka (2005). "Adenine nucleotides and energy charge during dormancy breaking in embryo axes of Acer platanoides and Fagus sylvatica seeds." Acta Physiologiae Plantarum 27(4): 455-461.

Kuneš, I., et al. (2017). "Effects of brassinosteroid application on seed germination of Norway spruce, Scots pine, Douglas fir and English oak." iForest - Biogeosciences and Forestry 10(1): 121-127.

Landgraff, A. J., Olavi (1979). "Germination and Dormancy of Reed Canary-Grass Seeds (Phalaris arundinacea)." Physiologia Plantarum 45(1): 96-102.

Le Pichon, C. G., M. (2001). "Evaluating the germination capacity of commercial seedlots of Quercus petraea." Seed Science and Technology 29(2): 377-385.

Leadem, C. L. (1986). "Stratification of Abiesamabilis seeds." Canadian Journal of Forest Research 16(4): 755-760.

Leck, M. A. (1996). "Germination of Macrophytes from a Delaware River Tidal Freshwater Wetland." Bulletin of the Torrey Botanical Club 123(1): 48-67.

Lee, B. D., et al. (2015). "The Impact of Environmental and Host Specificity in Seed Germination and Survival of Korean Mistletoe [Viscum album var. coloratum (Kom.) Ohwi]." Korean Journal of Plant Resources 28(6): 710-717.

Lee, I.-J. (2013). "Influence of Plant Growth Regulator Application on Seed Germination of Dandelion (Taraxacum officinale)." Weed & Turfgrass Science 2(2): 152-158.

Lee, J. H., et al. (2014). "Effect of Temperature, Light Intensity, Covering Depth, Watering Frequency or GA3 on the Germination of Rhododendron brachycarpum Native to Korea." Flower Research Journal 22(2): 68-73.

Lee, K. Y., et al. (2013). "Botanical and germinating characteristics of Miscanthus species native to Korea." Horticulture, Environment, and Biotechnology 53(6): 490-496.

Lee, S. Y., et al. (2008). "Characteristics of Seed Germination and Seedling Growth ofNative Hydrangea serrata for. Acuminata." Flower Research Journal 16(2): 134-142.

Leinonen, K. (1998). "Effects of storage conditions on dormancy and vigor of Picea abies seeds." New Forests 16(3): 231-249.

Leinonen, K. D. C., Michelle (1998). "Regulation of Picea abies seed dormancy by red and far?red light at various moisture contents." Scandinavian Journal of Forest Research 13(1-4): 43-49.

Leiva, M. J., et al. (2018). "The effect of simulated damage by weevils on Quercus ilex subsp. Ballota acorns germination, seedling growth and tolerance to experimentally induced drought." Forest Ecology and Management 409: 740-748.

León-Lobos, P. and R. H. Ellis (2002). "Seed storage behaviour of Fagus sylvatica and Fagus crenata." Seed Science Research 12(1): 31-37.

León-Lobos, P. and R. H. Ellis (2018). "Comparison of seed desiccation sensitivity amongst Castanea sativa, Quercus ilex and Q. cerris." Seed Science and Technology 46(2): 233-237.
Letchamo, W. G., A. (1996). "Light, temperature and duration of storage govern the germination and emergence ofTaraxacum officinaleseed." Journal of Horticultural Science 71(3): 373-377.
Li, H. Z., Donglin (2018). "In Vitro Seed Germination of Kalmia latifolia L. Hybrids: A Means for Improving Germination and Speeding Up Breeding Cycle." Hortscience 53(4): 535-540.
Li, L. I. R., James D. (1990). "Lipid Mobilization During Dormancy Breakage in Oilseed of Corylus avellana." Annals of Botany 66(5): 501-505.
Li, S., et al. (2013). "Methods for breaking the dormancy of eastern redbud (Cercis canadensis) seeds." Seed Science and Technology 41(1): 27-35.
Li, X. J. B., P. J.; Leadem, C. L. (1994). "Interactive effects of light and stratification on the germination of some British Columbia conifers." Canadian Journal of Botany 72(11): 1635-1646.
Li, Y. L. C., H. Y.; Song, S. Q. (2009). "Effects of temperature, after-ripening, stratification, and scarification plus hormone treatments on dormancy release and germination of Acer truncatum seeds." Seed Science and Technology 37(3): 554-562.
Lim, H.-I. K., Gil-Nam; Jang, Kyung-Hwan; Park, Wan-Geun (2015). "Effect of Wet Cold and Gibberellin Treatments on Germination of Dwarf Stone Pine Seeds." Korean Journal of Plant Resources 28(2): 253-258.
Lindig-Cisneros, R. and J. Zedler (2001). "Effect of light on seed germination in Phalaris arundinacea L. (reed canary grass)." Plant Ecology 155(1): 75-78.
Liopa-Tsakalidi, A., et al. (2011). "Effect of NaCl and GA(3) on seed germination and seedling growth of eleven medicinal and aromatic crops." Journal of Medicinal Plants Research 5(17): 4065-4073.
Lisci, M. (1994). "Germination ecology of drupelets of the fig (Ficus carica L.)." Botanical Journal of the Linnean Society 114(2): 133-146.
Liu, C. H. C., J. J.; Martin, S. B.; Turner, A. V. (2001). "Rough bluegrass germination varies with temperature and cultivar/seed lot." Hortscience 36(1): 153-156.
Liu, H., et al. (2015). "Causes and Breaking of Seed Dormancy in Flowering Dogwood (Cornus florida L.)." Hortscience 50(7): 1041-1044.
Liu, K., et al. (2018). "Linking seed germination and plant height: a case study of a wetland community on the eastern Tibet Plateau." Plant Biol (Stuttg) 20(5): 886-893.
Liu, M. H., Andrew; Mallory-Smith, Carol (2017). "Waterlogging Influence on Roughstalk Bluegrass (Poa trivialis) and Tall Fescue Germination." Weed Technology 31(05): 732-739.
Liu, Y. and Y. A. El-Kassaby (2014). "Timing of seed germination correlated with temperature-based environmental conditions during seed development in conifers." Seed Science Research 25(01): 29-45.
Liu, Y., et al. (2012). "Influence of pericarp, cotyledon and inhibitory substances on sharp tooth oak (Quercus aliena var. acuteserrata) germination." Plos One 7(10): e47682.
Liu, Y., et al. (2013). "The role of moist-chilling and thermo-priming on the germination characteristics of white spruce (Picea glauca) seed." Seed Science and Technology 41(3): 321-335.
Liu, Y., et al. (2015). "Changes in hormone flux and signaling in white spruce (Picea glauca) seeds during the transition from dormancy to germination in response to temperature cues." BMC Plant Biol 15: 292.
Liu, Y., et al. (2015). "Effects of different mechanical treatments on Quercus variabilis, Q. wutaishanica and Q. robur acorn germination." iForest - Biogeosciences and Forestry 8(6): 728-734.
Lonati, M., et al. (2010). "Thermal time requirements for germination, emergence and seedling development of adventive legume and grass species." New Zealand Journal of Agricultural Research 52(1): 17-29.
Ludewig, K., et al. (2014). "Differential effects of reduced water potential on the germination of floodplain grassland species indicative of wet and dry habitats." Seed Science Research 24(01): 49-61.
Luna, B. and J. M. Moreno (2008). "Light and nitrate effects on seed germination of Mediterranean plant species of several functional groups." Plant Ecology 203(1): 123-135.
Luo, J. and J. Cardina (2012). "Germination patterns and implications for invasiveness in three Taraxacum (Asteraceae) species." Weed Research 52(2): 112-121.
Ma, Y. L., et al. (2003). "Effect of solid matrix priming during moist chilling on dormancy breakage and germination of seeds of four fir species." New Forests 25(1): 49-66.
Mancilla-Leytón, J. M., et al. (2013). "Effects of rabbit gut passage on seed retrieval and germination of three shrub species." Basic and Applied Ecology 14(7): 585-592.
Marchiol, L., et al. (2000). "Germination and Initial Root Growth of Four Legumes as Affected by Landfill Biogas Atmosphere." Restoration Ecology 8(1): 93-98.
Måren, I. E., et al. (2009). "Prescribed burning of northern heathlands: Calluna vulgaris germination cues and seed-bank dynamics." Plant Ecology 207(2): 245-256.
Mariko, S. K., Hiroshi; Suzuki, Jun-ichirou; Furukawa, Akio (1993). "Altitudinal variations in germination and growth responses of Reynoutria japonica; populations on Mt Fuji to a controlled thermal environment." Ecological Research 8(1): 27-34.
Marin, M., et al. (2018). "Responses of Primula vulgaris to light quality in the maternal and germination environments." Plant Biol (Stuttg).
Maroder, H. (2000). "Storage Behaviour of Salix alba and Salix matsudana Seeds." Annals of Botany 86(5): 1017-1021.
Marshall, J., et al. (2000). "The effects of paclobutrazol, abscisic acid, and gibberellin on germination and early growth in silver, red, and hybrid maple." Canadian Journal of Forest Research 30(4): 557-565.
Martín-García, J., et al. (2015). "Influence of temperature on germination ofQuercus ilexinPhytophthora cinnamomi,P. gonapodyides, P. quercinaandP. psychrophilainfested soils." Forest Pathology 45(3): 215-223.
Martin, R. M. (2017). "Effects of Warming on Invasive Phragmites australis and Native Spartina patens Seed Germination Rates and Implications for Response to Climate Change." Northeastern Naturalist 24(3): 235-238.
Masaka, K. and K. Yamada (2017). "Variation in germination character of Robinia pseudoacacia L. (Leguminosae) seeds at individual tree level." Journal of Forest Research 14(3): 167-177.
Masin, R., et al. (2017). "Can alternating temperatures be used to estimate base temperature for seed germination?" Weed Research 57(6): 390-398.
Masselink, A. K. (1980). "Germination and Seed Population Dynamics in Melampyrum Pratense L." Acta Botanica Neerlandica 29(5-6): 451-468.
Mataruga, M., et al. (2010). "Dynamics of seed imbibition and germination of Austrian pine (Pinus nigra Arnold) from extreme habitat conditions within five Balkan provenances." New Forests 40(2): 229-242.
McCartan, S. A., et al. (2015). "Using thermal time models to predict the impact of assisted migration on the synchronization of germination and shoot emergence of oak (Quercus robur L.)." Annals of Forest Science 72(4): 479-487.
McCartan, S. A., et al. (2017). "Secondary dormancy imposition in pre-chilled, dried seeds of Douglas fir (Pseudotsuga menziesii) during storage." Seed Science and Technology 45(2): 296-305.
McDonough, W. T. H., R. O. (1974). "Effects of Temperature on Germination in Three Subspecies of Big Sagebrush." Journal of Range Management 27(3): 204-205.
McGinnis, E. E. and M. H. Meyer (2011). "After-ripening, Stratification, and Perigynia Removal Enhance Pennsylvania Sedge Germination." Horttechnology 21(2): 187-192.
McKee, J. (1998). "The Effect of Temperature on Reproduction in FivePrimulaSpecies." Annals of Botany 82(3): 359-374.
McKersie, B. D., et al. (1981). "EFFECT OF SEED SIZE ON GERMINATION, SEEDLING VIGOR, ELECTROLYTE LEAKAGE, AND ESTABLISHMENT OF BIRD'S-FOOT TREFOIL (Lotus corniculatus L.)." Canadian Journal of Plant Science 61(2): 337-343.
Mennan, H. (2003). "The Effects of Depth and Duration of Burial on Seasonal Germination, Dormancy and Viability of Galium aparine and Bifora radians Seeds." Journal of Agronomy and Crop Science 189(5): 304-309.

Mennan, H. and M. Ngouajio (2017). "Seasonal cycles in germination and seedling emergence of summer and winter populations of catchweed bedstraw (Galium aparine) and wild mustard (Brassica kaber)." Weed Science 54(01): 114-120.
Merou, T., et al. (2012). "Effect of stratification and scarification treatments on the germination of oriental hornbeam (Carpinus orientalis) seeds." Seed Science and Technology 40(2): 265-270.
Mesléard, F. and J. Lepart (1991). "Germination and seedling dynamics ofArbutus unedoandErica arbóreaon Corsica." Journal of Vegetation Science 2(2): 155-164.
Meyer, S. (2000). "Genetic Regulation of Seed Dormancy in Purshia tridentata(Rosaceae)." Annals of Botany 85(4): 521-529.
Meyer, S. E. (1989). "WARM PRETREATMENT EFFECTS ON ANTELOPE BITTERBRUSH (PURSHIA-TRIDENTATA) GERMINATION RESPONSE TO CHILLING." Northwest Science 63(4): 146-153.
Meyer, S. E. A., Phil S.; Beckstead, Julie (1997). "Seed Germination Regulation in Bromus tectorum (Poaceae) and Its Ecological Significance." Oikos 78(3): 475-485.
Meyer, S. E. M., Stephen B.; McArthur, E. Durant (1990). "Germination Response of Artemisia tridentata (Asteraceae) to Light and Chill: Patterns of Between-Population Variation." Botanical Gazette 151(2): 176-183.
Michalak, M., et al. (2013). "Desiccation sensitivity and successful cryopreservation of oil seeds of European hazelnut (Corylus avellana)." Annals of Applied Biology 163(3): n/a-n/a.
Midmore, E. K., et al. (2015). "Using thermal time models to predict germination of five provenances of silver birch (Betula pendula Roth) in southern England." Silva Fennica 49(2).
Milberg, P. (1994). "Germination ecology of the polycarpic grassland perennials Primula veris and Trollius europaeus." Ecography 17(1): 3-8.
Milberg, P. A., Lars (1997). "Seasonal variation in dormancy and light sensitivity in buried seeds of eight annual weed species." Canadian Journal of Botany 75(11): 1998-2004.
Mitchell, E. (1926). "Germination of Seeds of Plants Native to Dutchess County, New York." Botanical Gazette 81(1): 108-112.
Moldoveanu, C., et al. (2015). "Biological Effects of Some New Imidazole Derivatives on Spruce (Picea Abies) Germination." Revista De Chimie 66(1): 104-108.
Molina-Montenegro, M. A., et al. (2018). "Is the Success of Plant Invasions the Result of Rapid Adaptive Evolution in Seed Traits? Evidence from a Latitudinal Rainfall Gradient." Front Plant Sci 9: 208.
Mollard, F. P. and M. A. Naeth (2015). "Germination sensitivities to water potential among co-existing C3 and C4 grasses of cool semi-arid prairie grasslands." Plant Biol (Stuttg) 17(2): 583-587.
Monaco, T. A., et al. (2003). "Nitrogen Effects on Seed Germination and Seedling Growth." Journal of Range Management 56(6): 646-653.
Mondoni, A., et al. (2008). "Habitat-correlated seed germination behaviour in populations of wood anemone (Anemone nemorosa L.) from northern Italy." Seed Science Research 18(4): 213-222.
Mortensen, L. C. E., E. N. (2004). "The effect of gibberellic acid, paclobutrazol and ethephon on the germination of Fagus sylvatica and Picea sitchensis seeds exposed to varying durations of moist chilling." Seed Science and Technology 32(1): 21-33.
Mortensen, L. C., et al. (2007). "Decline in a seed-specific abscisic acid-responsive glycine-rich protein (GRPF1) mRNA may reflect the release of seed dormancy in Fagus sylvatica during moist prechilling." Seed Science Research 14(01): 27-34.
Muller, C. and M. Bonnet-Masimbert (1983). "Amélioration de la germination des faînes (Fagus silvatica) par prétraitement en présence de polyéthylène glycol." Annales Des Sciences Forestieres 40(2): 157-164.
Muller, C. and M. Bonnet-Masimbert (1985). "Levée de dormance des faînes avant leur conservation : résultats préliminaires." Annales Des Sciences Forestieres 42(4): 385-396.
Muller, C. F., E.; Laroppe, E.; Bonnet-Masimbert, M. (1999). "Drying and storage of prechilled Douglas fir, Pseudotsuga menziesii, seeds." Canadian Journal of Forest Research-Revue Canadienne De Recherche Forestiere 29(2): 172-177.
Myerscough, P. J. and F. H. Whitehead (1966). "Comparative Biology of Tussilago Farfara L., Chamafnerion Angustifolium (L.) Scop., Epilobium Montanum L. And Fpilobium Adfnocaulon Hausskn.. I. General Biology and Germination." New Phytologist 65(2): 192-210.
Naghipour, A. A., et al. (2016). "Effects of smoke, ash and heat shock on seed germination of seven species from Central Zagros rangelands in the semi-arid region of Iran." African Journal of Range & Forage Science 33(1): 67-71.
Nesme, X. (1985). "RESPECTIVE EFFECTS OF ENDOCARP, TESTA AND ENDOSPERM, AND EMBRYO ON THE GERMINATION OF RASPBERRY (Rubus idaeus L.) SEEDS." Canadian Journal of Plant Science 65(1): 125-130.
Newton, R. J., et al. (2013). "Seed development and maturation in early spring-flowering Galanthus nivalis and Narcissus pseudonarcissus continues post-shedding with little evidence of maturation in planta." Ann Bot 111(5): 945-955.
Nie, G., et al. (2017). "Effect of moist pre-chill and dry pre-heat treatment on the germination of Miscanthus sinensis seed from southwest China." Grassland Science 63(2): 93-100.
Nielsen, J. A., et al. (2015). "Germination and growth responses of co-occurring grass species to soil from under invasive Thymus vulgaris." Allelopathy Journal 35(1): 139-152.
Niimi, Y., et al. (2006). "Temperatures affecting embryo development and seed germination of Christmas rose (Helleborus niger) after sowing." Scientia Horticulturae 107(3): 292-296.
Nijjer, S., et al. (2002). "Effects of temperature and light on Chinese tallow (Sapium sebiferum and Texas sugarberry (Celtis laevigata) seed germination." Texas Journal of Science 54(1): 63-68.
Nikolic, R., et al. (2007). "Cytokinins and urea derivatives stimulate seed germination in Lotus corniculatus L." Archives of Biological Sciences 59(2): 125-128.
Nin, S., et al. (2017). "Effects of environmental factors on seed germination and seedling establishment in bilberry (Vaccinium myrtillus L.)." Scientia Horticulturae 226: 241-249.
Nishitani, S. M., Takehiro (1996). "Germination Characteristics of Two Species of Polygonum in Relation to Their Altitudinal Distribution on Mt. Fuji, Japan." Arctic and Alpine Research 28(1): 104-110.
Nomiya, H. (2017). "Differentiation of seed germination traits in relation to the natural habitats of three Ulmus species in Japan." Journal of Forest Research 15(2): 123-130.
Noronha, A. (1997). "Rate of Change in Dormancy Level and Light Requirement in Weed Seeds During Stratification." Annals of Botany 80(6): 795-801.
Nosko, P. B., Pierre; Kramer, James R.; Kershaw, Kenneth A. (1988). "The effect of aluminum on seed germination and early seedling establishment, growth, and respiration of white spruce (Picea glauca)." Canadian Journal of Botany 66(11): 2305-2310.
Nozzolillo, C. T., Ingrid (1983). "Aspects of Germination of Impatiens capensis Meerb., Formae capensis and immaculata, and I. pallida Nutt." Bulletin of the Torrey Botanical Club 110(3): 335-344.
Núñez, M. R. C., L. (2000). "Effect of high temperatures on seed germination of Pinus sylvestris and Pinus halepensis." Forest Ecology and Management 131(1-3): 183-190.
O'Reilly, C. and N. De Atrip (2007). "Seed moisture content during chilling and heat stress effects after chilling on the germination of common alder and downy birch seeds." Silva Fennica 41(2): 235-246.
Okagami, N. and K. Terui (1996). "Differences in the Rates of Metabolism of Various Triacylglycerols during Seed Germination and the Subsequent Growth of Seedlings of Dioscorea tokoro, a Perennial Herb." Plant and Cell Physiology 37(3): 273-277.
Okagami, N. and M. Kawai (1977). "Dormancy in Dioscorea: Gibberellin-Induced Inhibition or Promotion in Seed Germination of D. tokoro and D. tenuipes in Relation to Light Quality." Plant Physiology 60(3): 360-362.
Okagami, N. K., Masashi (1982). "Dormancy inDioscorea: Differences of temperature responses in seed germination among six Japanese species." The Botanical Magazine Tokyo 95(2): 155-166.
Oliveira, G., et al. (2012). "Testing Germination of Species for Hydroseeding Degraded Mediterranean Areas." Restoration Ecology 20(5): 623-630.

Oomes, M. J. M. E., W. Th (1976). "Germination of Six Grassland Herbs in Microsites with Different Water Contents." The Journal of Ecology 64(2): 745-755.
Ostroshenko, V. I. and V. V. Ostroshenko (2018). "Influence of growth stimulators on germination energy and ability of scots pine seeds (Pinus Sylvestris L.)." Research Journal of Pharmaceutical Biological and Chemical Sciences 9(1): 529-535.
Ozbingol, N. (2005). "Increasing acorn moisture content followed by freezing-storage enhances germination in pedunculate oak." Forestry 78(1): 73-81.
Pannangpetch, K. and E. W. Bean (1984). "Effects of Temperature on Germination in Populations of Dactylis glomerata from NW Spain and Central Italy." Annals of Botany 53(5): 633-639.
Pari?, A., et al. (2008). "Breaking dormancy of two endemic Lilium species: Lilium bosniacum (G. Beck) Beck ex Fritsch and Lilium martagon L. var. cattaniae Vis." Seed Science and Technology 36(3): 788-791.
Parker, W. C., et al. (2006). "The Effects of Seed Mass on Germination, Seedling Emergence, and Early Seedling Growth of Eastern White Pine (Pinus strobus L.)." New Forests 32(1): 33-49.
Pasquini, N. M. and G. E. Defossé (2012). "Effects of storage conditions and pre-chilling periods on germinability of Pinus ponderosa seeds from Patagonia, Argentina: preliminary study." Bosque (Valdivia) 33(1): 23-24.
Pasquini, S., et al. (2011). "Effect of different storage conditions in recalcitrant seeds of holm oak (Quercus ilex L.) during germination." Seed Science and Technology 39(1): 165-177.
Patten, D. T. (1963). "Light and Temperature Influence on Engelmann Spruce Seed Germination and Subalpine Forest Advance." Ecology 44(4): 817-818.
Paw?owski, T. A., et al. (2004). "Cell Cycle Activity and -Tubulin Accumulation During Dormancy Breaking of Acer platanoides L. seeds." Biologia Plantarum 48(2): 211-218.
Pawlowski, T. A. (2009). "Proteome analysis of Norway maple (Acer platanoides L.) seeds dormancy breaking and germination: influence of abscisic and gibberellic acids." BMC Plant Biol 9: 48.
Pedrol, N., et al. (2017). "Optimal and synchronized germination of Robinia pseudoacacia, Acacia dealbata and other woody Fabaceae using a handheld rotary tool: concomitant reduction of physical and physiological seed dormancy." Journal of Forestry Research 29(2): 283-290.
Pegtel, D. M. (1985). "Germination in Populations of Solanum Dulcamara L. From Contrasting Habitats." New Phytologist 100(4): 671-679.
Perez-Fernandez, M. A. and S. Rodriguez-Echeverria (2003). "Effect of smoke, charred wood, and nitrogenous compounds on seed germination of ten species from woodland in central-western Spain." J Chem Ecol 29(1): 237-251.
Perez-Fernandez, M. A., et al. (2006). "Seed germination in response to chemicals: effect of nitrogen and pH in the media." J Environ Biol 27(1): 13-20.
Pérez-García, F., et al. (2002). "Effects of light, temperature and population variability on the germination of seven Spanish pines." Seed Science Research 12(4): 261-271.
PÉRez-GarcÍA, F., et al. (2003). "Interpopulation variation in seed germination of five Mediterranean Labiatae shrubby species." Israel Journal of Plant Sciences 51(2): 117-124.
Pérez-García, F., et al. (2006). "Hypericum perforatum L. Seed Germination: Interpopulation Variationand Effect of Light, Temperature, Presowing Treatments and Seed Desiccation." Genetic Resources and Crop Evolution 53(6): 1187-1198.
Pérez-García, F., et al. (2007). "High viability recorded in ultra-dry seeds of 37 species of Brassicaceae after almost 40 years of storage." Seed Science and Technology 35(1): 143-153.
Pérez-Ramos, I. M. and T. Marañón (2009). "Effects of waterlogging on seed germination of three Mediterranean oak species: Ecological implications." Acta Oecologica 35(3): 422-428.
Perglova, I., et al. (2009). "Differences in germination and seedling establishment of alien and native Impatiens species." Preslia 81(4): 357-375.
Persson, L., et al. (2006). "The effect of endocarp and endocarp splitting resistance on warm stratification requirement of hawthorn seeds (Crataegus monogyna)." Seed Science and Technology 34(3): 573-584.
Peterson, J. K. (1983). "Mechanisms Involved in Delayed Germination of Quercus nigra L. Seeds." Annals of Botany 52(1): 81-92.
Phartyal, S. S., et al. (2009). "Seed development and germination ecophysiology of the invasive tree Prunus serotina (Rosaceae) in a temperate forest in Western Europe." Plant Ecology 204(2): 285-294.
Phartyal, S. S., et al. (2009). "Temperature requirements differ for the two stages of seed dormancy break in Aegopodium podagraria (Apiaceae), a species with deep complex morphophysiological dormancy." Am J Bot 96(6): 1086-1095.
Phartyal, S. S., et al. (2014). "A comprehensive view of epicotyl dormancy in Viburnum furcatum: combining field studies with laboratory studies using temperature sequences." Seed Science Research 24(04): 281-292.
Picciau, R., et al. (2017). "Can alternating temperature, moist chilling, and gibberellin interchangeably promote the completion of germination in Clematis vitalba seeds?" Botany 95(8): 847-852.
Pinfield, N. J. and P. A. Stutchbury (1990). "Seed Dormancy in Acer: The Role of Testa-imposed and Embryo Dormancy in Acer velutinum." Annals of Botany 66(2): 133-137.
Pinfield, N. J. S., P. A.; Bazaid, S. M. (1987). "Seed dormancy in Acer: Is there a common mechanism for all Acer species and what part is played in it by abscisic acid?" Physiologia Plantarum 71(3): 365-371.
Pipinis, E., et al. (2012). "Effects of stratification and pre-treatment with gibberellic acid on seed germination of two Carpinus species." Seed Science and Technology 40(1): 21-31.
Pipinis, E., et al. (2014). "Dormancy-Breaking Requirements and Germination for Seeds of Ostrya carpinifolia Scop." Notulae Botanicae Horti Agrobotanici Cluj-Napoca 42(1): 209-213.
Pipinis, E., et al. (2015). "Effects of dormancy-breaking treatments on seed germination of Koelreuteria paniculata and Mahonia aquifolium." Dendrobiology 74: 149-155.
Pipinis, E., et al. (2017). "Effects of Cold Stratification and Ga3 on Germination of Arbutus Unedo Seeds of Three Provenances." Afr J Tradit Complement Altern Med 14(1): 318-323.
Pita, J. M. S., V.; Escudero, A. (1998). "Seed cryopreservation of seven Spanish native pine species." Silvae Genetica 47(4): 220-223.
Pitel, J. A. C., W. M. (1988). "Metabolism of enzymes with imbibition and germination of seeds of jack pine (Pinus banksiana)." Canadian Journal of Botany 66(3): 542-547.
Pitel, J. A. W., B. S. P. (1985). "Physical and chemical treatments to improve laboratory germination of western white pine seeds." Canadian Journal of Forest Research 15(6): 1187-1190.
Pitel, J. A. W., B. S. P.; Cheliak, W. M. (1984). "Improving germination of hop-hornbeam seeds." Canadian Journal of Forest Research 14(3): 464-466.
Pliszko, A. and K. Kostrakiewicz-Gieralt (2018). "Effect of cold stratification on seed germination in Solidago x niederederi (Asteraceae) and its parental species." Biologia (Bratisl) 73(10): 945-950.
Pons, T. L. (1984). "Possible significance of changes in the light requirement of Cirsium palustre seeds after dispersal in ash coppice." Plant, Cell and Environment 7(4): 263-268.
Pons, T. L. (1991). "Dormancy, Germination and Mortality of Seeds in a Chalk-Grassland Flora." The Journal of Ecology 79(3): 765-780.
Póvoa, O., et al. (2017). "Adaptação ao cultivo de oregão (Origanum vulgare L.) na região de Elvas." Revista de Ciências Agrárias 40(SP): S059-S070.
Pritchard, H. W. and K. R. Manger (1990). "Quantal Response of Fruit and Seed Germination Rate inQuercus roburL. andCastanea sativaMill, to Constant Temperatures and Photon Dose." Journal of Experimental Botany 41(12): 1549-1557.
Pritchard, H. W., et al. (1993). "Influence of temperature on seed germination and the nutritional requirements for embryo growth in Arum maculatum L." New Phytologist 123(4): 801-809.
Probert, R. J. S., R. O. (1986). "The joint action of phytochrome and alternating temperatures in the control of seed germination in Dactylis glomerata." Physiologia Plantarum 67(2): 299-304.

Probert, R. J., et al. (1985). "Germination Responses to Light and Alternating Temperatures in European Populations of Dactylis Glomerata L." New Phytologist 100(3): 447-455.
Probert, R. J., et al. (1986). "Germination Responses to Light and Alternating Temperatures in European Populations of Dactylis Glomerata L.. V. The Principle Components of the Alternating Temperature Requirement." New Phytologist 102(1): 133-142.
Prochazkova, Z. and L. Bezdeckova (2009). "Effect of accelerated ageing on the viability and germination of European beech (Fagus sylvatica L.) seeds." Seed Science and Technology 37(3): 699-712.
Putievsky, E. (1983). "Temperature and daylength influences on the growth and germination of sweet basil and oregano." Journal of Horticultural Science 58(4): 583-587.
Qin, J. and Q. Liu (2009). "Oxidative metabolism-related changes during germination of mono maple (Acer mono Maxim.) seeds under seasonal frozen soil." Ecological Research 25(2): 337-345.
Radvanyi, A. (1975). "Effect of storage on germination of R-55 repellent-treated seed of white spruce." The Forestry Chronicle 51(1): 21-23.
Raghu, S. P., Susan L. (2008). "Cold Stratification Requirements for Germination ofAlliaria petiolata." Invasive Plant Science and Management 1(3): 315-318.
Ratajczak, E. and S. Pukacka (2005). "Decrease in beech (Fagus sylvatica) seed viability caused by temperature and humidity conditions as related to membrane damage and lipid composition." Acta Physiologiae Plantarum 27(1): 3-12.
Ratajczak, E., et al. (2015). "Age-related changes in protein metabolism of beech (Fagus sylvatica L.) seeds during alleviation of dormancy and in the early stage of germination." Plant Physiol Biochem 94: 114-121.
Rawlins, J. K., et al. (2012). "Predicting germination in semi-arid wildland seedbeds. I. Thermal germination models." Environmental and Experimental Botany 76: 60-67.
Ren, C. and A. R. Kermode (2000). "An increase in pectin methyl esterase activity accompanies dormancy breakage and germination of yellow cedar seeds." Plant Physiol 124(1): 231-242.
Reyes, O. and L. Trabaud (2008). "Germination behaviour of 14 Mediterranean species in relation to fire factors: smoke and heat." Plant Ecology 202(1): 113-121.
Richardson, W. C., et al. (2018). "Use of auto-germ to model germination timing in the sagebrush-steppe." Ecol Evol 8(23): 11533-11542.
Richter, D. D. and G. L. Switzer (1982). "A Technique for Determining Quantitative Expressions of Dormancy in Seeds." Annals of Botany 50(4): 459-463.
Roberts, H. A. and P. M. Lockett (1977). "Temperature Requirements for Germination of Dry-Stored, Cold-Stored and Buried Seeds of Solanum Dulcamara L." New Phytologist 79(3): 505-510.
Robocker, W. C. (1977). "GERMINATION OF SEEDS OF COMMON YARROW (ACHILLEA-MILLEFOLIUM) AND ITS HERBICIDAL CONTROL." Weed Science 25(5): 456-459.
Rosario Nuñez, M., et al. (2003). "Predicting the probability of seed germination in Pinus sylvestris L. and four competitor shrub species after fire." Annals of Forest Science 60(1): 75-81.
Rosner, L. S. and J. T. Harrington (2004). "Effect of stratification in polyethylene glycol solutions on germination of three North American shrub species." Seed Science and Technology 32(2): 309-318.
Rostamikia, Y., et al. (2016). "Effect of Plant Growth Promoting Rhizobacteria (PGPR) and Cold Stratification on Seed Germination and Early Growth of Corylus avellana L." Austrian Journal of Forest Science 133(4): 337-352.
Rounsaville, T. J., et al. (2018). "Seed dynamics of the liana Euonymus fortunei (Celastraceae) and implications for invasibility." The Journal of the Torrey Botanical Society 145(3): 225-236.
Rowley, L., et al. (2007). "Seed stratification of an intermountain west Chokecherry ecotype." Journal of the American Pomological Society 61(4): 179-182.
Russi, L. C., P. S.; Roberts, E. H. (1992). "The Fate of Legume Seeds Eaten by Sheep from a Mediterranean Grassland." The Journal of Applied Ecology 29(3): 772-778.
Sahramaa, M. K. H., L. (2000). "Seed production characters and germination performance of reed canary grass in Finland." Agricultural and Food Science in Finland 9(3): 239-251.
Sakurai, A. and K. Takahashi (2017). "Flowering phenology and reproduction of the Solidago virgaurea L. complex along an elevational gradient on Mt Norikura, central Japan." Plant Species Biology 32(4): 270-278.
Salahshoor, F. and F. Kazemi (2016). "Effect of calcium on reducing salt stress in seed germination and early growth stage of Festuca ovina L. ." Plant, Soil and Environment 62(No. 10): 460-466.
Santiago, A., et al. (2013). "Species-specific environmental requirements to break seed dormancy: implications for selection of regeneration niches in three Lonicera (Caprifoliaceae) species." Botany 91(4): 225-233.
Santiago, A., et al. (2014). "Non-deep simple morphophysiological dormancy in seeds of Viburnum lantana (Caprifoliaceae), a new dormancy level in the genus Viburnum." Seed Science Research 25(01): 46-56.
Sarvas, R. (1950). "Effect of Light on the Germination of Forest Tree Seeds." Oikos 2(1): 109-119.
Sasaki, S. K., T. T. (1968). "Effects of Herbicides on Seed Germination and Early Seedling Development of Pinus resinosa." Botanical Gazette 129(3): 238-246.
Sayers, R. L. W., Richard T. (1966). "Germination Responses in Alpine Species." Botanical Gazette 127(1): 11-16.
Schalin, I. (1967). "Germination Analysis of Alnus incana (L.) Moench and Alnus glutinosa (L.) Gaertn. Seeds." Oikos 18(2): 253-&.
Scherbatskoy, T. K., Richard M.; Badger, G. J. (1987). "Germination responses of forest tree seed to acidity and metal ions." Environmental and Experimental Botany 27(2): 157-164.
Schmiedel, D. and O. Tackenberg (2013). "Hydrochory and water induced germination enhance invasion of Fraxinus pennsylvanica." Forest Ecology and Management 304: 437-443.
Schonfeld, M. A. C., R. J. (1983). "Factors influencing seed movement and dormancy in grass seeds." Grass and Forage Science 38(4): 243-250.
Schütz, W. (1997). "Are germination strategies important for the ability of cespitose wetland sedges (Carex) to grow in forests?" Canadian Journal of Botany 75(10): 1692-1699.
Schütz, W. (1997). "Primary dormancy and annual dormancy cycles in seeds of six temperate wetland sedges." Aquatic Botany 59(1-2): 75-85.
Seglie, L., et al. (2012). "In vitroseed germination and seedling propagation inCampanulaspp." Plant Biosystems - An International Journal Dealing with all Aspects of Plant Biology 146(1): 15-23.
Seiwa, K., et al. (2009). "Spatio-temporal variation of environmental signals inducing seed germination in temperate conifer plantations and natural hardwood forests in northern Japan." Forest Ecology and Management 257(1): 361-369.
Seong, C. K. S., Ki Seon; Koo, Da Eun; Hana, Lee; Kim, Jong Jin; ???, (2018). "Characteristics of Seed and Germination of Rhododendron mucronulatum by Collection Dates and Germination Temperatures." Journal of Korean Society of Forest Science 107(3): 237-244.
Sevik, H. and M. Cetin (2015). "Effects of Water Stress on Seed Germination for Select Landscape Plants." Polish Journal of Environmental Studies 24(2): 689-693.
Shannon, P. R. M. J., R. A.; Jarvis, B. C. (1983). "Light-Sensitivity of Hazel Seeds with Respect to the Breaking of Dormancy." Plant and Cell Physiology 24(5): 933-936.
Sharaf, A. R. N., et al. (2011). "In vitro seed germination and micropropagation of primrose (Primula heterochroma Stapf.) an endemic endangered Iranian species via shoot tip explants." Horticulture, Environment, and Biotechnology 52(3): 298-302.
Shimomura, H. S., Yutaka; Nakata, Hiroyuki; Yamamoto, Akiko; Kawakubo, Yoshie; Kawasaki, Junichi (1983). "Germination and Growth Inhibitors in Fruits of Gardenia jasminoides." Plant and Cell Physiology 24(1): 123-126.
Shimono, Y. and G. Kudo (2005). "Comparisons of germination traits of alpine plants between fellfield and snowbed habitats." Ecological Research 20(2): 189-197.

Shipley, B. P., M. (1991). "Germination Responses of 64 Wetland Species in Relation to Seed Size, Minimum Time to Reproduction and Seedling Relative Growth Rate." Functional Ecology 5(1): 111-118.
Silvertown, J. (1980). "Leaf-Canopy-Induced Seed Dormancy in a Grassland Flora." New Phytologist 85(1): 109-118.
Simpson, J. D., et al. (2004). "Long-term seed storage of various Canadian hardwoods and conifers." Seed Science and Technology 32(2): 561-572.
Smith, D. C. (1939). "Influence of moisture and low temperature on the germination of hop seeds." Journal of Agricultural Research 58: 0369-0381.
Sniezko, R. A., et al. (2017). "Ex situ genetic conservation potential of seeds of two high elevation white pines." New Forests 48(2): 245-261.
Snow, A. G. S., A. G.; Borthwick, H. A.; Hendricks, S. B.; Toole, E. H. (1961). "RESPONSES OF SEEDS OF PINUS VIRGINIANA TO LIGHT." Plant Physiology 36(3): 285-+.
Soares, V. N. E., Sabry G.; Gadotti, Gizele I.; Garay, Adriel E.; Villela, Francisco A. (2016). "Can the Tetrazolium Test be Used as an Alternative to the Germination Test in Determining Seed Viability of Grass Species?" Crop Science 56(2): 707-715.
Solarik, K. A., et al. (2016). "Assessing tree germination resilience to global warming: a manipulative experiment using sugar maple (Acer saccharum)." Seed Science Research 26(02): 153-164.
Soltani, A., et al. (2005). "Alleviation of physiological dormancy in oriental beechnuts with cold stratification at controlled and unrestricted hydration." Seed Science and Technology 33(2): 283-292.
Song, D., et al. (2017). "Seed dormancy in Camellia sinensis L. (Theaceae): effects of cold-stratification and exogenous gibberellic acid application on germination." Botany 95(2): 147-152.
Song, U., et al. (2014). "Effects of three fire-suppressant foams on the germination and physiological responses of plants." Environ Manage 54(4): 865-874.
Song, Y., et al. (2018). "Korean pine seed: linking changes in dormancy to germination in the 2 years following dispersal." Forestry: An International Journal of Forest Research 91(1): 98-109.
Spindelbock, J. P., et al. (2013). "Conditional cold avoidance drives between-population variation in germination behaviour in Calluna vulgaris." Ann Bot 112(5): 801-810.
Springer, T. L. (2017). "Recurrent selection increases seed germination in little bluestem (Schizachyrium scoparium)." Euphytica 213(12).
Spyroglou, G. and K. Radoglou (2017). "Effect of pre-treatments on the germination of jasmin box (Phillyrea latifolia) seeds in Greece." Bosque (Valdivia) 38(2): 347-355.
Stanisavljevic, R., et al. (2011). "Seed germination and seedling vigour of italian ryegrass, cocksfoot and timothy following harvest and storage." Ciencia E Agrotecnologia 35(6): 1141-1148.
Stanisavljevic, R., et al. (2015). "Enhancement of seed germination in three grass species using chemical and temperature treatments." Range Management and Agroforestry 36(2): 115-121.
Stanton, S., et al. (2010). "Seed germination tests of the parasitic perennial Viscum album (Viscaceae) from fragmented habitats at the northern edge of its range." Plant Ecology and Evolution 143(2): 113-118.
Stearns, F. O., Jerry (1958). "Interactions of Photoperiod and Temperature Affecting Seed Germination in Tsuga canadensis." American Journal of Botany 45(1): 53-58.
Stewart, R. N. S., Peter (1965). "The Effect of the Interaction of Temperature with After-Ripening Requirement and Compensating Temperature on Germination of Seed of Five Species of Rosa." American Journal of Botany 52(7): 755-&.
Struve, D. K. D., Martin F.; Bennett, Mark A. (1991). "Aerated water soak increases red oak seed germination and seedling emergence." Canadian Journal of Forest Research 21(8): 1257-1261.
Sun, Q. Y., Toshihiko; Takano, Tetsuo (2014). "Salinity Effects on Germination, Growth, Photosynthesis, and Ion Accumulation in Wild Anderss. Populations." Crop Science 54(6): 2760-2771.
Susko, D. J. M., J. Paul; Spears, Janet F. (2001). "An evaluation of methods for breaking seed dormancy in kudzu (Pueraria lobata)." Canadian Journal of Botany 79(2): 197-203.
Suszka, B., et al. (2005). "How long can seeds of Norway spruce (Picea abies (L.) Karst.) be stored?" Annals of Forest Science 62(1): 73-78.
Suzuki, K., et al. (2007). "Responses of Liriope platyphylla F.T. Wang & T. Tang and Ophiopogon japonicus (L.f.) Ker Gawl. seeds to desiccation." Seed Science and Technology 35(1): 129-133.
Suzuki, W. (1997). "Germination responses of Rubus palmatus var. coptophyllus and Rubus parvifolius seeds with different burial durations to a variable light and temperature regime." Ecological Research 12(2): 167-174.
Takos, I. A. and G. S. Efthimiou (2003). "Germination results on dormant seeds of fifteen tree species autumn sown in a northern Greek nursery." Silvae Genetica 52(2): 67-71.
Takos, I., et al. (2012). "Can Electrical Conductivity Predict Seed Germination of Three Pinus Species?" Silvae Genetica 61(1-6): 168-170.
Tav?ano?lu, Ç., et al. (2015). "Fire-related germination and early seedling growth in 21 herbaceous species in Central Anatolian steppe." Journal of Arid Environments 122: 109-116.
Tavsanoglu, C. (2011). "Fire-Related Cues (Heat Shock and Smoke) and Seed Germination in a Cistus creticus Population in Southwestern Turkey." Ekoloji 20(79): 99-104.
Taylor, R. J. S., David C. (1983). "Allelopathic effects of Engelmann spruce bark stilbenes and tannin–stilbene combinations on seed germination and seedling growth of selected conifers." Canadian Journal of Botany 61(1): 279-289.
Taylorson, R. B. (1987). "Reverse bimodal action of 2,2,2-trifluoroethanol on Rumex crispus seed germination." Physiologia Plantarum 69(4): 716-720.
Temel, F., et al. (2011). "Germination of Anatolian Black Pine (Pinus nigra subsp pallasiana) Seeds from the Lakes Region of Turkey: Geographic Variation and Effect of Storage." Notulae Botanicae Horti Agrobotanici Cluj-Napoca 39(1): 267-274.
Terui, K. O., Nobuo (1989). "Dormancy in Dioscorea: Rapid Germination of Detached Embryos from Dormant Seeds of D. tokoro." Plant and Cell Physiology 30(2): 287-293.
Tezuka, T., et al. (2013). "Factors Affecting Seed Germination of Ilex latifolia and I-rotunda." Hortscience 48(3): 352-356.
Thanos, C. A. G., K. (1988). "Ecophysiology of fire-stimulated seed germination in Cistus incanus ssp. creticus (L.) Hey wood and C. salvifolius L." Plant, Cell & Environment 11(9): 841-849.
Thanos, C. A. K., C. C.; Skarou, F. (1995). "ECOPHYSIOLOGY OF GERMINATION IN THE AROMATIC PLANTS THYME, SAVORY AND OREGANO (LABIATAE)." Seed Science Research 5(3): 161-170.
Thomas, T. H. and I. Davies (2002). "Responses of dormant heather (Calluna vulgaris) seeds to light, temperature, chemical and advancement treatments." Plant Growth Regulation 37(1): 23-29.
Thompson, A. J., et al. (1997). "The effect of temperature on viability of imbibed weed seeds." Annals of Applied Biology 130(1): 123-134.
Thompson, K. (1989). "A Comparative Study of Germination Responses to High Irradiance Light." Annals of Botany 63(1): 159-162.
Thompson, K. G., J. P. (1983). "A Comparative Study of Germination Responses to Diurnally-Fluctuating Temperatures." The Journal of Applied Ecology 20(1): 141-156.
Thompson, P. A. (1974). "Effects of Fluctuating Temperatures on Germination." Journal of Experimental Botany 25(1): 164-175.
Thompson, P. A. (1980). "Germination Strategy of a Woodland Grass: Milium effusum L." Annals of Botany 46(5): 593-602.
Thompson, P. A. and S. A. Cox (1978). "Germination of the Bluebell (Hyacinthoides non-scripta (L.) Chouard) in Relation to its Distribution and Habitat." Annals of Botany 42(1): 51-62.
Thomson, E. F. R., S.; Cocks, P. S.; Osman, A. E.; Russi, L. (1990). "Recovery and germination rates of seeds of Mediterranean medics and clovers offered to sheep at a single meal or continuously." The Journal of Agricultural Science 114(03): 295-299.
Tilki, F. (2005). "Seed germination and radicle development in six provenances of Pinus sylvestris L. under water stress." Israel Journal of Plant Sciences 53(1): 29-33.
Tilki, F. (2007). "Preliminary results on the effects of various pre-treatments on seed germination of Juniperus oxycedrus L." Seed Science and Technology 35(3): 765-770.

Tilki, F. (2008). “Seed germination of Cistus creticus L. and Cistus laurifolius L. as influenced by dry-heat, soaking in distilled water and gibberellic acid.” Journal of Environmental Biology 29(2): 193-195.
Tilki, F. (2010). “Influence of acorn size and storage duration on moisture content, germination and survival of Quercus petraea (Mattuschka).” J Environ Biol 31(3): 325-328.
Tipton, J. L. (1992). “REQUIREMENTS FOR SEED-GERMINATION OF MEXICAN REDBUD, EVERGREEN SUMAC, AND MEALY SAGE.” Hortscience 27(4): 313-316.
Tisdale, E. W. H., M.; Pringle, W. L. (1959). “Observations on the Autecology of Hypericum Perforatum.” Ecology 40(1): 54-62.
Toole, E. H., et al. (1955). “Interaction of Temperature and Light in Germination of Seeds.” Plant Physiol 30(5): 473-478.
Toole, V. K., et al. (1962). “Responses of Seeds of Pinus taeda & P. strobus to Light.” Plant Physiol 37(2): 228-233.
Topacoglu, O., et al. (2016). “EFFECTS OF WATER STRESS ON GERMINATION OF PINUS NIGRA ARNOLD. SEEDS.” Pakistan Journal of Botany 48(2): 447-453.
Toumi, M., et al. (2017). “[Effect of several methods of scarification and osmotic stress on seed germination of Robinia pseudoacacia L.].” C R Biol 340(5): 264-270.
Trueblood, C., et al. (2010). “Evaluating Fertility of Triploid Clones of Hypericum androsaemum L. for Use as Non-invasive Landscape Plants.” Hortscience 45(8): S280-S281.
Tsuyuzaki, S. and C. Miyoshi (2009). “Effects of smoke, heat, darkness and cold stratification on seed germination of 40 species in a cool temperate zone in northern Japan.” Plant Biol (Stuttg) 11(3): 369-378.
Tylkowski, T. (2007). “Stratification conditions determining seed dormancy release of european bladder nut (Staphylea pinnata L.).” Acta Societatis Botanicorum Poloniae 76(2): 95-101.
Tylkowski, T. (2009). “Improving seed germination and seedling emergence in the Juniperus communis.” Dendrobiology 61: 47-53.
Valbuena, L. and M. L. Vera (2002). “The effects of thermal scarification and seed storage on germination of four heathland species.” Plant Ecology 161(1): 137-144.
Valbuena, L. and R. Tarrega (1998). “The influence of heat and mechanical scarification on the germination capacity of Quercus pyrenaica seeds.” New Forests 16(2): 177-183.
Van Assche, J. A. and F. E. A. Vandelook (2006). “Germination ecology of eleven species of <I>Geraniaceae</I> and <I>Malvaceae</I>, with special reference to the effects of drying seeds.” Seed Science Research 16(4): 283-290.
Van Assche, J. A., et al. (2003). “Seasonal cycles in the germination capacity of buried seeds of some Leguminosae (Fabaceae).” New Phytologist 158(2): 315-323.
Van Assche, J., et al. (2002). “The comparative germination ecology of nine Rumex species.” Plant Ecology 159(2): 131-142.
van der Vegte, F. W. (1978). “Population differentiation and germination ecology in Stellaria media (L.) Vill.” Oecologia 37(2): 231-245.
van Tooren, B. F. P., T. L. (1988). “Effects of Temperature and Light on the Germination in Chalk Grassland Species.” Functional Ecology 2(3): 303-310.
Vandelook, F. and J. A. Van Assche (2010). “A combined physical and physiological dormancy controls seasonal seedling emergence of Geranium robertianum.” Plant Biol (Stuttg) 12(5): 765-771.
Vandelook, F. V. A., J. A. (2008). “Deep complex morphophysiological dormancy in Sanicula europaea (Apiaceae) fits a recurring pattern of dormancy types in genera with an Arcto-Tertiary distribution.” Botany 86(12): 1370-1377.
Vandelook, F., et al. (2007). “Multiple environmental signals required for embryo growth and germination of seeds of Selinum carvifolia (L.) L. and Angelica sylvestris L. (Apiaceae).” Seed Science Research 17(4): 283-291.
Vandelook, F., et al. (2008). “Environmental signals for seed germination reflect habitat adaptations in four temperate Caryophyllaceae.” Functional Ecology 22(3): 470-478.
Vandelook, F., et al. (2009). “Morphological and physiological dormancy in seeds of Aegopodium podagraria (Apiaceae) broken successively during cold stratification.” Seed Science Research 19(2): 115-123.
Vandelook, F., et al. (2009). “The role of temperature in post-dispersal embryo growth and dormancy break in seeds of Aconitum lycoctonum L.” Flora - Morphology, Distribution, Functional Ecology of Plants 204(7): 536-542.
Vanhatalo, V., et al. (1996). “Effect of prechilling on the dormancy of Betulapendula seeds.” Canadian Journal of Forest Research 26(7): 1203-1208.
Vansplunder, I. C., H.; Voesenek, Lacj; Blom, Cwpm (1995). “ESTABLISHMENT OF ALLUVIAL FOREST SPECIES IN FLOODPLAINS - THE ROLE OF DISPERSAL TIMING, GERMINATION CHARACTERISTICS AND WATER-LEVEL FLUCTUATIONS.” Acta Botanica Neerlandica 44(3): 269-278.
Vasques, A., et al. (2014). “The role of cold storage and seed source in the germination of three Mediterranean shrub species with contrasting dormancy types.” Annals of Forest Science 71(8): 863-872.
Vera, M. L. (1997). “Effects of altitude and seed size on germination and seedling survival of heathland plants in North Spain.” Plant Ecology 133(1): 101-106.
Voronkova, N. and A. Holina (2011). “Biologija prorastanija i kriohranenie semjan nekotoryh pisevyh i lekarstvennyh vidov rastenij Dalnego Vostoka Rossii.” Vestnik Krasnojarskogo gosudarstvennogo agrarnogo universiteta(9).
Vranckx, G. and F. Vandelook (2012). “A season- and gap-detection mechanism regulates seed germination of two temperate forest pioneers.” Plant Biol (Stuttg) 14(3): 481-490.
Wada, S. and B. M. Reed (2011). “Optimized scarification protocols improve germination of diverse Rubus germplasm.” Scientia Horticulturae 130(3): 660-664.
Wada, S. and B. M. Reed (2011). “Standardizing germination protocols for diverse raspberry and blackberry species.” Scientia Horticulturae 132: 42-49.
Wagner, M. P., Richard F.; Knopp, Tatjana; Bullock, James M.; Heard, Matthew S. (2011). “The germination niches of grassland species targeted for restoration: effects of seed pre-treatments.” Seed Science Research 21(02): 117-131.
Walbott, M., et al. (2018). “[Beech (Fagus sylvatica) germination and seedling growth under climatic and allelopathic constraints].” C R Biol 341(9-10): 444-453.
Walck, J. L. B., Carol C.; Baskin, Jerry M. (1997). “Comparative Achene Germination Requirements of the Rockhouse Endemic Ageratina luciae-brauniae and its Widespread Close Relative A. altissima (Asteraceae).” American Midland Naturalist 137(1): 1-12.
Walck, J. L., et al. (2002). “Seed germination ecophysiology of the Asian species Osmorhiza aristata (Apiaceae): comparison with its North American congeners and implications for evolution of types of dormancy.” Am J Bot 89(5): 829-835.
Walck, J. L., et al. (2012). “Seed germination and seedling development ecology in world-wide populations of a circumboreal Tertiary relict.” Aob Plants 2012: pls007.
Wang, B. (2000). “Beneficial Effects of Moist Chilling on the Seeds of Black Spruce (Picea mariana [Mill.] B.S.P.).” Annals of Botany 86(1): 29-36.
Wang, G., et al. (2017). “EFFECTS OF LOW TEMPERATURE IN WINTER ON THE GERMINATION OF CAMELLIA JAPONICA SEEDS.” Bangladesh Journal of Botany 46(3): 1145-1152.
Wang, H., et al. (2015). “Differences in female reproductive success between female and hermaphrodite individuals in the subdioecious shrub Eurya japonica (Theaceae).” Plant Biol (Stuttg) 17(1): 194-200.
Wang, W. Q. S., S. Q.; Li, S. H.; Gan, Y. Y.; Wu, J. H.; Cheng, H. Y. (2011). “Seed dormancy and germination in Vitis amurensis and its variation.” Seed Science Research 21(04): 255-265.
Wang, Z. M. M., S. E. (1992). “PEATLAND AND UPLAND BLACK SPRUCE POPULATIONS IN ALBERTA, CANADA - ISOZYME VARIATION AND SEED-GERMINATION ECOLOGY.” Silvae Genetica 41(2): 117-122.
Washitani, I. (1984). “GERMINATION RESPONSES OF A SEED POPULATION OF TARAXACUM-OFFICINALE WEBER TO CONSTANT TEMPERATURES INCLUDING THE SUPRA-OPTIMAL RANGE.” Plant Cell and Environment 7(9): 655-659.
Washitani, I. (1988). “Effects of High Temperatures on the Permeability and Germinability of the Hard Seeds of Rhus javanica L.” Annals of Botany 62(1): 13-16.

Washitani, I. S., Toshiro (1986). "Germination Responses ofPinus densifloraSeeds to Temperature, Light and Interrupted Imbibition." Journal of Experimental Botany 37(9): 1376-1387.
Webb, D. P. D., E. B. (1969). "Factors influencing the stratification process in seeds of Acer saccharum." Canadian Journal of Botany 47(10): 1555-1563.
Weber, J. C. S., F. C. (1990). "EFFECTS OF STRATIFICATION AND TEMPERATURE ON SEED-GERMINATION SPEED AND UNIFORMITY IN CENTRAL OREGON PONDEROSA PINE (PINUS-PONDEROSA DOUGL EX-LAWS)." Usda Forest Service Pacific Northwest Research Station Research Paper(429): 1-13.
West, T. P., et al. (2014). "Germination of Nonstratified Japanese Tree Lilac Seeds as Influenced by Seed Capsule Maturity and Moisture Content." Horttechnology 24(2): 177-180.
White, S. N. Z., Linshan; Pruski, Kris (2017). "Investigation of Potential Seed Dormancy Mechanisms in American Burnweed (Erechtites hieraciifolius) Seeds from Wild Blueberry (Vaccinium angustifolium) fields." Weed Science 65(02): 256-265.
Wijte, A. H. B. M. and J. L. Gallagher (1996). "Effect of Oxygen Availability and Salinity on Early Life History Stages of Salt Marsh Plants. I. Different Germination Strategies of Spartina alterniflora and Phragmites australis (Poaceae)." American Journal of Botany 83(10): 1337-1342.
Wille, W., et al. (2013). "Limited evidence for allelopathic effects of giant hogweed on germination of native herbs." Seed Science Research 23(02): 157-162.
Williams, E. D. (1983). "Germinability and enforced dormancy in seeds of species of indigenous grassland." Annals of Applied Biology 102(3): 557-566.
Williams, M. I., et al. (2016). "Can biochar be used as a seed coating to improve native plant germination and growth in arid conditions?" Journal of Arid Environments 125: 8-15.
Winston, D. A. H., B. D. (1981). "Effects of early cone collection and artificial ripening on white spruce and red pine germination." Canadian Journal of Forest Research 11(4): 817-826.
Woodard, P. M. C., G. (1987). "ENGELMANN SPRUCE, LODGEPOLE PINE AND SUBALPINE FIR SEED-GERMINATION SUCCESS ON ASHBED CONDITIONS." Northwest Science 61(4): 233-238.
Wu, A.-P., et al. (2010). "Effects of Mikania micrantha extracts and their exposure time on seed vigour, seed germination and seedling growth of plants." Allelopathy Journal 25(2): 503-511.
Wu, L., et al. (2001). "Effects of moist chilling and solid matrix priming on germination of loblolly pine (Pinus taeda L.) seeds." New Forests 21(1): 1-16.
Xia, Q., et al. (2016). "Interaction of seed size with light quality and temperature regimes as germination cues in 10 temperate pioneer tree species." Functional Ecology 30(6): 866-874.
Xiao, C., et al. (2010). "Seed germination of 14 wetland species in response to duration of cold-wet stratification and outdoor burial depth." Aquatic Biology 11(2): 169-177.
Xiao, Y., et al. (2016). "Effects of salinity and sulphide on seed germination of three coastal plants." Flora - Morphology, Distribution, Functional Ecology of Plants 218: 86-91.
Yagihashi, T., et al. (1998). "Effects of bird ingestion on seed germination of Sorbus commixta." Oecologia 114(2): 209-212.
Yambe, Y. T., K.; Saito, T. (1995). "LIGHT AND PHYTOCHROME INVOLVEMENT IN ROSA-MULTIFLORA SEED-GERMINATION." Journal of the American Society for Horticultural Science 120(6): 953-955.
Yang, J. C., et al. (2007). "Intermediate storage behaviour and the effect of prechilling on germination of Japanese Zelkova (Zelkova serrata) seeds." Seed Science and Technology 35(1): 99-110.
Yang, Q. H., et al. (2009). "Seed germination physiology of Ardisia crenata var. bicolor." Seed Science and Technology 37(2): 291-302.
Yasin, M. and C. Andreasen (2015). "Breaking seed dormancy of Alliaria petiolata with phytohormones." Plant Growth Regulation 77(3): 307-315.
Yasin, M. and C. Andreasen (2018). "Hypoxia Improves Germination of the Problematic Invader Garlic Mustard (Alliaria petiolata) of North American Forests." American Midland Naturalist 179(1): 150-156.
Yazdi, S. A. F., et al. (2013). "FACTORS AFFECTING SEED GERMINATION AND SEEDLING EMERGENCE OF SHEEP SORREL (RUMEX ACETOSELLA)." Romanian Agricultural Research 30: 373-380.
Yilmaz, M. and F. Tonguç (2012). "Effects of temperature on the germination of Fraxinus ornus subsp. cilicica seeds." Dendrobiology 69: 111-115.
Yilmaz, M. and F. Tonguc (2013). "DORMANCY LEVEL AND DORMANCY-BREAKING PRETREATMENTS IN SEEDS OF FRAXINUS ORNUS SUBSP CILICICA." Propagation of Ornamental Plants 13(1): 40-45.
Yoon, J.-H., et al. (2013). "Effects of Seed Pre-treatment and Germination Environments on Germination Characteristics of Ligularia fischeri Seeds." Protected Horticulture and Plant Factory 22(3): 262-269.
Young, A. T., et al. (2010). "The Influence of Germinations in Soaking Treatment of Rhus chinensis, Lespedeza cyrtobotrya and Lespedeza cuneata." Journal of the Korea Society of Environmental Restoration Technology 13(2): 42-51.
Young, J. A. E., Raymond A. (1977). "Squirreltail Seed Germination." Journal of Range Management 30(1): 33-36.
Young, J. A. E., Raymond A. (1979). "Arrowleaf Balsamroot and Mules Ear Seed Germination." Journal of Range Management 32(1): 71-74.
Young, J. A., et al. (2003). "Germination of Seeds of Big and Bottlebrush Squirreltail." Journal of Range Management 56(3): 277-281.
Yu, J., et al. (2012). "Effects of Salinity and Water Depth on Germination ofPhragmites australisin Coastal Wetland of the Yellow River Delta." CLEAN - Soil, Air, Water 40(10): 1154-1158.
Zerche, S. and A. Ewald (2005). "Seed Potassium Concentration Decline During Maturation Is Inversely Related to Subsequent Germination of Primrose." Journal of Plant Nutrition 28(4): 573-603.
Zhang, M., et al. (2012). "[Effects of light quality on the seed germination of main tree species in a secondary forest ecosystem of Northeast China]." Ying Yong Sheng Tai Xue Bao 23(10): 2625-2631.
Zhang, X., et al. (2018). "Allelopathic Potential of Koelreuteria bipinnata var. integrifoliola on Germination of Three Turf Grasses." Russian Journal of Plant Physiology 65(6): 833-841.
Zhang, Z. and F. Yu (2019). "Effects of Salt Stress on Seed Germination of Four Ornamental Non-Halophyte Species." International Journal of Agriculture and Biology 21(1): 47-53.
Zhong, X., et al. (2002). "Temperature dependence of seedling establishment of a perennial, Dioscorea tokoro." J Plant Res 115(1117): 55-57.
Zhu, J., et al. (2005). "[Effects of polyethylene glycol (PEG)-simulated drought stress on Pinus sylvestris var. mongolica seed germination on sandy land]." Ying Yong Sheng Tai Xue Bao 16(5): 801-804.
Zhu, J., et al. (2017). "Effects of drought stresses induced by polyethylene glycol on germination of Pinus sylvestris var. mongolica seeds from natural and plantation forests on sandy land." Journal of Forest Research 11(5): 319-328.
Zitnik, S. H., D. E.; Kraigher, H. (1999). "Reduced germination is associated with loss of phytic acid in stored seeds of sessile oak (Quercus petraea (Matt.) Liebl.)." Phyton-Annales Rei Botanicae 39(4): 275-280.
Zuloaga-Aguilar, S., et al. (2010). "Effect of heat shock on germination of 23 plant species in pine - oak and montane cloud forests in western Mexico." International Journal of Wildland Fire 19(6): 759-773.

Species	Reference	Population	Year	Country	Latitude	Longitude	Scarificatio	Stratificatio
Pinus taeda	Zhang, Z. a	Ji◆an, Jiar	2011	China	27.1	114.9833	N	0
Fraxinus ch	Zhang, Z. a	Ji◆an, Jiar	2011	China	27.1	114.9833	N	0
Solidago vi	Pliszko, A.	Warsaw, P	2016	Poland	42.11577	20.99223	N	84
Solidago vi	Pliszko, A.	Warsaw, P	2016	Poland	42.11577	20.99223	N	84
Juglans nig	Flores, P.,	Unknown,	2016	Argentina	-33.0167	-60.8833	N	90
Juglans nig	Flores, P.,	Unknown,	2016	Argentina	-33.0167	-60.8833	N	120
Juglans nig	Flores, P.,	Unknown,	2016	Argentina	-33.0167	-60.8833	N	90
Juglans nig	Flores, P.,	Unknown,	2016	Argentina	-33.0167	-60.8833	N	120
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies ceph	Daskalakou	Parnitha NF	2015	Greece	38.16667	23.71667	N	0
Abies balsa	Connolly, E	Wisconsin I	2011	USA	44.35	-89.8167	N	56
Acer sacch	Connolly, E	Wisconsin I	2011	USA	44.35	-89.8167	N	0
Picea glauc	Connolly, E	Wisconsin I	2011	USA	44.35	-89.8167	N	0
Pinus resin	Connolly, E	Wisconsin I	2011	USA	44.35	-89.8167	N	56
Acer sacch	Connolly, E	Wisconsin I	2011	USA	44.35	-89.8167	N	30
Abies balsa	Connolly, E	Wisconsin I	2011	USA	44.35	-89.8167	N	0
Pinus resin	Connolly, E	Wisconsin I	2011	USA	44.35	-89.8167	N	0
Pinus strob	Connolly, E	Wisconsin I	2011	USA	44.35	-89.8167	N	56
Pinus strob	Connolly, E	Wisconsin I	2011	USA	44.35	-89.8167	N	0
Picea glauc	Connolly, E	Wisconsin I	2011	USA	44.35	-89.8167	N	56
Dactylis glo	Butler, T. J.	NFOG 101,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 101,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 101,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 101,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 101,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 101,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 101,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 150,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 150,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 150,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 150,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 150,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 150,	2011	USA	34.16667	-97.1667	N	0
Dactylis glo	Butler, T. J.	NFOG 150,	2011	USA	34.16667	-97.1667	N	0
Acer rubrur	Marshall, J.	Ontario, Ca	1997	Canada	46.7	-82.6333	N	0
Acer rubrur	Marshall, J.	Ontario, Ca	1997	Canada	46.7	-82.6333	N	30
Alliaria peti	Blossey, B.	Ontario, Ca	1997	Canada	48.03333	-82.9167	N	0
Pinus bank	Bourgeois,	Ontario, Ca	1986	Canada	47.6	-82.4	N	0
Acer sacch	Marshall, J.	Ontario, Ca	1997	Canada	46.7	-82.6167	N	0
Picea maria	Beardmore	Ontario, Ca	1992	Canada	45.9	-77.2833	N	0
Picea maria	Beardmore	Ontario, Ca	1992	Canada	45.9	-77.2833	N	21
Alliaria peti	Blossey, B.	Minnesota,	1997	USA	45.21667	-93.1	N	0
Pinus resin	Sasaki, S. I	Minnesota,	1957	USA	45.96667	-94.2333	N	0

Alliaria peti	Blossey, B.	New York,	1997	USA	42.55	-74.8667	N	0
Alliaria peti	Blossey, B.	Illinois, USA	1997	USA	39.63333	-89.3833	N	0
Alliaria peti	Blossey, B.	Massachus	1997	USA	42.38333	-71.5333	N	0
Pinus sylve	Ostroshenk	Primorye T	2017	Russia	43.5	133.9	N	0
Alliaria peti	Blossey, B.	Ohio, USA	1997	USA	40.43333	-83.1833	N	0
Alliaria peti	Blossey, B.	Kansas, US	1997	USA	38.55	-97.8167	N	0
Alliaria peti	Blossey, B.	District of C	1997	USA	38.91667	-77.05	N	0
Acer sacch	Solarik, K. A	Kentucky, U	2013	USA	38.05	-84.35	N	14
Acer sacch	Solarik, K. A	Kentucky, U	2013	USA	38.05	-84.35	N	14
Acer sacch	Solarik, K. A	Kentucky, U	2013	USA	38.05	-84.35	N	14
Alliaria peti	Blossey, B.	Kentucky, U	1997	USA	37.48333	-86.1167	N	0
Acer sacch	Solarik, K. A	Kentucky, U	2013	USA	38.05	-84.35	N	14
Acer sacch	Solarik, K. A	Kentucky, U	2013	USA	38.05	-84.35	N	14
Acer sacch	Solarik, K. A	Kentucky, U	2013	USA	38.05	-84.35	N	14
Acer sacch	Solarik, K. A	Kentucky, U	2013	USA	38.05	-84.35	N	14
Acer sacch	Solarik, K. A	Kentucky, U	2013	USA	38.05	-84.35	N	14
Acer sacch	Solarik, K. A	Kentucky, U	2013	USA	38.05	-84.35	N	14
Alliaria peti	Blossey, B.	Georgia, US	1997	USA	32.75	-82.7833	N	0
Ulmus glab	Barden, C.	Douglas Co	2010	USA	38.86667	-95.25	N	90
Ulmus glab	Barden, C.	Douglas Co	2010	USA	38.86667	-95.25	N	0
Ulmus glab	Barden, C.	Butler Co, K	2010	USA	37.73333	-96.9	N	90
Ulmus glab	Barden, C.	Butler Co, K	2010	USA	37.73333	-96.9	N	0
Phragmites	Xiao, Y., et	Yancheng I	2013	China	32.33333	119.4833	N	0
Magnolia ol	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Magnolia ol	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Hydrangea	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Hydrangea	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Alnus hirsu	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Alnus hirsu	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Cercidiphyl	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Cercidiphyl	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Hydrangea	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Magnolia ki	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Magnolia ki	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Cercidiphyl	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Cercidiphyl	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Magnolia ki	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Magnolia ol	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Alnus hirsu	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Magnolia ol	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Hydrangea	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Magnolia ki	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Alnus hirsu	Xia, Q., et a	Field Scien	2012	Japan	38.75	140.75	N	30
Betula erm	Xia, Q., et a	Hokkaido, J	2012	Japan	43.11667	142.7	N	30
Phellodend	Xia, Q., et a	Hokkaido, J	2012	Japan	43.11667	142.7	N	30
Phellodend	Xia, Q., et a	Hokkaido, J	2012	Japan	43.11667	142.7	N	30
Phellodend	Xia, Q., et a	Hokkaido, J	2012	Japan	43.11667	142.7	N	30
Betula erm	Xia, Q., et a	Hokkaido, J	2012	Japan	43.11667	142.7	N	30
Phellodend	Xia, Q., et a	Hokkaido, J	2012	Japan	43.11667	142.7	N	30
Betula erm	Xia, Q., et a	Hokkaido, J	2012	Japan	43.11667	142.7	N	30
Betula erm	Xia, Q., et a	Hokkaido, J	2012	Japan	43.11667	142.7	N	30
Taraxacum	Molina-Mor	Caldera, Ch	2017	Chile	-27.1	-70.0167	N	0
Achillea mil	Williams, M	Moses Lake	2015	USA	47.13333	-119.283	N	0
Achillea mil	Williams, M	Moses Lake	2015	USA	47.13333	-119.283	N	0
Achillea mil	Williams, M	Moses Lake	2015	USA	47.13333	-119.283	N	0
Pinus nigra	Topacoglu,	Asar, Turke	2015	Turkey	39.85	27.23333	N	0

Pinus nigra	Topacoglu,	Kalkim, Tur	2015	Turkey	39.8	27.2	N	0
Pinus nigra	Topacoglu,	Karakoy, Tu	2015	Turkey	39.83333	26.88333	N	0
Pinus nigra	Topacoglu,	Bursa, Turk	2015	Turkey	40.16667	28.91667	N	0
Pinus nigra	Topacoglu,	Alabarda, T	2015	Turkey	39.88333	29.43333	N	0
Pinus nigra	Topacoglu,	Golcuk, Tur	2015	Turkey	39.81667	28.91667	N	0
Pinus nigra	Topacoglu,	Kicir, Turke	2015	Turkey	39.23333	28.7	N	0
Pinus nigra	Topacoglu,	Bogazova,	2015	Turkey	40.61667	29.71667	N	0
Pinus nigra	Topacoglu,	Uluhan, Tur	2015	Turkey	40.53333	31.43333	N	0
Taraxacum	Molina-Mor	La Serena,	2017	Chile	-29.9	-70.0167	N	0
Pinus nigra	Topacoglu,	Sorgun, Tu	2015	Turkey	39.88333	29.31667	N	0
Pinus nigra	Topacoglu,	Aktuzla, Tu	2015	Turkey	39.6	28.93333	N	0
Pinus nigra	Topacoglu,	Derecarsar	2015	Turkey	40.33333	29.75	N	0
Pinus nigra	Topacoglu,	Balikoy, Tu	2015	Turkey	39.5	29.08333	N	0
Pinus nigra	Topacoglu,	Inceler, Tur	2015	Turkey	37.71667	29.56667	N	0
Pinus nigra	Topacoglu,	Tota, Turke	2015	Turkey	37.86667	31.38333	N	0
Acer sacch	Solarik, K. A	Montmagny	2013	Canada	46.96667	-70.6	N	14
Acer sacch	Solarik, K. A	Montmagny	2013	Canada	46.96667	-70.6	N	14
Acer sacch	Solarik, K. A	Montmagny	2013	Canada	46.96667	-70.6	N	14
Acer sacch	Solarik, K. A	Montmagny	2013	Canada	46.96667	-70.6	N	14
Acer sacch	Solarik, K. A	Montmagny	2013	Canada	46.96667	-70.6	N	14
Acer sacch	Solarik, K. A	Montmagny	2013	Canada	46.96667	-70.6	N	14
Acer sacch	Solarik, K. A	Montmagny	2013	Canada	46.96667	-70.6	N	14
Acer sacch	Solarik, K. A	Montmagny	2013	Canada	46.96667	-70.6	N	14
Acer sacch	Solarik, K. A	Montmagny	2013	Canada	46.96667	-70.6	N	14
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Acer sacch	Solarik, K. A	Pennsylvar	2013	USA	41.15	-78.0167	N	14
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Acer sacch	Solarik, K. A	Pennsylvar	2013	USA	41.15	-78.0167	N	14
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Acer sacch	Solarik, K. A	Pennsylvar	2013	USA	41.15	-78.0167	N	14
Acer sacch	Solarik, K. A	Pennsylvar	2013	USA	41.15	-78.0167	N	14
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Acer sacch	Solarik, K. A	Pennsylvar	2013	USA	41.15	-78.0167	N	14
Acer sacch	Solarik, K. A	Pennsylvar	2013	USA	41.15	-78.0167	N	14
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Acer sacch	Solarik, K. A	Pennsylvar	2013	USA	41.15	-78.0167	N	14
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Acer sacch	Solarik, K. A	Pennsylvar	2013	USA	41.15	-78.0167	N	14
Acer sacch	Solarik, K. A	Pennsylvar	2013	USA	41.15	-78.0167	N	14
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Sambucus	Davis, O. H	Pennsylvar	1925	USA	40.81667	-77.75	N	99
Acer sacch	Solarik, K. A	Rivi&#xFFFD;re-du	2013	Canada	47.83333	-69.5333	N	14
Acer sacch	Solarik, K. A	Rivi&#xFFFD;re-du	2013	Canada	47.83333	-69.5333	N	14
Acer sacch	Solarik, K. A	Rivi&#xFFFD;re-du	2013	Canada	47.83333	-69.5333	N	14
Acer sacch	Solarik, K. A	Rivi&#xFFFD;re-du	2013	Canada	47.83333	-69.5333	N	14
Acer sacch	Solarik, K. A	Rivi&#xFFFD;re-du	2013	Canada	47.83333	-69.5333	N	14
Acer sacch	Solarik, K. A	Rivi&#xFFFD;re-du	2013	Canada	47.83333	-69.5333	N	14
Acer sacch	Solarik, K. A	Rivi&#xFFFD;re-du	2013	Canada	47.83333	-69.5333	N	14
Acer sacch	Solarik, K. A	Rivi&#xFFFD;re-du	2013	Canada	47.83333	-69.5333	N	14

Acer sacch	Solarik, K. A	Rivi&#65533;re-du	2013	Canada	47.83333	-69.5333	N	14
Acer sacch	Solarik, K. A	Sherbrooke	2013	Canada	45.4	-71.9167	N	14
Acer sacch	Solarik, K. A	Sherbrooke	2013	Canada	45.4	-71.9167	N	14
Acer sacch	Solarik, K. A	Sherbrooke	2013	Canada	45.4	-71.9167	N	14
Acer sacch	Solarik, K. A	Sherbrooke	2013	Canada	45.4	-71.9167	N	14
Acer sacch	Solarik, K. A	Sherbrooke	2013	Canada	45.4	-71.9167	N	14
Acer sacch	Solarik, K. A	Sherbrooke	2013	Canada	45.4	-71.9167	N	14
Acer sacch	Solarik, K. A	Sherbrooke	2013	Canada	45.4	-71.9167	N	14
Acer sacch	Solarik, K. A	Sherbrooke	2013	Canada	45.4	-71.9167	N	14
Taraxacum	Molina-Mor	Valparaiso,	2017	Chile	-33.0167	-71.0167	N	0
Acer sacch	Solarik, K. A	Tennessee	2013	USA	35.71667	-87.4667	N	14
Acer sacch	Solarik, K. A	Tennessee	2013	USA	35.71667	-87.4667	N	14
Acer sacch	Solarik, K. A	Tennessee	2013	USA	35.71667	-87.4667	N	14
Acer sacch	Solarik, K. A	Tennessee	2013	USA	35.71667	-87.4667	N	14
Acer sacch	Solarik, K. A	Tennessee	2013	USA	35.71667	-87.4667	N	14
Acer sacch	Solarik, K. A	Tennessee	2013	USA	35.71667	-87.4667	N	14
Acer sacch	Solarik, K. A	Tennessee	2013	USA	35.71667	-87.4667	N	14
Acer sacch	Solarik, K. A	Tennessee	2013	USA	35.71667	-87.4667	N	14
Acer sacch	Solarik, K. A	Tennessee	2013	USA	35.71667	-87.4667	N	14
Acer sacch	Solarik, K. A	Vile Marie,	2013	Canada	47.31667	-79.4333	N	14
Acer sacch	Solarik, K. A	Vile Marie,	2013	Canada	47.31667	-79.4333	N	14
Acer sacch	Solarik, K. A	Vile Marie,	2013	Canada	47.31667	-79.4333	N	14
Acer sacch	Solarik, K. A	Vile Marie,	2013	Canada	47.31667	-79.4333	N	14
Acer sacch	Solarik, K. A	Vile Marie,	2013	Canada	47.31667	-79.4333	N	14
Acer sacch	Solarik, K. A	Vile Marie,	2013	Canada	47.31667	-79.4333	N	14
Acer sacch	Solarik, K. A	Vile Marie,	2013	Canada	47.31667	-79.4333	N	14
Acer sacch	Solarik, K. A	Vile Marie,	2013	Canada	47.31667	-79.4333	N	14
Festuca ovi	Salahshoor	Agriculture	2015	Iran	36.28333	59.6	N	0
Corylus ave	Rostamikia	Guilan	2015	Iran	37.71667	47.88333	Y	0
Corylus ave	Rostamikia	Guilan	2015	Iran	37.71667	47.88333	Y	120
Corylus ave	Rostamikia	Ardebil	2015	Iran	38.31667	48.6	Y	120
Corylus ave	Rostamikia	Ardebil	2015	Iran	38.31667	48.6	Y	0
Corylus ave	Rostamikia	Arasbaran	2015	Iran	38.85	48.65	Y	120
Corylus ave	Rostamikia	Arasbaran	2015	Iran	38.85	48.65	Y	0
Lilium mart	Guney, K.,	Kure Mount	2012	Turkey	41.85	33.76667	N	0
Prunella vu	Fazal, H., e	Madyan val	2015	Pakistan	35.13333	72.53333	N	0
Prunella vu	Fazal, H., e	Madyan val	2015	Pakistan	35.13333	72.53333	N	0
Prunella vu	Fazal, H., e	Madyan val	2015	Pakistan	35.13333	72.53333	N	0
Prunella vu	Fazal, H., e	Madyan val	2015	Pakistan	35.13333	72.53333	N	0
Taraxacum	Molina-Mor	Concepci&#65533;	2017	Chile	-36.95	-73.0167	N	0
Rubus parv	Choi, G. E.	Jeonju si, J	2013	South Kore	35.81667	127.1167	Y	0
Rubus parv	Choi, G. E.	Jeonju si, J	2013	South Kore	35.81667	127.1167	N	56
Rubus parv	Choi, G. E.	Jeonju si, J	2013	South Kore	35.81667	127.1167	Y	56
Rubus bue	Choi, G. E.	Seogwipo s	2012	South Kore	33.23333	126.55	Y	56
Rubus bue	Choi, G. E.	Seogwipo s	2012	South Kore	33.23333	126.55	N	56
Rubus bue	Choi, G. E.	Seogwipo s	2012	South Kore	33.23333	126.55	Y	0
Robinia ps	Cabra-Riva	Henares Ri	2013	Spain	40.7	-3.15	Y	0
Robinia ps	Cabra-Riva	Henares Ri	2013	Spain	40.7	-3.15	N	0
Stellaria m	van der Ve	The Nether	1977	Netherland	52.31667	4.566667	N	0
Angelica sy	Boedeltje, (	The Nether	2012	Netherland	52.11667	5.266667	N	108
Stellaria m	van der Ve	The Nether	1977	Netherland	52.31667	4.566667	N	0
Lycopus eu	Boedeltje, (	The Nether	2012	Netherland	52.11667	5.266667	N	108
Filipendula	Boedeltje, (	The Nether	2012	Netherland	52.11667	5.266667	N	108
Prunella vu	Oomes, M.	The Nether	1975	Netherland	52.11667	4.833333	N	0

Stellaria me	van der Ve	The Nether	1977	Netherland	52.31667	4.566667	N	0
Alnus glutir	Boedeltje, (	The Nether	2012	Netherland	52.11667	5.266667	N	108
Stellaria me	van der Ve	The Nether	1977	Netherland	52.31667	4.566667	N	0
Achillea mil	Oomes, M.	The Nether	1975	Netherland	52.11667	4.833333	N	0
Stellaria me	van der Ve	The Nether	1977	Netherland	52.31667	4.566667	N	0
Juncus effu	Boedeltje, (	The Nether	2012	Netherland	52.11667	5.266667	N	108
Stellaria me	van der Ve	The Nether	1977	Netherland	52.31667	4.566667	N	0
Quercus ro	Ozbingol, N	The Nether	2002	Netherland	52.05	5.3	N	0
Stellaria me	van der Ve	The Nether	1977	Netherland	52.31667	4.566667	N	0
Solidago gi	Bochenek,	Krakow, Pc	2015	Poland	50.05	19.93333	N	80
Solidago gi	Bochenek,	Krakow, Pc	2015	Poland	50.05	19.93333	N	0
Sanguisorb	Benvenuti,	Tuscany, It	2013	Italy	43.38333	11.1	N	0
Campanula	Benvenuti,	Tuscany, It	2013	Italy	43.38333	11.1	N	30
Alliaria peti	Benvenuti,	Tuscany, It	2013	Italy	43.38333	11.1	N	0
Campanula	Benvenuti,	Tuscany, It	2013	Italy	43.38333	11.1	N	0
Alliaria peti	Benvenuti,	Tuscany, It	2013	Italy	43.38333	11.1	Y	0
Sanguisorb	Benvenuti,	Tuscany, It	2013	Italy	43.38333	11.1	Y	0
Taraxacum	Benvenuti,	Tuscany, It	2013	Italy	43.38333	11.1	N	0
Taraxacum	Benvenuti,	Tuscany, It	2013	Italy	43.38333	11.1	N	30
Securigera	Bae, J., et a	Pickseed E	2011	Canada	45.65	-72.9167	N	42
Lotus corni	Bae, J., et a	Richters se	2011	Canada	45.65	-72.9167	Y	0
Alliaria peti	Yasin, M. a	Hoejbakkeg	2014	Denmark	55.63333	12.28333	Y	0
Alliaria peti	Yasin, M. a	Hoejbakkeg	2014	Denmark	55.63333	12.28333	N	0
Eurya japor	Wang, H., e	Females, N	2014	Japan	35.16667	136.9667	N	0
Taraxacum	Molina-Mor	Coyhaique,	2017	Chile	-46.0167	-72.0167	N	0
Eurya japor	Wang, H., e	Hermaphro	2014	Japan	35.16667	136.9667	N	0
Sanguisorb	Tav?ano?lu	Hacettepe	2010	Turkey	39.86667	32.71667	N	0
Dactylis glc	Stanisavlje	Serbia and	2012	Serbia	44.01667	19.55	N	0
Pinus nigra	Sevik, H. a	Kastamonu	2015	Turkey	41.38333	33.76667	N	0
Pyracantha	Sevik, H. a	Kastamonu	2015	Turkey	41.38333	33.76667	N	5
Berberis aq	Pipinis, E.,	Thessaloni	2010	Greece	40.63333	22.93333	N	0
Berberis aq	Pipinis, E.,	Thessaloni	2010	Greece	40.63333	22.93333	N	120
Dactylis glc	Nielsen, J.	Flat Top Hi	2011	New Zealar	-45.2333	169.3667	N	0
Picea glauc	Beardmore	Alberta, Ca	1993	Canada	54.11667	-112.467	N	0
Pinus cont	Beardmore	Alberta, Ca	1993	Canada	54.11667	-112.467	N	21
Pinus cont	Beardmore	Alberta, Ca	1993	Canada	54.11667	-112.467	N	0
Schizachyri	Mollard, F.	Alberta, Ca	2011	Canada	54.25	-113.733	N	0
Picea glauc	Beardmore	Alberta, Ca	1993	Canada	54.11667	-112.467	N	21
Picea abies	Moldovean	Forest Distı	2011	Romania	47.68333	25.53333	N	0
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	21
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	0
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	0
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	21
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	21
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	0
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	0
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	0
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	0
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	21
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	21
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	21
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	21
Betula pen	Midmore, E	Central Eng	2010	UK	53.01667	-3.01667	N	0
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N	21
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N	0
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N	0

Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 21
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 0
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 0
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 21
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 21
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 0
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 0
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 21
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 21
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 0
Betula pen	Midmore, E	England Ke	2009	UK	55.01667	-3.01667	N 21
Primula vul	Marin, M.,	Scotia See	2016	UK	57.15	-3.08333	N 0
Primula vul	Marin, M.,	Scotia See	2016	UK	57.15	-3.08333	N 0
Primula vul	Marin, M.,	Scotia See	2016	UK	57.15	-3.08333	N 0
Primula vul	Marin, M.,	Scotia See	2016	UK	57.15	-3.08333	N 0
Primula vul	Marin, M.,	Scotia See	2016	UK	57.15	-3.08333	N 0
Primula vul	Marin, M.,	Scotia See	2016	UK	57.15	-3.08333	N 0
Primula vul	Marin, M.,	Scotia See	2016	UK	57.15	-3.08333	N 0
Primula vul	Marin, M.,	Scotia See	2016	UK	57.15	-3.08333	N 0
Primula vul	Marin, M.,	Scotia See	2016	UK	57.15	-3.08333	N 0
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 0
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 0
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 21
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 21
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 0
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 21
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 0
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 21
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 21
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 0
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 0
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 21
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 21
Betula pen	Midmore, E	Lahti, Finla	2002	Finland	60.01667	25.01667	N 0
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 21
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 21
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 21
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 0
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 21
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 21
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 0
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 0
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 0
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 21
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 21
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 0
Betula pen	Midmore, E	Rh&#65533;ne-Alp	2010	France	47.01667	5.016667	N 0
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N 0
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N 21
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N 21
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N 0
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N 0
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N 21
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N 21

Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N	0
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N	0
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N	21
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N	21
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N	0
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N	0
Betula pen	Midmore, E	Scottish Hig	2001	UK	57.01667	-3.01667	N	21
Quercus ro	McCartan,	Moriago de	2010	Italy	45.86667	12.1	N	0
Quercus ro	McCartan,	Moriago de	2010	Italy	45.86667	12.1	N	0
Quercus ro	McCartan,	Moriago de	2010	Italy	45.86667	12.1	N	0
Quercus ro	McCartan,	Moriago de	2010	Italy	45.86667	12.1	N	0
Quercus ro	McCartan,	Moriago de	2010	Italy	45.86667	12.1	N	0
Quercus ro	McCartan,	Moriago de	2010	Italy	45.86667	12.1	N	0
Quercus ro	McCartan,	Moriago de	2010	Italy	45.86667	12.1	N	0
Quercus ro	McCartan,	New Forest	2010	UK	50.86667	-1.56667	N	0
Quercus ro	McCartan,	New Forest	2010	UK	50.86667	-1.56667	N	0
Quercus ro	McCartan,	New Forest	2010	UK	50.86667	-1.56667	N	0
Quercus ro	McCartan,	New Forest	2010	UK	50.86667	-1.56667	N	0
Quercus ro	McCartan,	New Forest	2010	UK	50.86667	-1.56667	N	0
Quercus ro	McCartan,	New Forest	2010	UK	50.86667	-1.56667	N	0
Quercus ro	McCartan,	New Forest	2010	UK	50.86667	-1.56667	N	0
Quercus ile	Mart&#65533;n-G	Malpartida	2012	Spain	39.96667	-6.05	N	0
Quercus ile	Mart&#65533;n-G	Malpartida	2012	Spain	39.96667	-6.05	N	0
Quercus ile	Mart&#65533;n-G	Malpartida	2012	Spain	39.96667	-6.05	N	0
Quercus ile	Mart&#65533;n-G	Malpartida	2012	Spain	39.96667	-6.05	N	0
Pseudotsug	Li, X. J. B.,	British Colu	1990	Canada	50.85	-118.033	N	0
Pinus cont	Li, X. J. B.,	British Colu	1990	Canada	55.21667	-127.567	N	0
Pseudotsug	Li, X. J. B.,	British Colu	1990	Canada	50.85	-118.033	N	21
Picea glauc	Liu, Y., et a	British Colu	2014	Canada	54.43333	-121.733	N	21
Abies amat	Li, X. J. B.,	British Colu	1990	Canada	49.36667	-122.083	N	21
Abies gran	Li, X. J. B.,	British Colu	1988	Canada	49.06667	-122.017	N	21
Tsuga hete	Li, X. J. B.,	British Colu	1990	Canada	55.46667	-127.917	N	0
Pinus mont	Li, X. J. B.,	British Colu	1990	Canada	50.93333	-118.217	N	0
Abies gran	Li, X. J. B.,	British Colu	1988	Canada	49.06667	-122.017	N	0
Thuja plica	Li, X. J. B.,	British Colu	1990	Canada	55.45	-127.833	N	0
Abies amat	Li, X. J. B.,	British Colu	1990	Canada	49.36667	-122.083	N	21
Pinus pond	Li, X. J. B.,	British Colu	1989	Canada	50.83333	-122.117	N	0
Abies lasio	Li, X. J. B.,	British Colu	1990	Canada	55.5	-128.25	N	0
Abies gran	Ma, Y. L., e	British Colu	1981	Canada	49.46667	-124.8	N	84
Pinus mont	Li, X. J. B.,	British Colu	1990	Canada	50.93333	-118.217	N	0
Pinus cont	Li, X. J. B.,	British Colu	1990	Canada	55.21667	-127.567	N	21
Abies lasio	Li, X. J. B.,	British Colu	1990	Canada	55.5	-128.25	N	21
Picea glauc	Li, X. J. B.,	British Colu	1990	Canada	58.41667	-122.917	N	21
Picea glauc	Li, X. J. B.,	British Colu	1990	Canada	58.41667	-122.917	N	0
Picea glauc	Li, X. J. B.,	British Colu	1990	Canada	58.41667	-122.917	N	21
Tsuga hete	Li, X. J. B.,	British Colu	1990	Canada	55.46667	-127.917	N	21
Larix occid	Li, X. J. B.,	British Colu	1989	Canada	50.05	-115.633	N	0
Abies gran	Li, X. J. B.,	British Colu	1988	Canada	49.06667	-122.017	N	0
Picea glauc	Li, X. J. B.,	British Colu	1990	Canada	58.41667	-122.917	N	0
Pinus cont	Li, X. J. B.,	British Colu	1990	Canada	55.21667	-127.567	N	21
Pinus mont	Feurtado, J	British Colu	2006	Canada	51.35	-125	N	0
Pinus cont	Li, X. J. B.,	British Colu	1990	Canada	55.21667	-127.567	N	0
Picea glauc	Liu, Y., et a	British Colu	2014	Canada	54.43333	-121.733	N	21
Pinus pond	Li, X. J. B.,	British Colu	1989	Canada	50.83333	-122.117	N	21
Pinus mont	Li, X. J. B.,	British Colu	1990	Canada	50.93333	-118.217	N	21
Pinus pond	Li, X. J. B.,	British Colu	1989	Canada	50.83333	-122.117	N	21

Thuja plicat	Li, X. J. B.,	British Colu	1990	Canada	55.45	-127.833	N	21
Pinus pond	Li, X. J. B.,	British Colu	1989	Canada	50.83333	-122.117	N	0
Larix occid	Li, X. J. B.,	British Colu	1989	Canada	50.05	-115.633	N	21
Tsuga mert	Edwards, D	British Colu	1990	Canada	53.46667	-123.933	N	28
Pinus mont	Li, X. J. B.,	British Colu	1990	Canada	50.93333	-118.217	N	21
Abies lasio	Li, X. J. B.,	British Colu	1990	Canada	55.5	-128.25	N	21
Tsuga mert	Edwards, D	British Colu	1990	Canada	53.46667	-123.933	N	0
Abies gran	Li, X. J. B.,	British Colu	1988	Canada	49.06667	-122.017	N	21
Abies amat	Li, X. J. B.,	British Colu	1990	Canada	49.36667	-122.083	N	0
Picea glauc	Liu, Y., et a	British Colu	2014	Canada	54.43333	-121.733	N	21
Abies amat	Ma, Y. L., e	British Colu	1985	Canada	49.13333	-122.75	N	84
Abies proc	Ma, Y. L., e	British Colu	1982	Canada	49	-121.5	N	84
Pseudotsug	Li, X. J. B.,	British Colu	1990	Canada	50.85	-118.033	N	0
Larix occid	Li, X. J. B.,	British Colu	1989	Canada	50.05	-115.633	N	0
Thuja plicat	Li, X. J. B.,	British Colu	1990	Canada	55.45	-127.833	N	21
Tsuga mert	Edwards, D	British Colu	1990	Canada	53.46667	-123.933	N	0
Abies amat	Li, X. J. B.,	British Colu	1990	Canada	49.36667	-122.083	N	0
Tsuga hete	Li, X. J. B.,	British Colu	1990	Canada	55.46667	-127.917	N	0
Tsuga hete	Li, X. J. B.,	British Colu	1990	Canada	55.46667	-127.917	N	21
Tsuga mert	Edwards, D	British Colu	1990	Canada	53.46667	-123.933	N	28
Abies lasio	Li, X. J. B.,	British Colu	1990	Canada	55.5	-128.25	N	0
Pseudotsug	Li, X. J. B.,	British Colu	1990	Canada	50.85	-118.033	N	21
Larix occid	Li, X. J. B.,	British Colu	1989	Canada	50.05	-115.633	N	21
Abies lasio	Ma, Y. L., e	British Colu	1992	Canada	55.26667	-128.4	N	84
Thuja plicat	Li, X. J. B.,	British Colu	1990	Canada	55.45	-127.833	N	0
Quercus ali	Liu, Y., et a	Beijing Bota	2009	China	39.93333	116.3333	Y	0
Quercus ali	Liu, Y., et a	Beijing Bota	2009	China	39.93333	116.3333	N	0
Quercus ro	Liu, Y., et a	Beijing Bota	2009	China	39.93333	116.3333	N	0
Quercus va	Liu, Y., et a	Beijing Bota	2009	China	39.93333	116.3333	N	0
Quercus va	Liu, Y., et a	Beijing Bota	2009	China	39.93333	116.3333	Y	0
Quercus ro	Liu, Y., et a	Beijing Bota	2009	China	39.93333	116.3333	Y	0
Cornus flor	Liu, H., et a	Knoxville, T	2013	USA	35.95	-83.9167	Y	0
Cornus flor	Liu, H., et a	Knoxville, T	2013	USA	35.95	-83.9167	Y	90
Viscum alb	Lee, B. D.,	Mt. Jiri (Sar	2007	South Kore	35.33333	127.7167	N	0
Viscum alb	Lee, B. D.,	Mt. Jiri (Sar	2007	South Kore	35.33333	127.7167	N	0
Deschamps	Liu, K., et a	Maqu, Gan	2008	China	33.75	102.0667	N	196
Deschamps	Liu, K., et a	Maqu, Gan	2008	China	33.75	102.0667	N	196
Deschamps	Liu, K., et a	Maqu, Gan	2008	China	33.75	102.0667	N	196
Deschamps	Liu, K., et a	Maqu, Gan	2008	China	33.75	102.0667	N	196
Deschamps	Liu, K., et a	Maqu, Gan	2008	China	33.75	102.0667	N	196
Deschamps	Liu, K., et a	Maqu, Gan	2008	China	33.75	102.0667	N	196
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	0
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	0
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	0
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	120
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	0
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	0
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	0
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	0
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	120
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	0
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	0
Convallaria	Kondo, T.,	Sapporo, Ja	2009	Japan	43.08333	141.35	N	0
Prunus avi	Iakovoglou	Vermio, Gr	2010	Greece	40.58333	21.76667	N	28
Prunus avi	Iakovoglou	Vermio, Gr	2010	Greece	40.58333	21.76667	N	28
Prunus spir	Iakovoglou	Lachana, G	2010	Greece	40.95	23.2	N	28

Prunus spir	Iakovoglou	Lachana, G	2010	Greece	40.95	23.2	N	28
Rosa canin	Iakovoglou	Xiloupoli, G	2010	Greece	37.91667	23.75	Y	28
Rosa canin	Iakovoglou	Xiloupoli, G	2010	Greece	37.91667	23.75	Y	28
Rosa canin	Iakovoglou	Xiloupoli, G	2010	Greece	37.91667	23.75	N	28
Rosa canin	Iakovoglou	Xiloupoli, G	2010	Greece	37.91667	23.75	N	28
Robinia pse	Giuliani, C.	Six merged	2011	Italy	43.41667	11.13333	Y	0
Robinia pse	Giuliani, C.	Six merged	2011	Italy	43.41667	11.13333	N	0
Robinia pse	Giuliani, C.	Six merged	2011	Italy	43.41667	11.13333	Y	0
Robinia pse	Giuliani, C.	Six merged	2011	Italy	43.41667	11.13333	Y	0
Robinia pse	Giuliani, C.	Six merged	2011	Italy	43.41667	11.13333	Y	0
Robinia pse	Giuliani, C.	Six merged	2011	Italy	43.41667	11.13333	Y	0
Pinus cont	C&#65533;bar-Cal	Reserva Na	2011	Chile	-38.4	-71.5833	N	20
Oxalis acet	Graae, B. J	France	2005	France	49.6	3.516667	N	0
Oxalis acet	Graae, B. J	France	2005	France	49.6	3.516667	N	126
Geum urba	Graae, B. J	France	2005	France	50.36667	2.266667	N	0
Stachys syl	Graae, B. J	France	2005	France	49.51667	3.483333	N	0
Anemone n	Graae, B. J	France	2005	France	50.38333	2.266667	N	0
Lamium ga	Graae, B. J	France	2005	France	50.43333	2.8	N	126
Anemone n	Graae, B. J	France	2005	France	50.38333	2.266667	N	126
Brachypodi	Graae, B. J	France	2005	France	50.36667	2.266667	N	0
Circaea lute	Graae, B. J	France	2005	France	50.36667	2.266667	N	0
Stellaria ho	Graae, B. J	France	2005	France	50.38333	2.266667	N	0
Stachys syl	Graae, B. J	France	2005	France	49.51667	3.483333	N	126
Stellaria ho	Graae, B. J	France	2005	France	50.38333	2.266667	N	126
Geum urba	Graae, B. J	France	2005	France	50.36667	2.266667	N	126
Mercurialis	Graae, B. J	France	2005	France	50.43333	2.8	N	0
Melica unifl	Graae, B. J	France	2005	France	50.36667	2.266667	N	0
Carex sylva	Graae, B. J	France	2005	France	49.51667	3.483333	N	126
Melica unifl	Graae, B. J	France	2005	France	50.36667	2.266667	N	126
Mercurialis	Graae, B. J	France	2005	France	50.43333	2.8	N	126
Lamium ga	Graae, B. J	France	2005	France	50.43333	2.8	N	0
Carex sylva	Graae, B. J	France	2005	France	49.51667	3.483333	N	0
Circaea lute	Graae, B. J	France	2005	France	50.36667	2.266667	N	126
Brachypodi	Graae, B. J	France	2005	France	50.36667	2.266667	N	126
Circaea lute	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	0
Lamium ga	Graae, B. J	Belgium	2005	Belgium	50.96667	3.8	N	126
Stellaria ho	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	0
Melica unifl	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	126
Lamium ga	Graae, B. J	Belgium	2005	Belgium	50.96667	3.8	N	0
Melica unifl	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	0
Oxalis acet	Graae, B. J	Belgium	2005	Belgium	50.96667	3.8	N	0
Geum urba	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	0
Circaea lute	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	126
Stachys syl	Graae, B. J	Belgium	2005	Belgium	50.96667	3.8	N	0
Anemone n	Graae, B. J	Belgium	2005	Belgium	50.96667	3.8	N	0
Anemone n	Graae, B. J	Belgium	2005	Belgium	50.96667	3.8	N	126
Brachypodi	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	0
Geum urba	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	126
Carex sylva	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	0
Oxalis acet	Graae, B. J	Belgium	2005	Belgium	50.96667	3.8	N	126
Mercurialis	Graae, B. J	Belgium	2005	Belgium	50.96667	3.8	N	0
Stachys syl	Graae, B. J	Belgium	2005	Belgium	50.96667	3.8	N	126
Stellaria ho	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	126
Brachypodi	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	126
Mercurialis	Graae, B. J	Belgium	2005	Belgium	50.96667	3.8	N	126
Carex sylva	Graae, B. J	Belgium	2005	Belgium	50.8	4.7	N	126

Anemone n	Graae, B. J	NW Germa	2005	Germany	53.31667	9.383333	N 126
Mercurialis	Graae, B. J	NW Germa	2005	Germany	53.41667	9.383333	N 126
Mercurialis	Graae, B. J	NW Germa	2005	Germany	53.41667	9.383333	N 0
Stachys syl	Graae, B. J	NW Germa	2005	Germany	53.4	9.366667	N 0
Brachypodi	Graae, B. J	NW Germa	2005	Germany	53.4	9.366667	N 0
Carex sylva	Graae, B. J	NW Germa	2005	Germany	53.31667	9.383333	N 126
Circaea lute	Graae, B. J	NW Germa	2005	Germany	53.21667	8.633333	N 126
Carex sylva	Graae, B. J	NW Germa	2005	Germany	53.31667	9.383333	N 0
Anemone n	Graae, B. J	NW Germa	2005	Germany	53.31667	9.383333	N 0
Geum urba	Graae, B. J	NW Germa	2005	Germany	53.18333	8.666667	N 0
Oxalis acet	Graae, B. J	NW Germa	2005	Germany	53.18333	8.666667	N 0
Geum urba	Graae, B. J	NW Germa	2005	Germany	53.18333	8.666667	N 126
Stachys syl	Graae, B. J	NW Germa	2005	Germany	53.4	9.366667	N 126
Stellaria ho	Graae, B. J	NW Germa	2005	Germany	53.18333	8.666667	N 0
Brachypodi	Graae, B. J	NW Germa	2005	Germany	53.4	9.366667	N 126
Oxalis acet	Graae, B. J	NW Germa	2005	Germany	53.18333	8.666667	N 126
Stellaria ho	Graae, B. J	NW Germa	2005	Germany	53.18333	8.666667	N 126
Circaea lute	Graae, B. J	NW Germa	2005	Germany	53.21667	8.633333	N 0
Anemone n	Graae, B. J	NE Germar	2005	Germany	52.28333	13.11667	N 0
Geum urba	Graae, B. J	NE Germar	2005	Germany	52.58333	13	N 126
Circaea lute	Graae, B. J	NE Germar	2005	Germany	52.58333	13	N 126
Melica unifl	Graae, B. J	NE Germar	2005	Germany	52.58333	13.01667	N 0
Carex sylva	Graae, B. J	NE Germar	2005	Germany	53.01667	13.9	N 126
Geum urba	Graae, B. J	NE Germar	2005	Germany	52.58333	13	N 0
Oxalis acet	Graae, B. J	NE Germar	2005	Germany	52.28333	13.11667	N 126
Stellaria ho	Graae, B. J	NE Germar	2005	Germany	52.58333	13.01667	N 126
Brachypodi	Graae, B. J	NE Germar	2005	Germany	52.58333	13	N 126
Lamium ga	Graae, B. J	NE Germar	2005	Germany	52.58333	13.01667	N 0
Carex sylva	Graae, B. J	NE Germar	2005	Germany	53.01667	13.9	N 0
Mercurialis	Graae, B. J	NE Germar	2005	Germany	52.28333	13.11667	N 0
Brachypodi	Graae, B. J	NE Germar	2005	Germany	52.58333	13	N 0
Circaea lute	Graae, B. J	NE Germar	2005	Germany	52.58333	13	N 0
Oxalis acet	Graae, B. J	NE Germar	2005	Germany	52.28333	13.11667	N 0
Melica unifl	Graae, B. J	NE Germar	2005	Germany	52.58333	13.01667	N 126
Mercurialis	Graae, B. J	NE Germar	2005	Germany	52.28333	13.11667	N 126
Stachys syl	Graae, B. J	NE Germar	2005	Germany	52.58333	13.01667	N 126
Lamium ga	Graae, B. J	NE Germar	2005	Germany	52.58333	13.01667	N 126
Stellaria ho	Graae, B. J	NE Germar	2005	Germany	52.58333	13.01667	N 0
Stachys syl	Graae, B. J	NE Germar	2005	Germany	52.58333	13.01667	N 0
Anemone n	Graae, B. J	NE Germar	2005	Germany	52.28333	13.11667	N 126
Quercus ile	Le Gall-Lobo	University c	1997	UK	51.43333	-0.95	N 0
Castanea s	Le Gall-Lobo	University c	1997	UK	51.43333	-0.95	N 0
Quercus ce	Le Gall-Lobo	University c	1997	UK	51.43333	-0.95	N 0
Carex sylva	Graae, B. J	S Sweden	2005	Sweden	55.53333	13.26667	N 126
Brachypodi	Graae, B. J	S Sweden	2005	Sweden	56.15	13.6	N 126
Oxalis acet	Graae, B. J	S Sweden	2005	Sweden	56.4	12.96667	N 126
Mercurialis	Graae, B. J	S Sweden	2005	Sweden	56.4	12.96667	N 0
Melica unifl	Graae, B. J	S Sweden	2005	Sweden	55.55	13.3	N 126
Oxalis acet	Graae, B. J	S Sweden	2005	Sweden	56.4	12.96667	N 0
Carex sylva	Graae, B. J	S Sweden	2005	Sweden	55.53333	13.26667	N 0
Mercurialis	Graae, B. J	S Sweden	2005	Sweden	56.4	12.96667	N 126
Geum urba	Graae, B. J	S Sweden	2005	Sweden	55.53333	13.26667	N 126
Stachys syl	Graae, B. J	S Sweden	2005	Sweden	55.55	13.18333	N 0
Stachys syl	Graae, B. J	S Sweden	2005	Sweden	55.55	13.18333	N 126
Geum urba	Graae, B. J	S Sweden	2005	Sweden	55.53333	13.26667	N 0
Circaea lute	Graae, B. J	S Sweden	2005	Sweden	55.53333	13.16667	N 126

Brachypodi	Graae, B. J	S Sweden	2005	Sweden	56.15	13.6	N	0
Anemone n	Graae, B. J	S Sweden	2005	Sweden	55.53333	13.18333	N	0
Melica unifl	Graae, B. J	S Sweden	2005	Sweden	55.55	13.3	N	0
Anemone n	Graae, B. J	S Sweden	2005	Sweden	55.53333	13.18333	N	126
Circaea lut	Graae, B. J	S Sweden	2005	Sweden	55.53333	13.16667	N	0
Lamium ga	Graae, B. J	C Sweden	2005	Sweden	59.31667	17.88333	N	126
Stellaria ho	Graae, B. J	C Sweden	2005	Sweden	59.31667	17.88333	N	0
Geum urba	Graae, B. J	C Sweden	2005	Sweden	58.95	17.6	N	0
Oxalis acet	Graae, B. J	C Sweden	2005	Sweden	58.91667	17.16667	N	126
Carex sylva	Graae, B. J	C Sweden	2005	Sweden	59.33333	18.16667	N	126
Melica unifl	Graae, B. J	C Sweden	2005	Sweden	58.95	17.6	N	0
Stachys syl	Graae, B. J	C Sweden	2005	Sweden	58.95	17.6	N	126
Stellaria ho	Graae, B. J	C Sweden	2005	Sweden	59.31667	17.88333	N	126
Oxalis acet	Graae, B. J	C Sweden	2005	Sweden	58.91667	17.16667	N	0
Carex sylva	Graae, B. J	C Sweden	2005	Sweden	59.33333	18.16667	N	0
Anemone n	Graae, B. J	C Sweden	2005	Sweden	59.36667	18.05	N	126
Brachypodi	Graae, B. J	C Sweden	2005	Sweden	59.31667	17.88333	N	126
Mercurialis	Graae, B. J	C Sweden	2005	Sweden	59.31667	17.88333	N	126
Mercurialis	Graae, B. J	C Sweden	2005	Sweden	59.31667	17.88333	N	0
Anemone n	Graae, B. J	C Sweden	2005	Sweden	59.36667	18.05	N	0
Brachypodi	Graae, B. J	C Sweden	2005	Sweden	59.31667	17.88333	N	0
Stachys syl	Graae, B. J	C Sweden	2005	Sweden	58.95	17.6	N	0
Geum urba	Graae, B. J	C Sweden	2005	Sweden	58.95	17.6	N	126
Melica unifl	Graae, B. J	C Sweden	2005	Sweden	58.95	17.6	N	126
Lamium ga	Graae, B. J	C Sweden	2005	Sweden	59.31667	17.88333	N	0
Geum urba	Baeten, L.,	Ancient fore	2009	Belgium	51.01667	4.016667	N	112
Primula ela	Baeten, L.,	Ancient fore	2009	Belgium	51.01667	4.016667	N	0
Primula ela	Baeten, L.,	Ancient fore	2013	Belgium	51.01667	4.016667	N	154
Primula ela	Baeten, L.,	Post-agricu	2009	Belgium	51.01667	4.016667	N	0
Geum urba	Baeten, L.,	Post-agricu	2009	Belgium	51.01667	4.016667	N	112
Sorbus auc	Afroze, F. a	Ballintempl	2011	Ireland	52.73333	-6.7	N	224
Sorbus auc	Afroze, F. a	Ballintempl	2009	Ireland	52.71667	-6.68333	N	0
Sorbus auc	Afroze, F. a	Ballintempl	2009	Ireland	52.71667	-6.68333	N	140
Sorbus auc	Afroze, F. a	Ballintempl	2009	Ireland	52.71667	-6.68333	N	140
Sorbus auc	Afroze, F. a	Ballintempl	2009	Ireland	52.71667	-6.68333	N	0
Syringa reti	West, T. P.	North Dako	2012	USA	46.88333	-96.8	N	0
Arbutus un	Vasques, A	Braga, Port	2009	Portugal	37.83333	-8.66667	N	0
Arbutus un	Vasques, A	Braga, Port	2009	Portugal	37.83333	-8.66667	N	70
Arbutus un	Vasques, A	Coimbra, P	2009	Portugal	40.23333	-8.65	N	0
Arbutus un	Vasques, A	Coimbra, P	2009	Portugal	40.23333	-8.65	N	70
Arbutus un	Vasques, A	Faro, Portu	2009	Portugal	37.23333	-8.8	N	70
Arbutus un	Vasques, A	Faro, Portu	2009	Portugal	37.23333	-8.8	N	0
Pinus dens	Song, U., e	Korea	2013	South Kore	36.48333	128.05	N	0
Quercus ile	Leiva, M. J.	Villamanriq	2015	Spain	37.23333	-6.31667	N	0
Quercus ile	Leiva, M. J.	Villamanriq	2015	Spain	37.23333	-6.31667	Y	0
Crataegus	Mancilla-Le	Villamanriq	2012	Spain	37.23333	-6.33333	N	0
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	0
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	0
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	0
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	0
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168

Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	0
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	0
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	0
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	0
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Viburnum la	Santiago, A	Corduente,	2009	Spain	40.85	-1.98333	N	168
Ostrya carp	Pipinis, E.,	Northern G	2008	Greece	39.95	21.2	N	0
Ostrya carp	Pipinis, E.,	Northern G	2008	Greece	39.95	21.2	N	120
Carpinus or	Pipinis, E.,	Northern G	2008	Greece	39.95	21.2	N	120
Carpinus or	Pipinis, E.,	Northern G	2008	Greece	39.95	21.2	N	0
Carpinus be	Pipinis, E.,	Northern G	2008	Greece	39.96667	21.2	N	0
Carpinus be	Pipinis, E.,	Northern G	2008	Greece	39.96667	21.2	N	120
Viburnum fi	Phartyal, S	Sapporo, H	2007	Japan	43	141.35	N	0
Viburnum fi	Phartyal, S	Sapporo, H	2007	Japan	43	141.35	N	0
Viburnum fi	Phartyal, S	Sapporo, H	2007	Japan	43	141.35	N	0
Viburnum fi	Phartyal, S	Sapporo, H	2007	Japan	43	141.35	N	0
Viburnum fi	Phartyal, S	Sapporo, H	2007	Japan	43	141.35	N	0
Viburnum fi	Phartyal, S	Sapporo, H	2007	Japan	43	141.35	N	0
Viburnum fi	Phartyal, S	Sapporo, H	2007	Japan	43	141.35	N	0
Sanguisorb	Ludewig, K	Rieger & H	2010	Germany	49.28333	9.916667	N	35
Sanguisorb	Ludewig, K	Rieger & H	2010	Germany	49.28333	9.916667	N	35
Filipendula	Ludewig, K	Rieger & H	2010	Germany	49.28333	9.916667	N	35
Filipendula	Ludewig, K	Rieger & H	2010	Germany	49.28333	9.916667	N	35
Galium bor	Ludewig, K	Northern U	2010	Germany	49.83333	8.416667	N	35
Galium bor	Ludewig, K	Northern U	2010	Germany	49.83333	8.416667	N	35
Galium pal	Ludewig, K	Middle Elbe	2010	Germany	52.53333	11.98333	N	35
Galium pal	Ludewig, K	Middle Elbe	2010	Germany	52.53333	11.98333	N	35
Pinus cont	Liu, Y. and	TOD, Britis	1978	Canada	50.93333	-122.833	N	0
Pinus cont	Liu, Y. and	WK, British	1987	Canada	49.11667	-118.367	N	0
Tsuga hete	Liu, Y. and	WK, British	2008	Canada	50.13333	-117.967	N	0
Pinus cont	Liu, Y. and	CT, British	1988	Canada	52.05	-121.083	N	0
Pinus cont	Liu, Y. and	CHL, Britis	1996	Canada	52.85	-123.633	N	0
Malus bacc	Kim, D. H. a	Suwon	2015	South Kore	37.26667	127	N	60
Rhododenc	Kim, D. H. a	Suwon	2015	South Kore	37.26667	127	N	0
Pinus dens	Kim, D. H. a	Suwon	2015	South Kore	37.26667	127	N	0
Rhododenc	Kim, D. H. a	Suwon	2015	South Kore	37.26667	127	N	0
Rhododenc	Kim, D. H. a	Suwon	2015	South Kore	37.26667	127	N	0
Malus bacc	Kim, D. H. a	Suwon	2015	South Kore	37.26667	127	N	60
Rhododenc	Kim, D. H. a	Suwon	2015	South Kore	37.26667	127	N	0
Pinus dens	Kim, D. H. a	Suwon	2015	South Kore	37.26667	127	N	0
Pinus cont	Liu, Y. and	TOA, Britis	2005	Canada	50.45	-120.05	N	0
Tsuga hete	Liu, Y. and	NST, Britis	1978	Canada	55.5	-128.95	N	0
Tsuga hete	Liu, Y. and	M, British C	1979	Canada	48.98333	-124.417	N	0
Tsuga hete	Liu, Y. and	SM, British	1992	Canada	54.58333	-128.083	N	0
Tsuga hete	Liu, Y. and	MIC, Britis	1993	Canada	51.03333	-118.267	N	0
Reynoutria	Groenevelc	Quebec Cit	2012	Canada	46.81667	-71.2167	N	0
Miscanthus	Dwiyanti, M	JM0575, nc	2010	Japan	43.45	142.8167	N	0
Miscanthus	Dwiyanti, M	JM0575, nc	2010	Japan	43.45	142.8167	N	0

MiscanthusDwiyanti, M	JM0594, ce	2010	Japan	35.9	137.7333	N		0
MiscanthusDwiyanti, M	JM0594, ce	2010	Japan	35.9	137.7333	N		0
MiscanthusDwiyanti, M	JM0620, sc	2010	Japan	33.1	131.0167	N		0
MiscanthusDwiyanti, M	JM0620, sc	2010	Japan	33.1	131.0167	N		0
Pinus sylveCastoldi, E.	Seed mass	2011	Spain	40.9	-3.86667	N		0
Betula ermaKim, D. H. a	Mt. Jiri	2015	South Kore	35.33333	127.7167	N		60
Betula ermaKim, D. H. a	Mt. Jiri	2015	South Kore	35.33333	127.7167	N		60
Pinus sylveCastoldi, E.	Seed mass	2011	Spain	40.9	-3.86667	N		0
Quercus ileCaliskan, S	Canakkale,	2013	Turkey	40.16667	25.83333	N		0
Quercus ileCaliskan, S	Canakkale,	2013	Turkey	40.16667	25.83333	N		0
Quercus ileCaliskan, S	Sinop, Turk	2013	Turkey	40.01667	35	N		0
Quercus ileCaliskan, S	Sinop, Turk	2013	Turkey	40.01667	35	N		0
Quercus ileCaliskan, S	Aydin, Turk	2013	Turkey	37.65	27.08333	N		0
Quercus ileCaliskan, S	Aydin, Turk	2013	Turkey	37.65	27.08333	N		0
Quercus ileCaliskan, S	Mugla, Turk	2013	Turkey	36.71667	27.53333	N		0
Quercus ileCaliskan, S	Mugla, Turk	2013	Turkey	36.71667	27.53333	N		0
Rhamnus aAou-ouad,	Esporles, M	2010	Spain	39.66667	2.566667	N		0
Rhamnus aAou-ouad,	Esporles, M	2010	Spain	39.66667	2.566667	N		0
Rhamnus aAou-ouad,	Esporles, M	2010	Spain	39.66667	2.566667	N		0
Rhamnus aAou-ouad,	Lloret, Mall	2010	Spain	39.61667	2.966667	N		0
Rhamnus aAou-ouad,	Lloret, Mall	2010	Spain	39.61667	2.966667	N		0
Rhamnus aAou-ouad,	Lloret, Mall	2010	Spain	39.61667	2.966667	N		0
Fraxinus orYilmaz, M.	Menzelet (K	2012	Turkey	37.68333	36.83333	N		126
Fraxinus orYilmaz, M.	Menzelet (K	2012	Turkey	37.68333	36.83333	N		0
Fraxinus orYilmaz, M.	Boztoprak (	2012	Turkey	37.53333	36.3	N		126
Fraxinus orYilmaz, M.	Boztoprak (	2012	Turkey	37.53333	36.3	N		0
Fraxinus orYilmaz, M.	D�zi�i (O	2012	Turkey	37.26667	36.5	N		0
Fraxinus orYilmaz, M.	D�zi�i (O	2012	Turkey	37.26667	36.5	N		126
Prunus padKim, D. H. a	Chungju	2015	South Kore	36.96667	127.9167	N		60
Maackia anKim, D. H. a	Chungju	2015	South Kore	36.96667	127.9167	N		0
Maackia anKim, D. H. a	Chungju	2015	South Kore	36.96667	127.9167	N		0
Prunus padKim, D. H. a	Chungju	2015	South Kore	36.96667	127.9167	N		60
Fraxinus orYilmaz, M.	Kozan (Ada	2012	Turkey	37.51667	35.86667	N		0
Fraxinus orYilmaz, M.	Kozan (Ada	2012	Turkey	37.51667	35.86667	N		126
Fraxinus orYilmaz, M.	Pozant? (A	2012	Turkey	37.36667	34.88333	N		0
Fraxinus orYilmaz, M.	Pozant? (A	2012	Turkey	37.36667	34.88333	N		126
Fraxinus orYilmaz, M.	G�ndo?mu	2012	Turkey	36.81667	32	N		0
Fraxinus orYilmaz, M.	G�ndo?mu	2012	Turkey	36.81667	32	N		126
Fraxinus orYilmaz, M.	E?irdir (Ispa	2012	Turkey	37.73333	30.83333	N		0
Fraxinus orYilmaz, M.	E?irdir (Ispa	2012	Turkey	37.73333	30.83333	N		126
Rumex aceYazdi, S. A	Qaemshahr	2010	Iran	36.45	52.85	N		30
Rumex aceYazdi, S. A	Qaemshahr	2010	Iran	36.45	52.85	N		0
Rumex aceYazdi, S. A	Qaemshahr	2010	Iran	36.45	52.85	Y		0
Lapsana cc Wille, W., e	Botanical G	2008	Denmark	55.66667	12.53333	N		21
Urtica dioic Wille, W., e	Botanical G	2008	Denmark	55.66667	12.53333	N		21
Brachypodi Wille, W., e	Botanical G	2008	Denmark	55.66667	12.53333	N		21
Poa trivialis Wille, W., e	Botanical G	2008	Denmark	55.66667	12.53333	N		21
Ilex rotunda Tezuka, T.,	Osaka Pref	2007	Japan	34.53333	135.5	N		308
Calluna vul Spindelboc	Norway	2007	Norway	63.51667	10.25	N		28
Calluna vul Spindelboc	Norway	2007	Norway	63.51667	10.25	N		0
Acer pseudDaws, M. I.	Norway	2003	Norway	60.2	5.316667	N		0
Fraxinus peSchmiedel,	Dessau, Sa	2006	Germany	51.81667	12.23333	N		0
Lonicera xySantiago, A	Orea, Guad	2008	Spain	40.53333	-1.71667	N		0
Lonicera xySantiago, A	Orea, Guad	2008	Spain	40.53333	-1.71667	N		0
Lonicera xySantiago, A	Orea, Guad	2008	Spain	40.53333	-1.71667	N		0
Lonicera xySantiago, A	Orea, Guad	2008	Spain	40.53333	-1.71667	N		0

Lonicera xy	Santiago, A	Orea, Guac	2008	Spain	40.53333	-1.71667	N	0
Lonicera xy	Santiago, A	Orea, Guac	2008	Spain	40.53333	-1.71667	N	0
Lonicera xy	Santiago, A	Orea, Guac	2008	Spain	40.53333	-1.71667	N	0
Lonicera xy	Santiago, A	Orea, Guac	2008	Spain	40.53333	-1.71667	N	0
Lonicera xy	Santiago, A	Orea, Guac	2008	Spain	40.53333	-1.71667	N	0
Lonicera xy	Santiago, A	Orea, Guac	2008	Spain	40.53333	-1.71667	N	0
Lonicera xy	Santiago, A	Orea, Guac	2008	Spain	40.53333	-1.71667	N	0
Lonicera xy	Santiago, A	Orea, Guac	2008	Spain	40.53333	-1.71667	N	0
Zelkova ser	Kim, D. H. a	Imsil	2015	South Kore	35.6	127.2167	N	60
Zelkova ser	Kim, D. H. a	Imsil	2015	South Kore	35.6	127.2167	N	60
Galanthus n	Newton, R.	Wakehurst	2009	UK	51.06667	########	N	0
Galanthus n	Newton, R.	Wakehurst	2009	UK	51.06667	########	N	0
Galanthus n	Newton, R.	Wakehurst	2009	UK	51.06667	########	N	0
Galanthus n	Newton, R.	Wakehurst	2009	UK	51.06667	########	N	0
Galanthus n	Newton, R.	Wakehurst	2009	UK	51.06667	########	N	0
Galanthus n	Newton, R.	Wakehurst	2009	UK	51.06667	########	N	0
Corylus ave	Michalak, M	Jarocin ◆ (	2012	Poland	51.96667	17.5	Y	98
Picea glauc	Liu, Y., et a	33356 WK,	1991	Canada	50.25	-118.167	N	0
Picea glauc	Liu, Y., et a	33356 WK,	1991	Canada	50.25	-118.167	N	21
Picea glauc	Liu, Y., et a	35707 MIC	1991	Canada	51.03333	-118.8	N	21
Picea glauc	Liu, Y., et a	35707 MIC	1991	Canada	51.03333	-118.8	N	0
Picea glauc	Liu, Y., et a	37842 MGF	1992	Canada	54.43333	-121.733	N	21
Picea glauc	Liu, Y., et a	37842 MGF	1992	Canada	54.43333	-121.733	N	0
Picea glauc	Liu, Y., et a	39450 CP,	1994	Canada	55.05	-125.033	N	0
Picea glauc	Liu, Y., et a	39450 CP,	1994	Canada	55.05	-125.033	N	21
Picea glauc	Liu, Y., et a	45353 SM,	1996	Canada	54.65	-128.75	N	21
Picea glauc	Liu, Y., et a	45353 SM,	1996	Canada	54.65	-128.75	N	0
Cercis can	Li, S., et al.	Elsberry, M	2011	USA	39.15	-90.7833	Y	14
Miscanthus	Lee, K. Y.,	Mokpo Nati	2011	South Kore	34.9	126.4333	N	0
Miscanthus	Lee, K. Y.,	Mokpo Nati	2011	South Kore	34.9	126.4333	Y	0
Miscanthus	Lee, K. Y.,	Mokpo Nati	2011	South Kore	34.9	126.4333	Y	0
Miscanthus	Lee, K. Y.,	Mokpo Nati	2011	South Kore	34.9	126.4333	Y	0
Miscanthus	Lee, K. Y.,	Mokpo Nati	2011	South Kore	34.9	126.4333	N	0
Miscanthus	Lee, K. Y.,	Mokpo Nati	2011	South Kore	34.9	126.4333	Y	0
Miscanthus	Lee, K. Y.,	Mokpo Nati	2011	South Kore	34.9	126.4333	N	0
Miscanthus	Lee, K. Y.,	Mokpo Nati	2011	South Kore	34.9	126.4333	N	0
Vicia unijug	Hu, X., et a	Qinghai-Tib	2010	China	35.26667	102.5	Y	0
Vicia unijug	Hu, X., et a	Qinghai-Tib	2010	China	35.26667	102.5	Y	0
Vicia unijug	Hu, X., et a	Qinghai-Tib	2010	China	35.26667	102.5	Y	0
Vicia unijug	Hu, X., et a	Qinghai-Tib	2010	China	35.26667	102.5	Y	0
Quercus ro	Kaliniewicz	batch 76 Sz	2016	Poland	53.55	20.98333	Y	30
Quercus ro	Kaliniewicz	batch 76 Sz	2016	Poland	53.55	20.98333	N	30
Picea abies	Himanen, k	Heinamaki,	2006	Finland	62.21667	25.4	N	0
Picea abies	Himanen, k	Pohja, Finla	2008	Finland	60.01667	23.01667	N	0
Picea abies	Himanen, k	Leppaniem	1995	Finland	61.93333	26.68333	N	0
Cornus kou	Fu, X. X., e	Funiu mour	2009	China	33.83333	111.2	N	50
Cornus kou	Fu, X. X., e	Funiu mour	2009	China	33.83333	111.2	N	0
Acer velutir	Farhadi, M.	300 m, Sha	2012	Iran	36.7	54.35	N	112
Acer velutir	Farhadi, M.	300 m, Sha	2012	Iran	36.7	54.35	N	0
Acer velutir	Farhadi, M.	600 m, Sha	2012	Iran	36.7	54.35	N	0
Acer velutir	Farhadi, M.	600 m, Sha	2012	Iran	36.7	54.35	N	112
Acer velutir	Farhadi, M.	900 m, Sha	2012	Iran	36.7	54.35	N	112
Acer velutir	Farhadi, M.	900 m, Sha	2012	Iran	36.7	54.35	N	0
Acer velutir	Farhadi, M.	1200 m, Sh	2012	Iran	36.7	54.35	N	0
Acer velutir	Farhadi, M.	1200 m, Sh	2012	Iran	36.7	54.35	N	112
Acer velutir	Farhadi, M.	1500 m, Sh	2012	Iran	36.7	54.35	N	0

Acer velutir	Farhadi, M.	1500 m, Sh	2012	Iran	36.7	54.35	N 112
Acer velutir	Farhadi, M.	1800 m, Sh	2012	Iran	36.7	54.35	N 0
Acer velutir	Farhadi, M.	1800 m, Sh	2012	Iran	36.7	54.35	N 112
Quercus ro	Kaliniewicz	batch 91 Sz	2016	Poland	53.55	20.98333	Y 30
Quercus ro	Kaliniewicz	batch 91 Sz	2016	Poland	53.55	20.98333	N 30
Fagus sylv	Bezd??kov	Jizera Mou	2009	Czech Rep	50.71667	14.98333	N 0
Fagus sylv	Bezd??kov	White Carp	2009	Czech Rep	49.26667	18.13333	N 0
Fagus sylv	Bezd??kov	2nd White (	2009	Czech Rep	49.26667	18.13333	N 0
Fagus sylv	Bezd??kov	Lesko-Sred	2010	Poland	49.46667	22.31667	N 0
Fagus sylv	Bezd??kov	Krasiczyn-k	2010	Poland	49.76667	22.65	N 0
Fagus sylv	Bezd??kov	Rymanow,	2010	Poland	49.56667	21.86667	N 0
Arbutus un	Bertsouklis	Mount Parr	2008	Greece	38.13333	23.78333	N 0
Arbutus un	Bertsouklis	Mount Parr	2008	Greece	38.13333	23.78333	N 0
Arbutus un	Bertsouklis	Mount Parr	2008	Greece	38.13333	23.78333	N 60
Arbutus un	Bertsouklis	Mount Parr	2008	Greece	38.13333	23.78333	N 0
Arbutus un	Bertsouklis	Mount Parr	2008	Greece	38.13333	23.78333	N 60
Arbutus un	Bertsouklis	Mount Parr	2008	Greece	38.13333	23.78333	N 60
Arbutus un	Bertsouklis	Mount Parr	2008	Greece	38.13333	23.78333	N 60
Arbutus un	Bertsouklis	Mount Parr	2008	Greece	38.13333	23.78333	N 0
Hypericum	Basto, S., ϵ	Harpur Hill,	2012	UK	53.21667	-1.91667	N 0
Phragmites	Yu, J., et al	Yellow Rive	2010	China	37.58333	118.55	N 0
Fraxinus or	Yilmaz, M.	Andirin/K.M	2007	Turkey	37.6	36.4	N 112
Fraxinus or	Yilmaz, M.	Andirin/K.M	2007	Turkey	37.6	36.4	N 112
Fraxinus or	Yilmaz, M.	Andirin/K.M	2007	Turkey	37.6	36.4	N 112
Fraxinus or	Yilmaz, M.	Andirin/K.M	2007	Turkey	37.6	36.4	N 112
Fraxinus or	Yilmaz, M.	Andirin/K.M	2007	Turkey	37.6	36.4	N 112
Fraxinus or	Yilmaz, M.	Andirin/K.M	2007	Turkey	37.6	36.4	N 112
Fraxinus or	Yilmaz, M.	Andirin/K.M	2007	Turkey	37.6	36.4	N 112
Fraxinus or	Yilmaz, M.	Andirin/K.M	2007	Turkey	37.6	36.4	N 112
Quercus ro	Kaliniewicz	batch 131 S	2016	Poland	53.55	20.98333	Y 30
Quercus ro	Kaliniewicz	batch 131 S	2016	Poland	53.55	20.98333	N 30
Fraxinus or	Yilmaz, M.	Kozan/Adai	2007	Turkey	37.51667	35.86667	N 112
Fraxinus or	Yilmaz, M.	Kozan/Adai	2007	Turkey	37.51667	35.86667	N 112
Fraxinus or	Yilmaz, M.	Kozan/Adai	2007	Turkey	37.51667	35.86667	N 112
Fraxinus or	Yilmaz, M.	Kozan/Adai	2007	Turkey	37.51667	35.86667	N 112
Fraxinus or	Yilmaz, M.	Kozan/Adai	2007	Turkey	37.51667	35.86667	N 112
Fraxinus or	Yilmaz, M.	Kozan/Adai	2007	Turkey	37.51667	35.86667	N 112
Fraxinus or	Yilmaz, M.	Kozan/Adai	2007	Turkey	37.51667	35.86667	N 112
Fraxinus or	Yilmaz, M.	Kozan/Adai	2007	Turkey	37.51667	35.86667	N 112
Fraxinus or	Yilmaz, M.	Pozanti/Ada	2007	Turkey	37.36667	34.88333	N 112
Fraxinus or	Yilmaz, M.	Pozanti/Ada	2007	Turkey	37.36667	34.88333	N 112
Fraxinus or	Yilmaz, M.	Pozanti/Ada	2007	Turkey	37.36667	34.88333	N 112
Fraxinus or	Yilmaz, M.	Pozanti/Ada	2007	Turkey	37.36667	34.88333	N 112
Fraxinus or	Yilmaz, M.	Pozanti/Ada	2007	Turkey	37.36667	34.88333	N 112
Fraxinus or	Yilmaz, M.	Pozanti/Ada	2007	Turkey	37.36667	34.88333	N 112
Fraxinus or	Yilmaz, M.	Pozanti/Ada	2007	Turkey	37.36667	34.88333	N 112
Fraxinus or	Yilmaz, M.	Pozanti/Ada	2007	Turkey	37.36667	34.88333	N 112
Viburnum c	Walck, J. L	Japan, Hok	2004	Japan	44.35	143.35	N 84
Viburnum c	Walck, J. L	Japan, Hok	2004	Japan	44.35	143.35	N 84
Viburnum c	Walck, J. L	Japan, Hok	2004	Japan	44.35	143.35	N 84
Viburnum c	Walck, J. L	Japan, Hok	2004	Japan	44.35	143.35	N 84
Viburnum c	Walck, J. L	Japan, Hok	2004	Japan	44.35	143.35	N 84
Viburnum c	Walck, J. L	Canada, Ne	2004	Canada	46.1	-64.7833	N 84
Viburnum c	Walck, J. L	Canada, Ne	2004	Canada	46.1	-64.7833	N 84
Viburnum c	Walck, J. L	Canada, Ne	2004	Canada	46.1	-64.7833	N 84
Viburnum c	Walck, J. L	Canada, Ne	2004	Canada	46.1	-64.7833	N 84

Viburnum c	Walck, J. L	Canada, Ne	2004	Canada	46.1	-64.7833	N	84
Viburnum c	Walck, J. L	Sweden, O	2004	Sweden	58.41667	15.5	N	84
Viburnum c	Walck, J. L	Sweden, O	2004	Sweden	58.41667	15.5	N	84
Viburnum c	Walck, J. L	Sweden, O	2004	Sweden	58.41667	15.5	N	84
Viburnum c	Walck, J. L	Sweden, O	2004	Sweden	58.41667	15.5	N	84
Viburnum c	Walck, J. L	Sweden, O	2004	Sweden	58.41667	15.5	N	84
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	48
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	48
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	48
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	48
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	48
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	48
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	0
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	48
Scrophulari	Vranckx, G	Meerdaalw	2008	Belgium	50.8	4.7	N	48
Pinus nigra	Takos, I., e	Greek Nati	2010	Greece	38.35	23.28333	N	60
Campanula	Seglie, L., (	Giaglione g	2006	Italy	44.3	7.45	N	40
Campanula	Seglie, L., (	Valle Gess	2006	Italy	44.23333	7.516667	N	40
Campanula	Seglie, L., (	Val Tronce	2006	Italy	44.95	6.933333	N	40
Quercus ro	Kaliniewicz	batch 161 S	2016	Poland	53.55	20.98333	N	30
Quercus ro	Kaliniewicz	batch 161 S	2016	Poland	53.55	20.98333	Y	30
Campanula	Seglie, L., (	Val Vermer	2006	Italy	44.23333	7.533333	N	40
Campanula	Seglie, L., (	Valle Stura	2006	Italy	44.26667	7.016667	N	40
Campanula	Seglie, L., (	Valle Stura	2006	Italy	44.03333	7.033333	N	40
Campanula	Seglie, L., (	Val Sesia g	2006	Italy	46.01667	8.066667	N	40
Campanula	Seglie, L., (	Val Grande	2006	Italy	44.23333	7.533333	N	40
Campanula	Seglie, L., (	Vallecrosia	2006	Italy	43.78333	7.05	N	40
Campanula	Seglie, L., (	Barzio gras	2006	Italy	45.93333	9.033333	N	40
Bromus tec	Rawlins, J.	Lookout Pa	2005	USA	40.1	-112.55	N	0
Bromus tec	Rawlins, J.	Lookout Pa	2005	USA	40.1	-112.55	N	0
Bromus tec	Rawlins, J.	Lookout Pa	2005	USA	40.1	-112.55	N	0
Bromus tec	Rawlins, J.	Lookout Pa	2005	USA	40.1	-112.55	N	0
Bromus tec	Rawlins, J.	Lookout Pa	2005	USA	40.1	-112.55	N	0
Bromus tec	Rawlins, J.	Lookout Pa	2005	USA	40.1	-112.55	N	0

Bromus tec	Rawlins, J.	Lookout Pa	2005	USA	40.1	-112.55	N	0
Bromus tec	Rawlins, J.	Skull Valley	2005	USA	40.38333	-112.717	N	0
Bromus tec	Rawlins, J.	Skull Valley	2005	USA	40.38333	-112.717	N	0
Bromus tec	Rawlins, J.	Skull Valley	2005	USA	40.38333	-112.717	N	0
Bromus tec	Rawlins, J.	Skull Valley	2005	USA	40.38333	-112.717	N	0
Bromus tec	Rawlins, J.	Skull Valley	2005	USA	40.38333	-112.717	N	0
Bromus tec	Rawlins, J.	Skull Valley	2005	USA	40.38333	-112.717	N	0
Bromus tec	Rawlins, J.	Skull Valley	2005	USA	40.38333	-112.717	N	0
Achillea mil	Rawlins, J.	UDWR-Lota	2003	USA	47.25	-120.533	N	0
Achillea mil	Rawlins, J.	UDWR-Lota	2003	USA	47.25	-120.533	N	0
Achillea mil	Rawlins, J.	UDWR-Lota	2003	USA	47.25	-120.533	N	0
Achillea mil	Rawlins, J.	UDWR-Lota	2003	USA	47.25	-120.533	N	0
Achillea mil	Rawlins, J.	UDWR-Lota	2003	USA	47.25	-120.533	N	0
Achillea mil	Rawlins, J.	UDWR-Lota	2003	USA	47.25	-120.533	N	0
Achillea mil	Rawlins, J.	UDWR-Lota	2003	USA	47.25	-120.533	N	0
Elymus ely	Rawlins, J.	UDWR-Sar	2003	USA	39.35	-111.583	N	0
Elymus ely	Rawlins, J.	UDWR-Sar	2003	USA	39.35	-111.583	N	0
Elymus ely	Rawlins, J.	UDWR-Sar	2003	USA	39.35	-111.583	N	0
Elymus ely	Rawlins, J.	UDWR-Sar	2003	USA	39.35	-111.583	N	0
Elymus ely	Rawlins, J.	UDWR-Sar	2003	USA	39.35	-111.583	N	0
Elymus ely	Rawlins, J.	UDWR-Sar	2003	USA	39.35	-111.583	N	0
Elymus ely	Rawlins, J.	UDWR-Sar	2003	USA	39.35	-111.583	N	0
Pinus sylve	Kaliniewicz	Ruciane-Ni	2011	Poland	53.01667	21.01667	N	0
Pinus pond	Pasquini, N	Trevelin, Cl	2000	Argentina	-43.0667	-71.45	N	21
Dactylis glo	Oliveira, G.	Non-local s	2005	Portugal	38.48333	-8.93333	N	0
Sanguisorb	Oliveira, G.	Non-local s	2005	Portugal	38.48333	-8.93333	N	0
Lotus corni	Oliveira, G.	Non-local s	2005	Portugal	38.48333	-8.93333	N	0
Carpinus o	Merou, T.,	Drama, Gre	2011	Greece	41.15	24.16667	N	0
Carpinus o	Merou, T.,	Drama, Gre	2011	Greece	41.15	24.16667	Y	90
Carpinus o	Merou, T.,	Drama, Gre	2011	Greece	41.15	24.16667	N	90
Castanea c	Dalgleish, I	Four merge	2009	USA	39.71667	-86.2167	N	180
Camellia si	Chen, H., e	Kunming, C	2010	China	25.01667	102.7167	N	0
Camellia si	Chen, H., e	Lincang, Cl	2010	China	23.88333	100.0833	N	0
Camellia si	Chen, H., e	Puer, China	2010	China	22.81667	100.9667	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0

Taraxacum	Luo, J. and	Ohio State	2007	USA	40.78333	-81.9167	N	0
Ficus carica	ali?kan, (	cv. Bursa S	2009	Turkey	36.33333	36.18333	N	0
Ficus carica	ali?kan, (	cv. Bursa S	2009	Turkey	36.33333	36.18333	N	21
Ficus carica	ali?kan, (	cv. Sarilop,	2009	Turkey	36.33333	36.18333	N	21
Ficus carica	ali?kan, (	cv. Sarilop,	2009	Turkey	36.33333	36.18333	N	0
Agrostis ca	Zhang, X.,	Commercia	2016	China	36.41667	116	N	0
Pinus sylve	Kaliniewicz	Mikolajki, P	2007	Poland	53.01667	21.01667	N	0
Castanea s	Benedetti,	Las Minas,	2008	Chile	-39.9167	-73.2167	N	0
Castanea s	Benedetti,	Pillo Pillo,	2008	Chile	-39.8667	-73.1	N	0
Rubus parv	Wada, S. a	USA	2007	USA	37.41667	-79.6833	N	120
Rubus parv	Wada, S. a	USA	2007	USA	37.41667	-79.6833	Y	120
Lotus corni	Hill, M. J. L	USA	1990	USA	38.35	-100.267	Y	0
Lotus corni	Hill, M. J. L	USA	1990	USA	38.35	-100.267	Y	0
Securigera	Hill, M. J. L	USA	1990	USA	38.35	-100.267	Y	0
Securigera	Hill, M. J. L	USA	1990	USA	38.35	-100.267	Y	0
Lotus corni	Hill, M. J. L	USA	1990	USA	38.35	-100.267	Y	0
Securigera	Hill, M. J. L	USA	1990	USA	38.35	-100.267	Y	0
Securigera	Hill, M. J. L	USA	1990	USA	38.35	-100.267	Y	0
Lotus corni	Hill, M. J. L	USA	1990	USA	38.35	-100.267	Y	0
Lotus corni	Hill, M. J. L	USA	1990	USA	38.35	-100.267	Y	0
Rubus ursi	Wada, S. a	Oregon Sta	2006	USA	44.53333	-123.2	N	120
Rubus parv	Wada, S. a	Oregon Sta	2006	USA	44.53333	-123.2	N	120
Rubus ursi	Wada, S. a	Oregon Sta	2006	USA	44.53333	-123.2	Y	120
Rubus caes	Wada, S. a	Oregon Sta	2006	USA	44.53333	-123.2	N	120
Rubus crat	Wada, S. a	Oregon Sta	2006	USA	44.53333	-123.2	N	120
Rubus caes	Wada, S. a	Oregon Sta	2006	USA	44.53333	-123.2	Y	120
Pinus nigra	Temel, F.,	23 average	1998	Turkey	37.68333	30.9	N	0
Cistus creti	Tavsanoglu	Bozburun p	2008	Turkey	36.76667	28.16667	N	0
Cistus creti	Tavsanoglu	Bozburun p	2008	Turkey	36.76667	28.16667	Y	0
Cistus creti	Tavsanoglu	Bozburun p	2008	Turkey	36.76667	28.16667	N	21
Dactylis glo	Stanisavlje	Zaje ar, S	2007	Serbia	43.85	22.36667	N	5
Primula het	Sharaf, A. I	Saravan, G	2010	Iran	37.05	49.65	Y	0
Quercus ile	Pasquini, S	Monte Lupp	2008	Italy	45.56667	10.66667	N	0
Quercus ile	Pasquini, S	Porto Caler	2008	Italy	45.1	12.31667	N	0
Pinus sylve	Kaliniewicz	Lomza, Pol	2010	Poland	53.01667	22.01667	N	0
Carex pens	McGinnis, I	Prairie Moc	2005	USA	43.9	-91.6333	N	60
Carex pens	McGinnis, I	Prairie Moc	2005	USA	43.9	-91.6333	N	0
Carex pens	McGinnis, I	Prairie Moc	2005	USA	43.9	-91.6333	N	60
Carex pens	McGinnis, I	Prairie Moc	2005	USA	43.9	-91.6333	N	0
Carex pens	McGinnis, I	Prairie Moc	2005	USA	43.9	-91.6333	N	0
Carex pens	McGinnis, I	Prairie Moc	2005	USA	43.9	-91.6333	N	60
Origanum v	Liopa-Tsak	Messolongl	2010	Greece	38.36667	21.41667	N	0
Diospyros v	Elbers, J. F	Sheffield	2009	USA	42.63333	-76.4833	N	60
Quercus ph	Elbers, J. F	Louisiana F	2009	USA	31.11667	-92.4333	Y	0
Fraxinus or	Draghici, C	R?cari, Ror	2009	Romania	44.61667	25.73333	N	0
Fraxinus or	Draghici, C	Dr?g??ani,	2009	Romania	44.65	24.25	N	0
Fraxinus or	Draghici, C	Bal?, Roma	2009	Romania	44.35	24.08333	N	0
Fraxinus ex	Doody, C. I	Coillte See	2005	Ireland	52.73333	-6.7	N	294
Fraxinus ex	Doody, C. I	Coillte See	2005	Ireland	52.73333	-6.7	N	294
Miscanthus	Clifton-Bro	Mx117, UK	2010	UK	53.3	-1.48333	N	0
Miscanthus	Clifton-Bro	Mx117, UK	2010	UK	53.3	-1.48333	N	0
Miscanthus	Clifton-Bro	Mx117, UK	2010	UK	53.3	-1.48333	N	0
Miscanthus	Clifton-Bro	Mx117, UK	2010	UK	53.3	-1.48333	N	0
Miscanthus	Clifton-Bro	Mx117, UK	2010	UK	53.3	-1.48333	N	0
Miscanthus	Clifton-Bro	Mx117, UK	2010	UK	53.3	-1.48333	N	0
Miscanthus	Clifton-Bro	Mx117, UK	2010	UK	53.3	-1.48333	N	0

Securigera	Chunhui, W	Jindao See	2010	China	25.33333	110.35	N	0
Alnus glutir	Kaliniewicz	Gorowo Ila	2012	Poland	54.31667	20.31667	N	0
Achillea mil	Beckmann,	3 merged p	2006	Germany	51.01667	11.01667	N	0
Achillea mil	Beckmann,	3 merged p	2006	Germany	51.01667	11.01667	N	0
Achillea mil	Beckmann,	3 merged p	2006	Germany	51.01667	11.01667	N	0
Actaea rac	Albrecht, M	Athens and	2002	USA	39.31667	-82.0833	N	0
Sanguinari	Albrecht, M	Athens and	2002	USA	39.31667	-82.0833	N	0
Actaea rac	Albrecht, M	Athens and	2002	USA	39.31667	-82.0833	N	0
Sanguinari	Albrecht, M	Athens and	2002	USA	39.31667	-82.0833	N	0
Sanguinari	Albrecht, M	Athens and	2002	USA	39.31667	-82.0833	N	0
Actaea rac	Albrecht, M	Athens and	2002	USA	39.31667	-82.0833	N	0
Sanguinari	Albrecht, M	Athens and	2002	USA	39.31667	-82.0833	N	0
Actaea rac	Albrecht, M	Athens and	2002	USA	39.31667	-82.0833	N	0
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	84
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	84
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	84
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	84
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	84
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	84
Prunus ser	Zuloaga-Aç	Las Joyas S	2009	Mexico	19.58333	-104.617	N	0
Prunus ser	Zuloaga-Aç	Las Joyas S	2009	Mexico	19.58333	-104.617	Y	0
Oenanthe j	Xiao, C., et	Central Chi	2007	China	32.51667	111.1333	N	0
Oenanthe j	Xiao, C., et	Central Chi	2007	China	32.51667	111.1333	N	45
Robinia ps	Wu, A.-P.,	China Natic	2007	China	39.96667	116.4	N	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Rumex ace	Van Assch	Leuven, Be	1993	Belgium	50.86667	4.7	N	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0
Medicago l	Van Assch	Leuven, Be	1996	Belgium	50.86667	4.683333	N	0
Lotus corni	Van Assch	Leuven, Be	1996	Belgium	50.86667	4.683333	N	0
Anemone n	De Frenne,	Leuven, Be	2006	Belgium	50.86667	4.683333	N	182
Medicago l	Van Assch	Leuven, Be	1996	Belgium	50.86667	4.683333	N	0
Rumex ace	Van Assch	Leuven, Be	1993	Belgium	50.86667	4.7	N	0
Rumex ace	Van Assch	Leuven, Be	1993	Belgium	50.86667	4.7	N	0
Sanicula e	Vandelook,	Leuven, Be	2007	Belgium	50.85	4.683333	N	0
Rumex ace	Van Assch	Leuven, Be	1993	Belgium	50.86667	4.7	N	0
Medicago l	Van Assch	Leuven, Be	1996	Belgium	50.86667	4.683333	N	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0

Geranium r	Van Assch	Leuven, Be	2002	Belgium	50.86667	4.7	N	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0
Lotus corni	Van Assch	Leuven, Be	1996	Belgium	50.86667	4.683333	N	0
Lotus corni	Van Assch	Leuven, Be	1996	Belgium	50.86667	4.683333	N	0
Lotus corni	Van Assch	Leuven, Be	1996	Belgium	50.86667	4.683333	N	0
Lotus corni	Van Assch	Leuven, Be	1996	Belgium	50.86667	4.683333	N	0
Medicago l	Van Assch	Leuven, Be	1996	Belgium	50.86667	4.683333	N	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	90
Medicago l	Van Assch	Leuven, Be	1996	Belgium	50.86667	4.683333	N	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0
Geranium r	Vandelook,	Leuven, Be	2007	Belgium	50.86667	4.683333	Y	0
Sanicula e	Vandelook,	Leuven, Be	2007	Belgium	50.85	4.683333	N	0
Sanicula e	Vandelook,	Leuven, Be	2007	Belgium	50.85	4.683333	N	0
Sanicula e	Vandelook,	Leuven, Be	2007	Belgium	50.85	4.683333	N	0
Hypericum	Trueblood,	Mountain H	2009	USA	35.41667	-82.55	Y	0
Quercus pe	Tilki, F. (20	Ardanuc, T	2005	Turkey	41.13333	42.16667	N	0
Viscum alb	Stanton, S.	Three merg	2009	Belgium	50.7	4.533333	N	0
Viscum alb	Stanton, S.	Three merg	2009	Belgium	50.7	4.533333	N	0
Viscum alb	Stanton, S.	Three merg	2009	Belgium	50.7	4.533333	N	0
Alnus glutir	Kaliniewicz	Ketrzyn, Pc	2012	Poland	54.11667	21.48333	N	0
Pinus nigra	Mataruga, I	Sutjeska, B	2000	Bosnia and	43.31667	18.65	N	0
Pinus nigra	Mataruga, I	Visegrad, E	2000	Bosnia and	43.85	19.23333	N	0
Pinus nigra	Mataruga, I	Tara, Serbi	2000	Bosnia and	43.88333	19.53333	N	0
Pinus nigra	Mataruga, I	Teslic, Bos	2000	Bosnia and	44.56667	17.71667	N	0
Pinus nigra	Mataruga, I	Durmitor, M	2000	Montenegr	43	19.41667	N	0
Festuca ovi	Lonati, M.,	Commercia	2008	New Zealar	-42.3167	172.3333	N	0
Festuca ovi	Lonati, M.,	Commercia	2008	New Zealar	-42.3167	172.3333	N	0
Festuca ovi	Lonati, M.,	Commercia	2008	New Zealar	-42.3167	172.3333	N	0
Festuca ovi	Lonati, M.,	Commercia	2008	New Zealar	-42.3167	172.3333	N	0
Festuca ovi	Lonati, M.,	Commercia	2008	New Zealar	-42.3167	172.3333	N	0
Festuca ovi	Lonati, M.,	Commercia	2008	New Zealar	-42.3167	172.3333	N	0
Festuca ovi	Lonati, M.,	Commercia	2008	New Zealar	-42.3167	172.3333	N	0
Festuca ovi	Lonati, M.,	Commercia	2008	New Zealar	-42.3167	172.3333	N	0
Pinus bank	Kemball, K.	Pineland Fc	2009	Canada	49.63333	-95.8833	N	0
Picea glauc	Kemball, K.	Pineland Fc	2009	Canada	49.63333	-95.8833	N	0
Picea mari	Kemball, K.	Pineland Fc	2009	Canada	49.63333	-95.8833	N	0
Abies balsa	Kemball, K.	Quebec, Ca	2009	Canada	46.96667	-73.1167	N	0
Lotus corni	Kabouw, P.	Unknown, e	2009	Netherland	51.95	5.75	N	0
Rhododenc	Hirao, A. S.	Mt Hakkoda	2006	Japan	40.63333	140.85	N	60
Alnus glutir	Kaliniewicz	Lolkowo, P	2012	Poland	54.33333	20.26667	N	0
Sanicula ca	Hawkins, T	University c	2002	USA	37.5	-83.3333	N	0
Sanicula ca	Hawkins, T	University c	2002	USA	37.5	-83.3333	N	0
Sanicula ca	Hawkins, T	University c	2002	USA	37.5	-83.3333	N	84
Sanicula ca	Hawkins, T	University c	2002	USA	37.5	-83.3333	N	84
Sanicula ca	Hawkins, T	University c	2002	USA	37.5	-83.3333	N	168
Sanicula ca	Hawkins, T	University c	2002	USA	37.5	-83.3333	N	168
Sanicula ca	Hawkins, T	University c	2002	USA	37.5	-83.3333	N	84
Sanicula ca	Hawkins, T	University c	2002	USA	37.5	-83.3333	N	0
Sanicula ca	Hawkins, T	University c	2002	USA	37.5	-83.3333	N	168
Cytisus hirs	Gonz&#65533;lez	Madrid Bota	1993	Spain	40.4	-3.68333	N	0
Cytisus hirs	Gonz&#65533;lez	Madrid Bota	1993	Spain	40.4	-3.68333	N	0
Cytisus hirs	Gonz&#65533;lez	Vacratot Bc	1993	Hungary	47.7	19.23333	N	0
Cytisus hirs	Gonz&#65533;lez	Vacratot Bc	1993	Hungary	47.7	19.23333	N	0
Arbutus un	Ertekin, M.	Bart?n, Tur	2008	Turkey	41.63333	32.33333	N	0

Arbutus un	Ertekin, M. Bart?n, Tur	2008	Turkey	41.63333	32.33333	N	90
Poa bulbos	Naghipour, Central Zag	2013	Iran	31.18333	50.7	N	0
Bromus tec	Naghipour, Central Zag	2013	Iran	31.18333	50.7	N	0
Anemone n	De Frenne, Amiens, Fra	2006	France	49.88333	2.283333	N	182
Anemone n	De Frenne, Bremen, Ge	2006	Germany	53.06667	8.783333	N	182
Anemone n	De Frenne, Postdam, G	2006	Germany	52.38333	13.05	N	182
Anemone n	De Frenne, Alnarp, Swe	2006	Sweden	55.65	13.06667	N	182
Acer platan	Julin-Tegel	Stockholm,	1979	Sweden	59.31667	18.03333	N	131
Acer platan	Julin-Tegel	Stockholm,	1979	Sweden	59.31667	18.03333	N	0
Anemone n	De Frenne, Stockholm,	2006	Sweden	59.31667	18.05	N	182
Alnus glutir	Kaliniewicz	Czarnia, Po	2012	Poland	53.31667	21.18333	N	0
Anemone n	De Frenne, Umea, Swe	2006	Sweden	63.81667	20.25	N	182
Asparagus	Conversa, (	Manfredoni	2007	Italy	41.61667	15.9	N	56
Asparagus	Conversa, (	Manfredoni	2007	Italy	41.61667	15.9	N	0
Asparagus	Conversa, (	Manfredoni	2007	Italy	41.61667	15.9	N	56
Asparagus	Conversa, (	Manfredoni	2007	Italy	41.61667	15.9	Y	0
Carpinus b	Chmielarz, K�rnik, Po	2000	Poland	52.23333	17.08333	N	140
Alnus glutir	Chmielarz, Bierzwnik,	2000	Poland	53.03333	15.65	N	0
Alnus glutir	Chmielarz, Henryk�w	2000	Poland	50.65	17.01667	N	0
Ulmus glab	Chmielarz, Ko?obrzeg	2000	Poland	54.16667	15.51667	N	0
Ulmus glab	Chmielarz, Ko?obrzeg	2000	Poland	54.16667	15.58333	N	0
Phellodend	Chen, S. Y.	Taiping Mo	2004	Taiwan	24.5	121.4833	N	0
Phellodend	Chen, S. Y.	Taiping Mo	2004	Taiwan	24.5	121.4833	N	84
Prunus avi	Bujarska-B	K�rnik Arb	1985	Poland	52.25	17.1	N	98
Prunus avi	Bujarska-B	K�rnik Arb	1985	Poland	52.25	17.1	N	98
Prunus avi	Bujarska-B	K�rnik Arb	1985	Poland	52.25	17.1	N	98
Abies alba	Boncaldo, I	Laurenzana	2009	Italy	40.45	15.96667	N	21
Alnus glutir	Kaliniewicz	Ilawa, Pola	2012	Poland	53.7	19.6	N	0
Abies alba	Boncaldo, I	Monte Gari	2009	Italy	38.66667	16.33333	N	21
Abies alba	Boncaldo, I	Serra San I	2009	Italy	38.56667	16.3	N	21
Pseudotsu	Boberg, P.,	El Bols�n,	2007	Argentina	-41.95	-71.5333	N	30
Pinus pond	Boberg, P.,	Bariloche, A	2006	Argentina	-41.1333	-71.3	N	30
Origanum v	Bischoff, A.	Fribourg ar	2001	Switzerlanc	46.85	7.166667	N	0
Origanum v	Bischoff, A.	Sachsen-A	2001	Germany	51.31667	11.9	N	0
Ardisia crer	Yang, Q. H	Meizhou Ci	2006	China	24.3	116.1167	N	0
Ardisia crer	Yang, Q. H	Meizhou Ci	2006	China	24.3	116.1167	N	0
Ardisia crer	Yang, Q. H	Meizhou Ci	2006	China	24.3	116.1167	N	0
Ardisia crer	Yang, Q. H	Meizhou Ci	2006	China	24.3	116.1167	N	0
Ardisia crer	Yang, Q. H	Meizhou Ci	2006	China	24.3	116.1167	N	0
Ardisia crer	Yang, Q. H	Meizhou Ci	2006	China	24.3	116.1167	N	0
Ardisia crer	Yang, Q. H	Meizhou Ci	2006	China	24.3	116.1167	N	0
Ardisia crer	Yang, Q. H	Meizhou Ci	2006	China	24.3	116.1167	N	0
Aconitum l	Vandelook,	Lesse river	2006	Belgium	50.23333	4.9	N	0
Aconitum l	Vandelook,	Lesse river	2006	Belgium	50.23333	4.9	N	0
Aconitum l	Vandelook,	Lesse river	2006	Belgium	50.23333	4.9	N	0
Aconitum l	Vandelook,	Lesse river	2006	Belgium	50.23333	4.9	N	0
Aconitum l	Vandelook,	Lesse river	2006	Belgium	50.23333	4.9	N	0
Aegopodiu	Vandelook,	Diest, Belgi	2007	Belgium	50.8	5.383333	N	140
Aegopodiu	Vandelook,	Diest, Belgi	2007	Belgium	50.8	5.383333	N	0
Aegopodiu	Vandelook,	Diest, Belgi	2007	Belgium	50.8	5.383333	N	140
Angelica sy	Vandelook,	Diest, Belgi	2006	Belgium	50.8	5.05	N	0
Aegopodiu	Vandelook,	Diest, Belgi	2007	Belgium	50.8	5.383333	N	140
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Angelica sy	Vandelook,	Diest, Belgi	2006	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N	0

Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	112
Aegopodiur	Vandelook, Diest, Belgi	2007	Belgium	50.8	5.383333	N	0
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Aegopodiur	Vandelook, Diest, Belgi	2007	Belgium	50.8	5.383333	N	0
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	112
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	0
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	0
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	0
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	112
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	0
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Aegopodiur	Vandelook, Diest, Belgi	2007	Belgium	50.8	5.383333	N	140
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Moehringia	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	0
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	112
Stellaria ho	Vandelook, Diest, Belgi	2005	Belgium	50.8	5.05	N	112
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	0
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	112
Angelica sy	Vandelook, Diest, Belgi	2006	Belgium	50.8	5.05	N	0

Angelica sy	Vandelook,	Diest, Belgi	2006	Belgium	50.8	5.05	N 0
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 0
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 0
Moehringia	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 0
Moehringia	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Moehringia	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Moehringia	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Aegopodiur	Vandelook,	Diest, Belgi	2007	Belgium	50.8	5.383333	N 0
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Moehringia	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Moehringia	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Moehringia	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Moehringia	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 0
Moehringia	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 112
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 0
Stellaria ho	Vandelook,	Diest, Belgi	2005	Belgium	50.8	5.05	N 0
Juniperus c	Tylkowski,	Shrub A, W	2003	Poland	51.21667	18.56667	N 182
Fagus sylv	Ratajczak,	K□rnik Arb	2014	Poland	52.23333	17.08333	N 0
Acer sacch	Kalemba, E	K□rnik Arb	2017	Poland	52.23333	17.08333	N 0
Acer platan	Pawlowski,	K□rnik Arb	2005	Poland	52.23333	17.08333	N 0
Juniperus c	Tylkowski,	Shrub B, W	2006	Poland	51.21667	18.56667	N 182
Juniperus c	Tylkowski,	Shrub C, G	2006	Poland	52.03333	18.05	N 182
Rubus parv	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Miscanthus	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 30
Prunus gra	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Hydrangea	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	Y 0
Vitis coigne	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Weigela ho	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 30
Aralia elata	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	Y 0
Leucothoe	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	Y 0
Aster agera	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 30
Miscanthus	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Solidago vi	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Weigela ho	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Ampelopsis	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Aralia elata	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Calamagro	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Ampelopsis	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 30
Rubus parv	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 30
Hydrangea	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 30
Pinus dens	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 30
Miscanthus	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	Y 0
Calamagro	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 30
Juncus effu	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Solidago vi	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	Y 0
Toxicodenc	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Lotus corni	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Rumex ace	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Toxicodenc	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	Y 0
Weigela ho	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Artemisia n	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0
Juncus effu	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	Y 0
Aralia elata	Tsuyuzaki,	Mount Kom	2004	Japan	40.06667	140.7	N 0

Leucothoe	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Toxicodenc	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Anaphalis r	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Solidago vi	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Pinus dens	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Juncus effu	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Prunus gra	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Pinus dens	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Anaphalis r	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Rumex ace	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Aster agera	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Rumex ace	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Ampelopsis	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Lotus corni	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Artemisia m	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Anaphalis r	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Aralia elata	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Ampelopsis	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Artemisia m	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Juncus effu	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Vitis coigne	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Leucothoe	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Anaphalis r	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Pinus dens	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Hydrangea	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Prunus gra	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Lotus corni	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Vitis coigne	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Rumex ace	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Leucothoe	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Calamagro	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Aster agera	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Rubus parv	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Hydrangea	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Lotus corni	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Aster agera	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Prunus gra	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Calamagro	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Rubus parv	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Toxicodenc	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Vitis coigne	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Weigela ho	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	Y	0
Miscanthus	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Artemisia m	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	30
Solidago vi	Tsuyuzaki, Mount Kom	2004	Japan	40.06667	140.7	N	0
Commelina	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	0
Epilobium a	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	30
Betula platy	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	0
Betula platy	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	30
Lespedeza	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	0
Betula platy	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	Y	0
Commelina	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	0
Commelina	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	30
Commelina	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	Y	0
Epilobium a	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	0
Epilobium a	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	Y	0

Lespedeza	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	0
Lespedeza	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	30
Betula plat	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	0
Lespedeza	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	Y	0
Epilobium a	Tsuyuzaki, Ishikari Plai	2005	Japan	43.05	141.3333	N	0
Betula max	Seiwa, K., «Hardwood f	2007	Japan	42.86667	142.5833	N	28
Betula max	Seiwa, K., «Hardwood f	2007	Japan	42.86667	142.5833	N	28
Acer pictur	Qin, J. and Lixian Cour	2007	China	31.83333	102.8333	N	0
Fagus sylva	Prochazko\Hostynsko-	1999	Czech Rep	50.38333	17	N	0
Fagus sylva	Prochazko\Predhor\xef\xbf\xbd (	1999	Czech Rep	49.41667	15.65	N	0
Fagus sylva	Prochazko\Stredoslove	1999	Slovakia	48.73333	19.15	N	0
Fagus sylva	Prochazko\Stredoslove	1999	Slovakia	48.73333	19.15	N	0
Fagus sylva	Prochazko\Podtatransl	1999	Slovakia	49.05	20.28333	N	0
Lathyrus lin	Dello Jaco\Green mor	2016	UK	54.73333	-1.36667	N	0
Lathyrus lin	Dello Jaco\Green mor	2016	UK	54.73333	-1.36667	N	0
Lathyrus lin	Dello Jaco\Green mor	2016	UK	54.73333	-1.36667	Y	0
Lathyrus lin	Dello Jaco\Green mor	2016	UK	54.73333	-1.36667	N	0
Lathyrus lin	Dello Jaco\Green mor	2016	UK	54.73333	-1.36667	N	0
Lathyrus lin	Dello Jaco\Green mor	2016	UK	54.73333	-1.36667	N	0
Lathyrus lin	Dello Jaco\Green mor	2016	UK	54.73333	-1.36667	N	0
Fagus sylva	Prochazko\Predhori Hr	1999	Czech Rep	50.2	17.21667	N	0
Fagus sylva	Prochazko\Drahanska	1999	Czech Rep	49.38333	17	N	0
Fagus sylva	Prochazko\Ceskomora	1999	Czech Rep	49.46667	16	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	112
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	112
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	112
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	112
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	0
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	112
Aegopodiur	Phartyal, S Hokkaido U	2007	Japan	43.06667	141.3333	N	112
Prunus ser	Phartyal, S Sonian For	2002	Belgium	50.78333	4.433333	N	56
Prunus ser	Phartyal, S Sonian For	2002	Belgium	50.78333	4.433333	N	56
Prunus ser	Phartyal, S Sonian For	2002	Belgium	50.78333	4.433333	N	56
Impatiens r	Perglova, I. Three merg	2005	Czech Rep	49.68333	13.98333	N	0
Impatiens r	Perglova, I. Three merg	2005	Czech Rep	49.68333	13.98333	N	0
Impatiens r	Perglova, I. Three merg	2005	Czech Rep	49.68333	13.98333	N	0
Impatiens c	Perglova, I. Three merg	2005	Germany	50.8	8.85	N	0
Impatiens c	Perglova, I. Three merg	2005	Germany	50.8	8.85	N	0
Impatiens c	Perglova, I. Three merg	2005	Germany	50.8	8.85	N	0
Quercus py	P\xef\xbf\xbdrez-Rar	Sierra More	2005	Spain	38.36667	-3.81667	N	0
Calluna vul	M\xef\xbf\xbdren, I. E	Lygra islan	2007	Norway	60.68333	5.116667	N	0
Cryptomeri	Kim, D. H., Jeju Island,	2005	South Kore	33.36667	126.55	N	0
Lathyrus lin	Dello Jaco\Brown mor	2016	UK	54.73333	-1.36667	N	0
Lathyrus lin	Dello Jaco\Brown mor	2016	UK	54.73333	-1.36667	Y	0
Lathyrus lin	Dello Jaco\Brown mor	2016	UK	54.73333	-1.36667	N	0
Lathyrus lin	Dello Jaco\Brown mor	2016	UK	54.73333	-1.36667	N	0
Lathyrus lin	Dello Jaco\Brown mor	2016	UK	54.73333	-1.36667	N	0

Lathyrus lin	Dello Jaco	Brown mor	2016	UK	54.73333	-1.36667	N	0
Lathyrus lin	Dello Jaco	Brown mor	2016	UK	54.73333	-1.36667	N	0
Phragmites	Kettenring,	3 merged p	2006	USA	38.01667	-76.0167	N	0
Phragmites	Kettenring,	3 merged p	2006	USA	38.01667	-76.0167	N	60
Phragmites	Kettenring,	3 merged p	2006	USA	38.01667	-76.0167	N	0
Phragmites	Kettenring,	3 merged p	2006	USA	38.01667	-76.0167	N	60
Ulex gallii	Hanley, M.	Buckland C	2008	UK	50.55	-3.78333	N	0
Ulex gallii	Hanley, M.	Buckland C	2008	UK	50.55	-3.78333	Y	0
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	42
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	42
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	0
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	0
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	42
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	0
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	42
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	0
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	42
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	42
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	0
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	42
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	42
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	0
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	0
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	0
Alnus glutir	Gosling, P.	Durham, Er	1992	UK	54.76667	-1.58333	N	0
Acer platan	Jensen, M.	Departmen	1993	Denmark	55.3	10.43333	N	12
Acer platan	Jensen, M.	Departmen	1993	Denmark	55.3	10.43333	N	12
Acer platan	Jensen, M.	Departmen	1993	Denmark	55.3	10.43333	N	12
Acer platan	Jensen, M.	Departmen	1993	Denmark	55.3	10.43333	N	12
Acer platan	Jensen, M.	Departmen	1993	Denmark	55.3	10.43333	N	12
Acer platan	Jensen, M.	Departmen	1993	Denmark	55.3	10.43333	N	12
Acer platan	Jensen, M.	Departmen	1993	Denmark	55.3	10.43333	N	12
Acer platan	Jensen, M.	Departmen	1993	Denmark	55.3	10.43333	N	12
Pinus taeda	Golle, D. P.	Universidad	2008	Brazil	-29.7	-53.7167	N	0
Prunus avi	Esen, D., e	Four merge	2003	Turkey	41.2	33.55	N	135
Asparagus	Conversa,	Orsara di P	2006	Italy	41.28333	15.26667	N	0
Asparagus	Conversa,	Orsara di P	2006	Italy	41.28333	15.26667	N	30
Pinus dens	Choi, D., et	Hokkaido R	2008	Japan	43.05	141.35	N	10
Acer pseud	Daws, M. I.	Poznan, Pc	2003	Poland	52.41667	16.88333	N	0
Acer pseud	Daws, M. I.	Poznan, Pc	2003	Poland	52.41667	16.88333	N	0
Acer pseud	Daws, M. I.	Poznan, Pc	2003	Poland	52.41667	16.88333	N	0
Fraxinus e	Chmielarz,	Poznan, Pc	2000	Poland	52.41667	16.91667	N	16
Acer pseud	Daws, M. I.	Poznan, Pc	2003	Poland	52.41667	16.88333	N	0
Acer pseud	Daws, M. I.	Poznan, Pc	2003	Poland	52.41667	16.88333	N	0
Acer pseud	Daws, M. I.	Poznan, Pc	2003	Poland	52.41667	16.88333	N	0
Acer pseud	Daws, M. I.	Poznan, Pc	2003	Poland	52.41667	16.88333	N	0
Fagus sylv	Walbott, M.	For&#65533;t de F	2014	France	47	3.233333	N	150
Fagus sylv	Walbott, M.	For&#65533;t de F	2014	France	47	3.233333	N	150
Cornus kou	Cho, J. S.	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	84
Cornus kou	Cho, J. S.	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	0
Cornus kou	Cho, J. S.	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	84
Cornus kou	Cho, J. S.	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	0
Cornus kou	Cho, J. S.	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	84
Cornus kou	Cho, J. S.	Miwon-mye	2013	South Kore	36.61667	127.6667	N	84
Cornus kou	Cho, J. S.	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	84
Cornus kou	Cho, J. S.	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	84

Cornus kou	Cho, J. S. &	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	84
Cornus kou	Cho, J. S. &	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	84
Cornus kou	Cho, J. S. &	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	84
Cornus kou	Cho, J. S. &	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	84
Cornus kou	Cho, J. S. &	Miwon-mye	2013	South Kore	36.61667	127.6667	Y	84
Cornus kou	Cho, J. S. &	Miwon-mye	2013	South Kore	36.61667	127.6667	N	0
Cornus kou	Cho, J. S. &	Miwon-mye	2013	South Kore	36.61667	127.6667	N	84
Cornus kou	Cho, J. S. &	Miwon-mye	2013	South Kore	36.61667	127.6667	N	0
Betula pen	Chmielarz,	Totun, Pola	2000	Poland	53	18.58333	N	0
Picea glauc	Carles, S.,	Cap Tourm	2001	Canada	47.06667	-70.8333	N	21
Rhus copal	Bolin, J. F.	Zuni Pine E	2004	USA	36.85	-76.8167	Y	0
Rhus copal	Bolin, J. F.	Zuni Pine E	2004	USA	36.85	-76.8167	N	0
Rhus copal	Bolin, J. F.	City ofAlex	2004	USA	38.8	-77.0333	N	0
Rhus copal	Bolin, J. F.	City ofAlex	2004	USA	38.8	-77.0333	Y	0
Rhus copal	Bolin, J. F.	Newport Ne	2004	USA	37.11667	-76.5167	Y	0
Rhus copal	Bolin, J. F.	Newport Ne	2004	USA	37.11667	-76.5167	N	0
Rhus copal	Bolin, J. F.	James City	2004	USA	37.28333	-76.7833	Y	0
Rhus copal	Bolin, J. F.	James City	2004	USA	37.28333	-76.7833	N	0
Fragaria ve	Baturin, S.	Burmistrov	2008	Russia	54.63333	82.85	N	120
Fragaria ve	Baturin, S.	1 Berd<U+FFFD>Ri	2008	Russia	54.63333	83.58333	N	120
Fragaria ve	Baturin, S.	Syenga Riv	2008	Russia	54.33333	84.2	N	120
Fragaria ve	Baturin, S.	2 Berd<U+FFFD>Ri	2008	Russia	54.63333	83.61667	N	120
Taraxacum	Arcamone,	Sierras Chi	2017	Argentina	-30.9667	-64.4833	N	0
Fragaria ve	Baturin, S.	Tashtagol,	2008	Russia	52.75	87.88333	N	120
Fragaria ve	Baturin, S.	Tashtagol,	2008	Russia	52.75	87.88333	N	120
Rosa canin	Alp, S., et a	Van, Turke	2007	Turkey	38.5	43.36667	N	84
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	0
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	0
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	0
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	0
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	0
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	0
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	0
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	0
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	0
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	112
Stellaria ne	Vandelook,	Anseremm	2005	Belgium	50.23333	4.9	N	0

Cistus creti	Tilki, F. (20	Artvin, Turk	2006	Turkey	41.16667	41.81667	Y	0
Cistus creti	Tilki, F. (20	Artvin, Turk	2006	Turkey	41.16667	41.81667	N	0
Juniperus c	Tilki, F. (20	Artvin, Turk	2005	Turkey	41.16667	41.8	N	0
Juniperus c	Tilki, F. (20	Artvin, Turk	2005	Turkey	41.16667	41.8	N	90
Genista sc	Reyes, O. ;	Montpellier	2008	France	43.6	3.866667	N	0
Melica cilia	Reyes, O. ;	Montpellier	2008	France	43.6	3.866667	Y	0
Rhamnus a	Reyes, O. ;	Montpellier	2008	France	43.6	3.866667	Y	0
Melica cilia	Reyes, O. ;	Montpellier	2008	France	43.6	3.866667	N	0
Rhamnus a	Reyes, O. ;	Montpellier	2008	France	43.6	3.866667	N	0
Genista sc	Reyes, O. ;	Montpellier	2008	France	43.6	3.866667	Y	0
Lilium mart	Pari?, A., e	Borova Gla	2007	Bosnia and	43.78333	17.11667	N	0
Lilium mart	Pari?, A., e	Borova Gla	2007	Bosnia and	43.78333	17.11667	Y	0
Anemone n	Mondoni, A	1 Poo plain	2006	Italy	45	10.48333	N	0
Anemone n	Mondoni, A	1 Poo plain	2006	Italy	45	10.48333	N	0
Anemone n	Mondoni, A	1 Poo plain	2006	Italy	45	10.48333	N	0
Anemone n	Mondoni, A	1 Poo plain	2006	Italy	45	10.48333	N	0
Anemone n	Mondoni, A	2 Poo plain	2006	Italy	45	10.5	N	0
Anemone n	Mondoni, A	2 Poo plain	2006	Italy	45	10.5	N	0
Anemone n	Mondoni, A	2 Poo plain	2006	Italy	45	10.5	N	0
Anemone n	Mondoni, A	2 Poo plain	2006	Italy	45	10.5	N	0
Anemone n	Mondoni, A	3 Poo plain	2006	Italy	45	10.5	N	0
Anemone n	Mondoni, A	3 Poo plain	2006	Italy	45	10.5	N	0
Anemone n	Mondoni, A	3 Poo plain	2006	Italy	45	10.5	N	0
Anemone n	Mondoni, A	3 Poo plain	2006	Italy	45	10.5	N	0
Pinus sylve	Zhu, J., et a	Honghuaer	2003	China	47.58333	118.9667	N	0
Anemone n	Mondoni, A	Northern A	2006	Italy	43.26667	12.58333	N	0
Anemone n	Mondoni, A	Northern A	2006	Italy	43.26667	12.58333	N	0
Anemone n	Mondoni, A	Northern A	2006	Italy	43.26667	12.58333	N	0
Anemone n	Mondoni, A	Northern A	2006	Italy	43.26667	12.58333	N	0
Erica cinere	Luna, B. an	Serran&#65533;a I	2008	Spain	39.83333	-1.33333	N	0
Erica cinere	Luna, B. an	Serran&#65533;a I	2008	Spain	39.83333	-1.33333	N	0
Teucrium c	Luna, B. an	Serran&#65533;a I	2008	Spain	39.83333	-1.33333	N	0
Teucrium c	Luna, B. an	Serran&#65533;a I	2008	Spain	39.83333	-1.33333	N	0
Quercus ro	Doody, C. I	Coillte See	2006	Ireland	52.83333	-6.93333	N	0
Pinus sylve	Daws, M. I.	United King	2005	UK	53.38333	-2.05	N	0
Pinus pond	Daws, M. I.	United King	2005	UK	53.38333	-2.05	N	0
Acer pseud	Daws, M. I.	United King	2003	UK	51.05	-0.1	N	0
Pinus mont	Daws, M. I.	United King	2005	UK	53.38333	-2.05	N	0
Pinus cont	Daws, M. I.	United King	2005	UK	53.38333	-2.05	N	0
Castanea s	Pritchard, H	Italy	1987	Italy	42.9	12.76667	N	100
Castanea s	Pritchard, H	Italy	1987	Italy	42.9	12.76667	N	100
Castanea s	Pritchard, H	Italy	1987	Italy	42.9	12.76667	N	100
Castanea s	Pritchard, H	Italy	1987	Italy	42.9	12.76667	N	100
Castanea s	Pritchard, H	Italy	1987	Italy	42.9	12.76667	N	100
Castanea s	Pritchard, H	Italy	1987	Italy	42.9	12.76667	N	100
Castanea s	Pritchard, H	Italy	1987	Italy	42.9	12.76667	N	100
Acer pseud	Daws, M. I.	Italy	2003	Italy	45.68333	11.21667	N	0
Castanea s	Pritchard, H	Italy	1987	Italy	42.9	12.76667	N	100
Castanea s	Pritchard, H	Italy	1987	Italy	42.9	12.76667	N	100
Castanea s	Pritchard, H	Italy	1987	Italy	42.9	12.76667	N	100
Fraxinus ex	Dacasa Ru	Oberrheing	2004	Germany	48.36667	7.816667	N	224
Fraxinus ex	Dacasa Ru	S&#65533;ddeutsc	2004	Germany	47.88333	8.1	N	224
Fraxinus ex	Dacasa Ru	S&#65533;ddeutsc	2004	Germany	48.48333	9.4	N	224
Myrica rubr	Chen, S. Y.	Nanjuang, I	2003	Taiwan	24.6	120.9833	N	0
Myrica rubr	Chen, S. Y.	Nanjuang, I	2003	Taiwan	24.6	120.9833	N	168
Myrica rubr	Chen, S. Y.	Nanjuang, I	2003	Taiwan	24.6	120.9833	N	84

Zelkova se	Yang, J. C.	Da-Mann, T	1999	Taiwan	24.66667	121.3833	N	0
Camellia ja	Wang, G., (	Qingdao Bo	2013	China	36.06667	120.35	N	0
Camellia ja	Wang, G., (	Qingdao Bo	2013	China	36.06667	120.35	N	0
Camellia ja	Wang, G., (	Qingdao Bo	2013	China	36.06667	120.35	N	0
Camellia ja	Wang, G., (	Qingdao Bo	2013	China	36.06667	120.35	N	0
Camellia ja	Wang, G., (	Qingdao Bo	2013	China	36.06667	120.35	N	0
Zelkova se	Yang, J. C.	Wu-Sheh, T	1999	Taiwan	24.03333	121.1333	N	0
Zelkova se	Yang, J. C.	Mei-Shan, T	1999	Taiwan	23.26667	120.8333	N	0
Zelkova se	Yang, J. C.	Fong-Shu-L	2000	Taiwan	24	121.0667	N	0
Zelkova se	Yang, J. C.	Nan-Juang	2000	Taiwan	24.56667	121.0333	N	0
Ophiopogo	Suzuki, K.,	Yokohama,	1996	Japan	35.43333	139.6333	N	0
Alliaria peti	P�rez-Gar	Spain	1966	Spain	40.01667	-3.86667	N	0
Alliaria peti	P�rez-Gar	Spain	1968	Spain	40.01667	-3.86667	N	0
Alnus glutir	O'Reilly, C.	Two merge	2001	UK	56.46667	-3	N	0
Alnus glutir	O'Reilly, C.	Two merge	2001	UK	56.46667	-3	N	84
Alnus glutir	O'Reilly, C.	Two merge	2001	UK	56.46667	-3	N	84
Alnus glutir	O'Reilly, C.	Two merge	2001	UK	56.46667	-3	N	0
Betula pub	O'Reilly, C.	Two merge	2000	Ireland	53.03333	-7.28333	N	0
Betula pub	O'Reilly, C.	Two merge	2000	Ireland	53.03333	-7.28333	N	84
Betula pub	O'Reilly, C.	Two merge	2000	Ireland	53.03333	-7.28333	N	84
Betula pub	O'Reilly, C.	Two merge	2000	Ireland	53.03333	-7.28333	N	0
Lotus corni	Nikolic, R.,	Zaje?ar, Se	1999	Serbia	43.88333	22.26667	N	0
Fagus sylv	Mortensen,	Danish Sta	2000	Denmark	55.95	9.316667	N	0
Fagus sylv	Mortensen,	Danish Sta	2000	Denmark	55.95	9.316667	N	0
Fagus sylv	Mortensen,	Danish Sta	2000	Denmark	55.95	9.316667	N	119
Fagus sylv	Mortensen,	Danish Sta	2003	Denmark	55.86667	9.2	N	70
Fagus sylv	Mortensen,	Danish Sta	2003	Denmark	55.86667	9.2	N	0
Fagus sylv	Mortensen,	Danish Sta	2000	Denmark	55.95	9.316667	N	119
Fagus sylv	Mortensen,	Danish Sta	2003	Denmark	55.86667	9.2	N	70
Fagus sylv	Mortensen,	Danish Sta	2003	Denmark	55.86667	9.2	N	0
Robinia pse	Toumi, M.,	Cherchell,	2014	Algiers	36.78333	2.616667	N	0
Robinia pse	Toumi, M.,	Cherchell,	2014	Algiers	36.78333	2.616667	Y	0
Maianthem	Kosi?ski, I.	Two popula	2000	Poland	54.83333	18.05	N	0
Maianthem	Kosi?ski, I.	Two popula	2000	Poland	54.83333	18.05	N	0
Maianthem	Kosi?ski, I.	Two popula	2000	Poland	54.83333	18.05	N	0
Stellaria ne	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Scrophulari	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Paris quadr	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Milium effu	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Moehringia	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Geranium r	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Scrophulari	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Phyteuma s	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Hypericum	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Ranunculus	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Milium effu	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Stellaria ho	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Juncus effu	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Epilobium r	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Oxalis acet	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Melica nuta	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Stachys syl	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Maianthem	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Ajuga repta	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Lamium ga	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Urtica dioic	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126

Phyteuma s	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Maianthem	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Melica nuta	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Epilobium r	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Circaea lut	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Lapsana cc	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Urtica dioic	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Poa nemor	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Lamium ga	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Stellaria ne	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Geranium r	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Paris quadr	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Aegopodiur	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Moehringia	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Stellaria ho	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Stachys syl	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Juncus effu	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Ajuga repta	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Ranunculus	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Oxalis acet	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Circaea lut	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Allium ursir	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Aegopodiur	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Poa nemor	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Lapsana cc	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Allium ursir	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Hypericum	Jankowska	Bialowieza	2004	Poland	52.83333	23.81667	N	126
Medicago l	Gresta, F.,	Castiglione	2003	Italy	37.86667	15.11667	N	0
Medicago l	Gresta, F.,	Castiglione	2003	Italy	37.86667	15.11667	Y	0
Medicago l	Gresta, F.,	Castiglione	2003	Italy	37.86667	15.11667	Y	0
Medicago l	Gresta, F.,	Castiglione	2003	Italy	37.86667	15.11667	Y	0
Medicago l	Gresta, F.,	Castiglione	2003	Italy	37.86667	15.11667	N	0
Medicago l	Gresta, F.,	Castiglione	2003	Italy	37.86667	15.11667	N	0
Medicago l	Gresta, F.,	Castiglione	2003	Italy	37.86667	15.11667	Y	0
Medicago l	Gresta, F.,	Castiglione	2003	Italy	37.86667	15.11667	N	0
Medicago l	Gresta, F.,	Castiglione	2003	Italy	37.86667	15.11667	Y	0
Medicago l	Gresta, F.,	Castiglione	2003	Italy	37.86667	15.11667	N	0
Larix decid	Gorian, F.,	Seven pool	2004	Italy	45.25	10.91667	Y	0
Larix decid	Gorian, F.,	Seven pool	2004	Italy	45.25	10.91667	Y	100
Prunus ser	Esen, D., e	Ukraine	2006	Ukraine	49.55	30.6	N	120
Prunus ser	Esen, D., e	Ukraine	2006	Ukraine	49.55	30.6	N	0
Prunus ser	Esen, D., e	Ukraine	2006	Ukraine	49.55	30.6	N	90
Prunus ser	Esen, D., e	Hungary	2006	Hungary	47.23333	19.05	N	90
Prunus ser	Esen, D., e	Hungary	2006	Hungary	47.23333	19.05	N	0
Prunus ser	Esen, D., e	Hungary	2006	Hungary	47.23333	19.05	N	120
Prunus ser	Esen, D., e	Michigan 1	2006	USA	45.01667	-84.8333	N	120
Prunus ser	Esen, D., e	Michigan 1	2006	USA	45.01667	-84.8333	N	90
Prunus ser	Esen, D., e	Michigan 1	2006	USA	45.01667	-84.8333	N	0
Prunus ser	Esen, D., e	Michigan 2	2006	USA	44.43333	-84.4667	N	120
Prunus ser	Esen, D., e	Michigan 2	2006	USA	44.43333	-84.4667	N	0
Prunus ser	Esen, D., e	Michigan 2	2006	USA	44.43333	-84.4667	N	90
Prunus ser	Esen, D., e	Virginia hig	2006	USA	36.96667	-81.5333	N	0
Prunus ser	Esen, D., e	Virginia hig	2006	USA	36.96667	-81.5333	N	90
Prunus ser	Esen, D., e	Virginia hig	2006	USA	36.96667	-81.5333	N	120
Prunus ser	Esen, D., e	Virginia me	2006	USA	37.15	-78.6167	N	0
Prunus ser	Esen, D., e	Virginia me	2006	USA	37.15	-78.6167	N	90

Phillyrea la	Spyroglou, Kassandra,	2012	Greece	39.98333	23.5	N	180
Phillyrea la	Spyroglou, Kassandra,	2012	Greece	39.98333	23.5	N	180
Phillyrea la	Spyroglou, Kassandra,	2012	Greece	39.98333	23.5	N	180
Phillyrea la	Spyroglou, Kassandra,	2012	Greece	39.98333	23.5	N	0
Prunus ser	Esen, D., e	Virginia low	2006	USA	37.58333	-76.7	N	0
Prunus ser	Esen, D., e	Virginia low	2006	USA	37.58333	-76.7	N	90
Alnus glutir	De Atrip, N	South-west	2001	UK	55.41667	-4.03333	N	84
Alnus glutir	De Atrip, N	South-west	2001	UK	55.41667	-4.03333	N	84
Alnus glutir	De Atrip, N	South-west	2001	UK	55.41667	-4.03333	N	84
Alnus glutir	De Atrip, N	South-west	2001	UK	55.41667	-4.03333	N	84
Alnus glutir	De Atrip, N	South-west	2001	UK	55.41667	-4.03333	N	84
Alnus glutir	De Atrip, N	South-west	2001	UK	55.41667	-4.03333	N	84
Alnus glutir	De Atrip, N	Mid-easterr	2001	UK	52.78333	0	N	84
Alnus glutir	De Atrip, N	Mid-easterr	2001	UK	52.78333	0	N	84
Alnus glutir	De Atrip, N	Mid-easterr	2001	UK	52.78333	0	N	84
Alnus glutir	De Atrip, N	Mid-easterr	2001	UK	52.78333	0	N	84
Alnus glutir	De Atrip, N	Mid-easterr	2001	UK	52.78333	0	N	84
Alnus glutir	De Atrip, N	Mid-easterr	2001	UK	52.78333	0	N	84
Betula pub	De Atrip, N	Co. Laois, I	2000	Ireland	52.83333	-6.91667	N	84
Betula pub	De Atrip, N	Co. Laois, I	2000	Ireland	52.83333	-6.91667	N	84
Betula pub	De Atrip, N	Co. Laois, I	2000	Ireland	52.83333	-6.91667	N	84
Betula pub	De Atrip, N	Co. Laois, I	2000	Ireland	52.83333	-6.91667	N	84
Betula pub	De Atrip, N	Co. Laois, I	2000	Ireland	52.83333	-6.91667	N	84
Betula pub	De Atrip, N	Co. Laois, I	2000	Ireland	52.83333	-6.91667	N	84
Betula pub	De Atrip, N	Co. Cork, Ir	2000	Ireland	51.85	-8.58333	N	84
Betula pub	De Atrip, N	Co. Cork, Ir	2000	Ireland	51.85	-8.58333	N	84
Betula pub	De Atrip, N	Co. Cork, Ir	2000	Ireland	51.85	-8.58333	N	84
Betula pub	De Atrip, N	Co. Cork, Ir	2000	Ireland	51.85	-8.58333	N	84
Betula pub	De Atrip, N	Co. Cork, Ir	2000	Ireland	51.85	-8.58333	N	84
Betula pub	De Atrip, N	Co. Cork, Ir	2000	Ireland	51.85	-8.58333	N	84
Vitis rotund	Conner, P.	University c	2006	USA	31.46667	-83.5167	N	90
Vitis rotund	Conner, P.	University c	2006	USA	31.46667	-83.5167	N	0
Vitis rotund	Conner, P.	University c	2006	USA	31.46667	-83.5167	N	0
Vitis rotund	Conner, P.	University c	2006	USA	31.46667	-83.5167	N	90
Vitis rotund	Conner, P.	University c	2006	USA	31.46667	-83.5167	N	90
Vitis rotund	Conner, P.	University c	2006	USA	31.46667	-83.5167	N	0
Vitis rotund	Conner, P.	University c	2006	USA	31.46667	-83.5167	N	0
Vitis rotund	Conner, P.	University c	2006	USA	31.46667	-83.5167	N	90
Ulmus min	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus glab	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus glab	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus glab	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus glab	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus glab	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus glab	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus min	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus min	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus min	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus min	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus glab	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus glab	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus min	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus min	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Ulmus min	Cicek, E. a	Western Bl	2004	Turkey	41.41667	32.85	N	0
Festuca ovi	Bulut, Y. ar	Mommerste	2005	Netherland	52.3	5.233333	N	0
Pinus sylve	Alvarez, R.	Sierra del T	2006	Spain	42.33333	-6.38333	N	0

Pinus nigra	Alvarez, R.	Sierra del T	2006	Spain	42.33333	-6.38333	N	0
Staphylea p	Tylkowski,	Dukla fores	2000	Poland	49.55	21.66667	N	63
Schizachyri	Springer, T	NU1 South	2013	USA	36.41667	-99.4	N	0
Hypericum P	rez-Gar	Villarubia d	2002	Spain	39.01667	-3.01667	N	0
Hypericum P	rez-Gar	Villarubia d	2002	Spain	39.01667	-3.01667	N	0
Hypericum P	rez-Gar	Bienservida	2002	Spain	38.01667	-2.01667	N	0
Hypericum P	rez-Gar	Bienservida	2002	Spain	38.01667	-2.01667	N	0
Hypericum P	rez-Gar	Bienservida	2002	Spain	38.01667	-2.01667	N	0
Dactylis glo	Perez-Fern	Quercus ro	2005	Spain	39.16667	-7	N	0
Pinus strob	Parker, W.	Central Ont	2005	Canada	48.98333	-84.25	N	0
Helleborus	Niimi, Y., et	Ishizuka far	2003	Japan	37.5	138.9167	N	56
Helleborus	Niimi, Y., et	Ishizuka far	2003	Japan	37.5	138.9167	N	0
Phragmites	Gorai, M., €	Zirkine, Gal	2001	Tunisia	33.66667	10.21667	N	0
Phragmites	Gorai, M., €	Zirkine, Gal	2001	Tunisia	33.66667	10.21667	N	0
Phragmites	Gorai, M., €	Zirkine, Gal	2001	Tunisia	33.66667	10.21667	N	0
Phragmites	Gorai, M., €	Zirkine, Gal	2001	Tunisia	33.66667	10.21667	N	0
Phragmites	Gorai, M., €	Zirkine, Gal	2001	Tunisia	33.66667	10.21667	N	0
Phragmites	Gorai, M., €	Zirkine, Gal	2001	Tunisia	33.66667	10.21667	N	0
Phragmites	Gorai, M., €	Zirkine, Gal	2001	Tunisia	33.66667	10.21667	N	0
Phragmites	Gorai, M., €	Zirkine, Gal	2001	Tunisia	33.66667	10.21667	N	0
Acer pseud	Daws, M. I.	Aberdeen,	2003	UK	57.16667	-2.06667	N	0
Acer pseud	Daws, M. I.	Aberdeen,	2003	UK	57.16667	-2.06667	N	0
Acer pseud	Daws, M. I.	Aberdeen,	2003	UK	57.16667	-2.06667	N	0
Acer pseud	Daws, M. I.	Aberdeen,	2003	UK	57.16667	-2.06667	N	0
Acer pseud	Daws, M. I.	Aberdeen,	2003	UK	57.16667	-2.06667	N	0
Acer pseud	Daws, M. I.	Aberdeen,	2003	UK	57.16667	-2.06667	N	0
Acer pseud	Daws, M. I.	Aberdeen,	2003	UK	57.16667	-2.06667	N	0
Acer pseud	Daws, M. I.	Angers, Fra	2003	France	47.15	########	N	0
Acer pseud	Daws, M. I.	Angers, Fra	2003	France	47.15	########	N	0
Acer pseud	Daws, M. I.	Angers, Fra	2003	France	47.15	########	N	0
Acer pseud	Daws, M. I.	Angers, Fra	2003	France	47.15	########	N	0
Acer pseud	Daws, M. I.	Angers, Fra	2003	France	47.15	########	N	0
Acer pseud	Daws, M. I.	Angers, Fra	2003	France	47.15	########	N	0
Acer pseud	Daws, M. I.	Angers, Fra	2003	France	47.15	########	N	0
Acer pseud	Daws, M. I.	Ardingly, Er	2003	UK	51.05	-0.1	N	0
Acer pseud	Daws, M. I.	Ardingly, Er	2003	UK	51.05	-0.1	N	0
Acer pseud	Daws, M. I.	Ardingly, Er	2003	UK	51.05	-0.1	N	0
Acer pseud	Daws, M. I.	Ardingly, Er	2003	UK	51.05	-0.1	N	0
Acer pseud	Daws, M. I.	Ardingly, Er	2003	UK	51.05	-0.1	N	0
Acer pseud	Daws, M. I.	Ardingly, Er	2003	UK	51.05	-0.1	N	0
Acer pseud	Daws, M. I.	Ardingly, Er	2003	UK	51.05	-0.1	N	0
Acer pseud	Daws, M. I.	Bergen, No	2003	Norway	60.2	5.316667	N	0
Acer pseud	Daws, M. I.	Bergen, No	2003	Norway	60.2	5.316667	N	0
Acer pseud	Daws, M. I.	Bergen, No	2003	Norway	60.2	5.316667	N	0
Acer pseud	Daws, M. I.	Bergen, No	2003	Norway	60.2	5.316667	N	0
Acer pseud	Daws, M. I.	Bergen, No	2003	Norway	60.2	5.316667	N	0
Acer pseud	Daws, M. I.	Bergen, No	2003	Norway	60.2	5.316667	N	0
Acer pseud	Daws, M. I.	Bergen, No	2003	Norway	60.2	5.316667	N	0
Schizachyri	Springer, T	NU2 South	2013	USA	36.41667	-99.4	N	0
Acer pseud	Daws, M. I.	Mt Lessini,	2003	Italy	45.68333	11.21667	N	0
Acer pseud	Daws, M. I.	Mt Lessini,	2003	Italy	45.68333	11.21667	N	0
Acer pseud	Daws, M. I.	Mt Lessini,	2003	Italy	45.68333	11.21667	N	0
Acer pseud	Daws, M. I.	Mt Lessini,	2003	Italy	45.68333	11.21667	N	0
Acer pseud	Daws, M. I.	Mt Lessini,	2003	Italy	45.68333	11.21667	N	0
Acer pseud	Daws, M. I.	Mt Lessini,	2003	Italy	45.68333	11.21667	N	0
Acer pseud	Daws, M. I.	Mt Lessini,	2003	Italy	45.68333	11.21667	N	0

Acer pseud	Daws, M. I.	Thessaly, C	2003	Greece	39.25	21.66667	N	0
Acer pseud	Daws, M. I.	Thessaly, C	2003	Greece	39.25	21.66667	N	0
Acer pseud	Daws, M. I.	Thessaly, C	2003	Greece	39.25	21.66667	N	0
Acer pseud	Daws, M. I.	Thessaly, C	2003	Greece	39.25	21.66667	N	0
Acer pseud	Daws, M. I.	Thessaly, C	2003	Greece	39.25	21.66667	N	0
Acer pseud	Daws, M. I.	Thessaly, C	2003	Greece	39.25	21.66667	N	0
Acer pseud	Daws, M. I.	Thessaly, C	2003	Greece	39.25	21.66667	N	0
Origanum v	Bischoff, A.	Naumburg,	2005	Germany	51.13333	11.73333	N	0
Origanum v	Bischoff, A.	Naumburg,	2005	Germany	51.13333	11.73333	N	0
Origanum v	Bischoff, A.	Norfolk, UK	2005	UK	52.75	########	N	0
Origanum v	Bischoff, A.	Norfolk, UK	2005	UK	52.75	########	N	0
Origanum v	Bischoff, A.	North Bade	2005	Germany	48.76667	8.183333	N	0
Origanum v	Bischoff, A.	North Bade	2005	Germany	48.76667	8.183333	N	0
Origanum v	Bischoff, A.	Region Frib	2005	Switzerlanc	46.78333	7.133333	N	0
Origanum v	Bischoff, A.	Region Frib	2005	Switzerlanc	46.78333	7.133333	N	0
Origanum v	Bischoff, A.	Region Wir	2005	Switzerlanc	47.48333	8.716667	N	0
Origanum v	Bischoff, A.	Region Wir	2005	Switzerlanc	47.48333	8.716667	N	0
Dioscorea v	Albrecht, M	Horizon He	2003	USA	42.21667	-123.267	N	0
Dioscorea v	Albrecht, M	Horizon He	2003	USA	42.21667	-123.267	N	0
Dioscorea v	Albrecht, M	Horizon He	2003	USA	42.21667	-123.267	N	0
Dioscorea v	Albrecht, M	Horizon He	2003	USA	42.21667	-123.267	N	0
Pinus sylve	Zhu, J., et a	Honghuaer	2003	China	48.01667	119.0167	N	0
Picea abies	Suszka, B.,	Hochsauerl	1973	Germany	51.31667	8.316667	N	0
Schizachyri	Springer, T	UC1 South	2013	USA	36.41667	-99.4	N	0
Fagus orier	Soltani, A.,	Hyrcanian r	2004	Iran	36.48333	51.13333	N	56
Fagus orier	Soltani, A.,	Hyrcanian r	2004	Iran	36.48333	51.13333	N	0
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Vaccinium '	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	60
Solidago vi	Shimono, Y	Taisetsu M	1998	Japan	43.55	142.8667	N	0
Crataegus	Persson, L.	Dyrelund, D	2000	Denmark	55.86667	12.26667	Y	0
Crataegus	Persson, L.	Dyrelund, D	2000	Denmark	55.86667	12.26667	N	112
Crataegus	Persson, L.	Dyrelund, D	2000	Denmark	55.86667	12.26667	Y	112
Crataegus	Persson, L.	Dyrelund, D	2000	Denmark	55.86667	12.26667	N	0
Primula vul	Zerche, S.	Institute of	2004	Germany	51.03333	10.98333	N	7
Fagus sylv	Ratajczak,	Krucz Fores	2000	Poland	52.83333	16.4	N	0
Acer platan	Paw?owski	K?rnik, Po	1997	Poland	52.23333	17.08333	N	0

Acer platan	Paw?owski	K?rnik, Po	1997	Poland	52.23333	17.08333	N 0
Acer platan	Krawiarz, K	K?rnik, Po	2000	Poland	52.23333	17.08333	N 0
Fagus sylv	Krawiarz, K	K?rnik, Po	2000	Poland	52.23333	17.08333	N 0
Viburnum a	Hidayati, S.	Powell Cou	1997	USA	37.83333	-83.8167	N 0
Viburnum a	Hidayati, S.	Powell Cou	1997	USA	37.83333	-83.8167	N 0
Viburnum a	Hidayati, S.	Powell Cou	1997	USA	37.83333	-83.8167	N 0
Viburnum a	Hidayati, S.	Powell Cou	1997	USA	37.83333	-83.8167	N 0
Viburnum a	Hidayati, S.	Powell Cou	1997	USA	37.83333	-83.8167	N 0
Viburnum a	Hidayati, S.	Powell Cou	1997	USA	37.83333	-83.8167	N 0
Arbutus un	Herranz, J.	Sierra del F	2001	Spain	38.61667	-2.7	N 0
Rhamnus a	Herranz, J.	Valle de Tu	2001	Spain	38.36667	-2.41667	N 0
Solidago vi	Gim?nez-I	Pico Pe?a	2001	Spain	40.83333	-3.95	N 0
Solidago vi	Gim?nez-I	Pico Pe?a	2001	Spain	40.83333	-3.95	N 0
Solidago vi	Gim?nez-I	Pico Pe?a	2001	Spain	40.83333	-3.95	N 0
Schizachyri	Springer, T	UC2 South	2013	USA	36.41667	-99.4	N 0
Rhododenc	Erfmeier, A	Six populat	2000	Spain	40.11667	-3.85	N 0
Rhododenc	Erfmeier, A	Six populat	2000	Spain	40.11667	-3.85	N 0
Rhododenc	Erfmeier, A	Six populat	2000	Spain	40.11667	-3.85	N 0
Rhododenc	Erfmeier, A	Six populat	2000	Spain	40.11667	-3.85	N 0
Rhododenc	Erfmeier, A	Six populat	1999	Georgia	41.96667	43.53333	N 0
Rhododenc	Erfmeier, A	Six populat	1999	Georgia	41.96667	43.53333	N 0
Rhododenc	Erfmeier, A	Six populat	1999	Georgia	41.96667	43.53333	N 0
Rhododenc	Erfmeier, A	Six populat	1999	Georgia	41.96667	43.53333	N 0
Alliaria peti	Dorning, M	Wright Stat	2003	USA	39.78333	-84.05	N 0
Impatiens c	Dorning, M	Wright Stat	2003	USA	39.78333	-84.05	N 0
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 140
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 140
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 140
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex remc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 140
Carex penc	Br?ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N 70

Carex remc	Br&#65533;ndel, M	Kiel, northe	2000	Germany	54.3	10.11667	N	70
Pinus bank	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	0
Pinus strob	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	30
Picea rube	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	0
Picea glauc	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	30
Acer rubrur	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	30
Betula alle	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	30
Pinus cont	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	30
Pinus resin	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	0
Betula pap	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	0
Picea mari	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	0
Abies balsa	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	30
Populus tre	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	0
Populus gr	Simpson, J	Canada	1967	Canada	53.18333	-100.517	N	0
Amelanchie	Rosner, L.	Idaho, USA	2003	USA	44.18333	-114.183	N	0
Amelanchie	Rosner, L.	Idaho, USA	2003	USA	44.18333	-114.183	N	84
Shepherdia	Rosner, L.	Montana, U	2003	USA	46.38333	-109.9	Y	0
Shepherdia	Rosner, L.	Montana, U	2003	USA	46.38333	-109.9	Y	84
Tanacetum	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Tanacetum	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Valeriana o	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Tanacetum	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Valeriana o	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Valeriana o	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Valeriana o	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Tanacetum	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Valeriana o	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Tanacetum	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Tanacetum	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Tanacetum	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Valeriana o	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Valeriana o	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Valeriana o	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Tanacetum	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Valeriana o	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Tanacetum	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Valeriana o	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Tanacetum	Hassell, R.	Johnny's S	1999	USA	44.56667	-69.5833	N	0
Acer pseud	Gosling, P.	Forestry Co	2003	UK	52.56667	-1.03333	N	0
Pinus nigra	Gosling, P.	Forestry Co	2003	UK	52.56667	-1.03333	N	0
Fraxinus e	Gosling, P.	Forestry Co	2003	UK	52.56667	-1.03333	N	0
Betula pen	Gosling, P.	Forestry Co	2003	UK	52.56667	-1.03333	N	0
Acer opalus	Gleiser, G.,	El Boixar, e	2001	Spain	40.68333	########	N	90
Acer opalus	Gleiser, G.,	El Boixar, e	2001	Spain	40.68333	########	N	0
Pinus korai	Song, Y., e	Pine planta	2013	China	41.8517	124.9091	N	0
Schizachyri	Springer, T	UO1 South	2013	USA	36.41667	-99.4	N	0
Pinus mont	Feurtado, J	British Colu	2003	Canada	49.15	-122.767	N	0
Pinus mont	Feurtado, J	British Colu	2003	Canada	49.15	-122.767	N	98
Hypericum	Faron, M. L	Delfim Mor	2001	Brazil	-22.5	-45.2833	N	0
Hypericum	Faron, M. L	Delfim Mor	2001	Brazil	-22.5	-45.2833	N	0
Hypericum	Faron, M. L	Delfim Mor	2001	Brazil	-22.5	-45.2833	N	0
Hypericum	Faron, M. L	Delfim Mor	2001	Brazil	-22.5	-45.2833	N	0
Hypericum	Faron, M. L	Delfim Mor	2001	Brazil	-22.5	-45.2833	N	0
Hypericum	Faron, M. L	Delfim Mor	2001	Brazil	-22.5	-45.2833	N	0
Hypericum	Faron, M. L	Delfim Mor	2001	Brazil	-22.5	-45.2833	N	0
Hypericum	Faron, M. L	Delfim Mor	2001	Brazil	-22.5	-45.2833	N	0

Cornus sar	Falleri, E. (:	Florence, It	2003	Italy	43.76667	11.23333	N	0
Cornus sar	Falleri, E. (:	Florence, It	2003	Italy	43.76667	11.23333	N	119
Acer pensy	Bourgoin, A	Five popula	2000	Canada	45.91667	-64.2833	N	112
Acer pensy	Bourgoin, A	Five popula	2000	Canada	45.91667	-64.2833	N	224
Acer pensy	Bourgoin, A	Five popula	2000	Canada	45.91667	-64.2833	N	112
Acer pensy	Bourgoin, A	Five popula	2000	Canada	45.91667	-64.2833	N	224
Prunus virg	Rowley, L.,	Wild stand	2006	USA	42.32502	-111.244	N	0
Prunus virg	Rowley, L.,	Wild stand	2006	USA	42.32502	-111.244	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus ely	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0

Elymus elyı	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus elyı	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus elyı	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus elyı	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus elyı	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus elyı	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Elymus elyı	Young, J. A	Medell Flat	1972	USA	39.63333	-120.317	N	0
Cornus san	Takos, I. A.	Tyria, Pedi	1999	Greece	39.51667	20.68333	Y	120
Pinus sylve	Rosario Nu	Monta�a s	1994	Spain	42.38333	-3.05	N	0
Pinus sylve	N��ez, M	Monta�a s	1995	Spain	42.01667	-2.01667	N	0
Origanum ı	P�Rez-Gª	Casavieja,	1999	Spain	40.01667	-4.01667	N	0
Origanum ı	P�Rez-Gª	Cenicientos	1999	Spain	40.01667	-3.01667	N	0
Schizachyri	Springer, T	UO2 South	2013	USA	36.41667	-99.4	N	0
Origanum ı	P�Rez-Gª	Salvatierra	1999	Spain	38.01667	-6.01667	N	0
Origanum ı	P�Rez-Gª	La Parra, B	1999	Spain	38.01667	-6.01667	N	0
Origanum ı	P�Rez-Gª	Vera de Mc	2000	Spain	41.01667	-1.01667	N	0
Origanum ı	P�Rez-Gª	Sabulcor, S	2000	Spain	41.01667	-3.01667	N	0
Origanum ı	P�Rez-Gª	Ermua, Viz	1999	Spain	43.01667	-2.01667	N	0
Origanum ı	P�Rez-Gª	Alcudia de	2000	Spain	39.01667	########	N	0
Origanum ı	P�Rez-Gª	Sueras, Ca	2000	Spain	39.01667	########	N	0
Origanum ı	P�Rez-Gª	Carbas de	2000	Spain	42.01667	########	N	0
Origanum ı	P�Rez-Gª	Rodellar, H	2000	Spain	42.01667	########	N	0
Origanum ı	P�Rez-Gª	Villamalur,	2000	Spain	39.01667	########	N	0
Geum urba	Catana, R.,	Romania	2016	Romania	45.75	24.81667	N	0
Geum urba	Catana, R.,	Romania	2015	Romania	45.75	24.81667	N	28
Origanum ı	P�Rez-Gª	Villarcayo,	2000	Spain	42.01667	-3.01667	N	0
Holcus lan	Perez-Fern	Quercus ro	1998	Spain	39.16667	-7	N	0
Dactylis glc	Perez-Fern	Quercus ro	1998	Spain	39.16667	-7	N	0
Bromus tec	Monaco, T.	Cache Co.,	2002	USA	41.76667	-111.783	N	0
Elymus elyı	Monaco, T.	USDA-ARS	2002	USA	41.73333	-111.8	N	0
Galium apa	Mennan, H	Havza distr	1995	Turkey	41.05	35.73333	N	0
Pinus sylve	Hilli, A., et	Inari, Finlar	1992	Finland	68.88333	27.03333	N	0
Pinus sylve	Hilli, A., et	Rovaniemi,	1992	Finland	66.5	25.76667	N	0
Pinus sylve	Hilli, A., et	Lieksa, Finl	1992	Finland	63.31667	30.01667	N	0
Pinus sylve	Hilli, A., et	Parkkola, F	1992	Finland	61.61667	26.73333	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Bromus tec	Hardegree,	Ada Co., Id	1997	USA	43.53333	-116.217	N	0
Picea rube	Butnor, J. F	MT10, Mou	2016	USA	35.01667	-82.0167	N	0
Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0
Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0
Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0
Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0
Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0
Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0
Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0
Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0
Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0

Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0
Bromus tec	Hardegree,	Kuna Butte	1997	USA	43.43333	-116.433	N	0
Quercus all	Connor, K.	Starkville, M	2002	USA	33.43333	-88.8167	Y	0
Rhus copal	Cain, M. D.	School of F	2002	USA	33.61667	-91.7667	Y	60
Rubus arg	Cain, M. D.	School of F	2002	USA	33.61667	-91.7667	Y	0
Quercus fal	Cain, M. D.	School of F	1996	USA	33.61667	-91.7667	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Dioscorea t	Zhong, X.,	Yakuraisan	1998	Japan	38.63333	141.1	N	0
Osmorhiza	Walck, J. L	Matsuyama	1998	Japan	33.83333	132.7667	N	0
Osmorhiza	Walck, J. L	Matsuyama	1998	Japan	33.83333	132.7667	N	0
Osmorhiza	Walck, J. L	Matsuyama	1998	Japan	33.83333	132.7667	N	0
Osmorhiza	Walck, J. L	Sendai (Miy	1999	Japan	38.26667	140.8667	N	0
Osmorhiza	Walck, J. L	Sendai (Miy	1999	Japan	38.26667	140.8667	N	0
Osmorhiza	Walck, J. L	Sendai (Miy	1999	Japan	38.26667	140.8667	N	0
Osmorhiza	Walck, J. L	Sendai (Miy	1999	Japan	38.26667	140.8667	N	0
Osmorhiza	Walck, J. L	Sendai (Miy	1999	Japan	38.26667	140.8667	N	0
Daboecia c	Valbuena, I	San Isidro,	1994	Spain	43.05	-5.38333	Y	0
Daboecia c	Valbuena, I	San Isidro,	1994	Spain	43.05	-5.38333	N	0
Daboecia c	Valbuena, I	San Isidro,	1994	Spain	43.05	-5.38333	N	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	Cornwall H	2001	UK	50.25	-5.05	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0
Calluna vul	Thomas, T.	John Cham	2001	UK	54.03333	-1.38333	Y	0

Pinus nigra	P�rez-Gar	Cuenca, Sp	1999	Spain	40.06667	-2.13333	Y	0
Pinus nigra	Escudero, /	Cuenca, Sp	1995	Spain	40.05	-2.13333	N	0
Pinus sylve	Escudero, /	Cuenca, Sp	1995	Spain	40.05	-2.13333	N	0
Pinus nigra	P�rez-Gar	Cuenca, Sp	1999	Spain	40.06667	-2.13333	Y	0
Pinus nigra	P�rez-Gar	Cuenca, Sp	1999	Spain	40.06667	-2.13333	Y	0
Pinus nigra	P�rez-Gar	Cuenca, Sp	1999	Spain	40.06667	-2.13333	Y	0
Pinus nigra	Escudero, /	Cuenca, Sp	1995	Spain	40.05	-2.15	N	0
Pinus nigra	P�rez-Gar	Cuenca, Sp	1999	Spain	40.06667	-2.13333	Y	0
Pinus nigra	P�rez-Gar	Cuenca, Sp	1999	Spain	40.06667	-2.13333	Y	0
Pinus nigra	P�rez-Gar	Cuenca, Sp	1999	Spain	40.06667	-2.13333	Y	0
Pinus nigra	P�rez-Gar	Cuenca, Sp	1999	Spain	40.06667	-2.13333	Y	0
Pinus nigra	P�rez-Gar	Cuenca, Sp	1999	Spain	40.06667	-2.13333	Y	0
Pinus nigra	P�rez-Gar	Cuenca, Sp	1999	Spain	40.06667	-2.13333	Y	0
Picea rube	Butnor, J. F	MT103, Mo	2016	USA	35.01667	-82.0167	N	0
Pinus sylve	P�rez-Gar	Soria, Spai	1999	Spain	41.75	-2.46667	Y	0
Pinus sylve	P�rez-Gar	Soria, Spai	1999	Spain	41.75	-2.46667	Y	0
Pinus sylve	P�rez-Gar	Soria, Spai	1999	Spain	41.75	-2.46667	Y	0
Pinus sylve	P�rez-Gar	Soria, Spai	1999	Spain	41.75	-2.46667	Y	0
Pinus sylve	P�rez-Gar	Soria, Spai	1999	Spain	41.75	-2.46667	Y	0
Pinus sylve	P�rez-Gar	Soria, Spai	1999	Spain	41.75	-2.46667	Y	0
Pinus sylve	P�rez-Gar	Soria, Spai	1999	Spain	41.75	-2.46667	Y	0
Pinus sylve	P�rez-Gar	Soria, Spai	1999	Spain	41.75	-2.46667	Y	0
Pinus sylve	Escudero, /	Soria, Spai	1995	Spain	41.76667	-2.46667	N	0
Pinus sylve	P�rez-Gar	Soria, Spai	1999	Spain	41.75	-2.46667	Y	0
Pinus sylve	P�rez-Gar	Soria, Spai	1999	Spain	41.75	-2.46667	Y	0
Celtis laevi	Nijjer, S., e	Houston Ur	1999	USA	29.31667	-94.8	N	0
Celtis laevi	Nijjer, S., e	Houston Ur	1999	USA	29.31667	-94.8	N	0
Celtis laevi	Nijjer, S., e	Houston Ur	1999	USA	29.31667	-94.8	N	0
Celtis laevi	Nijjer, S., e	Houston Ur	1999	USA	29.31667	-94.8	N	0
Celtis laevi	Nijjer, S., e	Houston Ur	1999	USA	29.31667	-94.8	N	0
Celtis laevi	Nijjer, S., e	Houston Ur	1999	USA	29.31667	-94.8	N	0
Celtis laevi	Nijjer, S., e	Houston Ur	1999	USA	29.31667	-94.8	N	0
Celtis laevi	Nijjer, S., e	Houston Ur	1999	USA	29.31667	-94.8	N	0
Celtis laevi	Nijjer, S., e	Houston Ur	1999	USA	29.31667	-94.8	N	0
Fagus sylv	Le�n-Lobc	Whiteknigh	1997	UK	51.43333	########	N	0
Fagus cren	Le�n-Lobc	Ito-Nouen N	1997	Japan	40.15	140.3333	N	0
Juncus effu	Ervin, G. N	Talladega N	1999	USA	32.9	-87.4333	N	0
Larix decid	David, A. (2	Trencin, Slc	1998	Slovakia	48.88333	18.03333	N	0
Phalaris ar	Crowe, A. l	Gardener C	2001	Canada	51.01667	-114.033	N	0
Pinus taed	Crowe, A. l	Carolina Bi	2001	USA	45.38333	-122.583	N	0
Cercis can	Couvillon, (	Athens, Ge	2000	USA	33.93333	-83.4167	Y	90
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	0
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	140
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	140
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	0
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	0
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	0
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	140
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	0
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	140
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	0
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	0
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	140
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	140
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	140
Pseudotsu	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N	0

Pseudotsug	Corbineau,	Forestry Cc	2001	UK	51.16667	-0.85	N 140
Picea rubei	Butnor, J. F	Perth-Ando	2016	Canada	46.01667	-67.0167	N 0
Pinus taeda	Wu, L., et a	NC59, Wey	2000	USA	35.76667	-76.7833	N 0
Pinus taeda	Wu, L., et a	NC59, Wey	2000	USA	35.76667	-76.7833	N 60
Pinus taeda	Wu, L., et a	NC103, We	2000	USA	35.65	-76.6667	N 0
Pinus taeda	Wu, L., et a	NC103, We	2000	USA	35.65	-76.6667	N 60
Pinus taeda	Wu, L., et a	OK100, Ok	2000	USA	35.15	-97.45	N 0
Pinus taeda	Wu, L., et a	OK100, Ok	2000	USA	35.15	-97.45	N 60
Pinus taeda	Wu, L., et a	OK125, Ok	2000	USA	35.13333	-97.4333	N 60
Pinus taeda	Wu, L., et a	OK125, Ok	2000	USA	35.13333	-97.4333	N 0
Phalaris ar	Lindig-Cisn	University c	1999	USA	43.03333	-89.4167	N 0
Symphoric	Hidayati, S	Camp Nels	1996	USA	37.78333	-84.5833	N 0
Symphoric	Hidayati, S	Camp Nels	1996	USA	37.78333	-84.5833	N 392
Symphoric	Hidayati, S	Camp Nels	1996	USA	37.78333	-84.5833	N 224
Symphoric	Hidayati, S	Camp Nels	1996	USA	37.78333	-84.5833	N 0
Acer sacch	Connor, K.	Starkville, M	2000	USA	33.43333	-88.8167	N 0
Picea mari	Wang, B. (2	Chapleau D	1982	Canada	47.86667	-83.1667	N 0
Cupressus	Ren, C. an	Tree Seed	1999	Canada	49.05	-122.7	N 90
Purshia trid	Meyer, S. (	Common g	1995	USA	37.61667	-112.167	N 14
Picea rubei	Butnor, J. F	Coy Brook,	2016	Canada	46.01667	-65.0167	N 0
Salix alba	Maroder, H	Delta area,	1997	Argentina	-34.2167	-58.3	N 0
Lotus corni	Marchiol, L	Dipartiment	1999	Italy	46.06667	13.23333	N 0
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 126
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 126
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 0
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 0
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 126
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 0
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 0
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 0
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 0
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 126
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 126
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 0
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 126
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 0
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 0
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 126
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 126
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 126
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 126
Sambucus	Hidayati, S	Morehead,	1998	USA	38.18333	-83.4667	N 0
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 0
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 126
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 126
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 126
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 126
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 0
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 126
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 0
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 126
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 0
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 0
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 0
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 126
Sambucus	Hidayati, S	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 0

Sambucus	Hidayati, S.	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 126
Sambucus	Hidayati, S.	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 0
Sambucus	Hidayati, S.	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 126
Sambucus	Hidayati, S.	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 0
Sambucus	Hidayati, S.	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 0
Sambucus	Hidayati, S.	Kalmar, Sm	1997	Sweden	56.66667	16.31667	N 126
Stellaria m	Grundy, A.	Horticulture	1999	UK	52.2	-1.6	N 0
Stellaria m	Grundy, A.	Horticulture	1999	UK	52.2	-1.6	N 0
Stellaria m	Grundy, A.	Horticulture	1999	UK	52.2	-1.6	N 0
Stellaria m	Grundy, A.	Horticulture	1999	UK	52.2	-1.6	N 0
Stellaria m	Grundy, A.	Horticulture	1999	UK	52.2	-1.6	N 0
Stellaria m	Grundy, A.	Horticulture	1999	UK	52.2	-1.6	N 0
Stellaria m	Grundy, A.	Horticulture	1999	UK	52.2	-1.6	N 0
Stellaria m	Grundy, A.	Horticulture	1999	UK	52.2	-1.6	N 0
Polygonum	Araki, S. ar	Lake Kasur	1995	Japan	36.06667	140.2833	N 0
Polygonum	Araki, S. ar	Lake Kasur	1995	Japan	36.06667	140.2833	N 0
Polygonum	Araki, S. ar	Lake Kasur	1995	Japan	36.06667	140.2833	N 42
Polygonum	Araki, S. ar	Lake Kasur	1995	Japan	36.06667	140.2833	N 42
Polygonum	Araki, S. ar	Lake Kasur	1995	Japan	36.06667	140.2833	N 42
Polygonum	Araki, S. ar	Lake Kasur	1995	Japan	36.06667	140.2833	N 0
Polygonum	Araki, S. ar	Lake Kasur	1995	Japan	36.06667	140.2833	N 42
Polygonum	Araki, S. ar	Lake Kasur	1995	Japan	36.06667	140.2833	N 0
Betula pen	Ahola, V. a	Seed orcha	1993	Finland	62.75	25.63333	N 0
Betula pen	Ahola, V. a	Seed orcha	1993	Finland	62.75	25.63333	N 22
Betula pen	Ahola, V. a	Seed orcha	1993	Finland	62.75	25.63333	N 22
Betula pen	Ahola, V. a	Seed orcha	1993	Finland	62.75	25.63333	N 0
Betula pen	Ahola, V. a	Seed orcha	1993	Finland	62.75	25.63333	N 0
Betula pen	Ahola, V. a	Seed orcha	1993	Finland	62.75	25.63333	N 0
Betula pen	Ahola, V. a	Seed orcha	1993	Finland	62.75	25.63333	N 22
Betula pen	Ahola, V. a	Seed orcha	1993	Finland	62.75	25.63333	N 22
Picea abies	Ahola, V. a	Seed orcha	1993	Finland	60.85	27.48333	N 0
Picea abies	Ahola, V. a	Seed orcha	1993	Finland	60.85	27.48333	N 22
Picea abies	Ahola, V. a	Seed orcha	1993	Finland	60.85	27.48333	N 22
Picea abies	Ahola, V. a	Seed orcha	1993	Finland	60.85	27.48333	N 0
Picea abies	Ahola, V. a	Seed orcha	1993	Finland	60.85	27.48333	N 0
Picea abies	Ahola, V. a	Seed orcha	1993	Finland	60.85	27.48333	N 22
Picea abies	Ahola, V. a	Seed orcha	1993	Finland	60.85	27.48333	N 22
Picea abies	Ahola, V. a	Seed orcha	1993	Finland	60.85	27.48333	N 0
Pinus sylve	Ahola, V. a	Seed orcha	1993	Finland	61.56667	26.3	N 0
Pinus sylve	Ahola, V. a	Seed orcha	1993	Finland	61.56667	26.3	N 22
Pinus sylve	Ahola, V. a	Seed orcha	1993	Finland	61.56667	26.3	N 0
Pinus sylve	Ahola, V. a	Seed orcha	1993	Finland	61.56667	26.3	N 0
Pinus sylve	Ahola, V. a	Seed orcha	1993	Finland	61.56667	26.3	N 0
Pinus sylve	Ahola, V. a	Seed orcha	1993	Finland	61.56667	26.3	N 22
Pinus sylve	Ahola, V. a	Seed orcha	1993	Finland	61.56667	26.3	N 22
Pinus sylve	Ahola, V. a	Seed orcha	1993	Finland	61.56667	26.3	N 22
Sorbus con	Yagihashi,	1992 collec	1992	Japan	43.68333	141.65	Y 180
Sorbus con	Yagihashi,	1992 collec	1992	Japan	43.68333	141.65	N 390
Sorbus con	Yagihashi,	1992 collec	1992	Japan	43.68333	141.65	N 180
Sorbus con	Yagihashi,	1992 collec	1992	Japan	43.68333	141.65	Y 390
Sorbus con	Yagihashi,	1993 collec	1993	Japan	43.68333	141.65	Y 390
Sorbus con	Yagihashi,	1993 collec	1993	Japan	43.68333	141.65	Y 180
Sorbus con	Yagihashi,	1993 collec	1993	Japan	43.68333	141.65	N 390
Sorbus con	Yagihashi,	1993 collec	1993	Japan	43.68333	141.65	N 180
Quercus py	Valbuena, I	Salamanca	1993	Spain	40.98333	-5.7	Y 0
Quercus py	Valbuena, I	Salamanca	1993	Spain	40.98333	-5.7	N 0

Primula ver	McKee, J. (Whittle Der	1996	UK	55	-1.9	N	21
Primula vul	McKee, J. (Whittle Der	1996	UK	55	-1.9	N	21
Picea abies	Leinonen, I Tree A, For	1992	Finland	61.85	24.33333	N	0
Picea abies	Leinonen, I Tree A, For	1992	Finland	61.85	24.33333	N	0
Picea abies	Leinonen, I Tree A, For	1992	Finland	61.85	24.33333	N	0
Picea abies	Leinonen, I Tree A, For	1992	Finland	61.85	24.33333	N	21
Picea abies	Leinonen, I Tree A, For	1992	Finland	61.85	24.33333	N	0
Picea abies	Leinonen, I Tree A, For	1992	Finland	61.85	24.33333	N	21
Picea abies	Leinonen, I Tree A, For	1992	Finland	61.85	24.33333	N	21
Picea abies	Leinonen, I Tree A, For	1992	Finland	61.85	24.33333	N	21
Picea abies	Leinonen, I Tree B, For	1992	Finland	61.85	24.33333	N	0
Picea abies	Leinonen, I Tree B, For	1992	Finland	61.85	24.33333	N	21
Picea abies	Leinonen, I Tree B, For	1992	Finland	61.85	24.33333	N	0
Picea abies	Leinonen, I Tree B, For	1992	Finland	61.85	24.33333	N	0
Picea abies	Leinonen, I Tree B, For	1992	Finland	61.85	24.33333	N	21
Picea abies	Leinonen, I Tree B, For	1992	Finland	61.85	24.33333	N	21
Picea abies	Leinonen, I Tree B, For	1992	Finland	61.85	24.33333	N	21
Picea abies	Leinonen, I Tree B, For	1992	Finland	61.85	24.33333	N	0
Epilobium a	Husband, E Beartooth F	1997	USA	44.93333	-109.6	N	0
Dorycnium	Herranz, J. Moropeche	1994	Spain	38.38333	-2.36667	Y	0
Dorycnium	Herranz, J. Moropeche	1994	Spain	38.38333	-2.36667	N	0
Quercus ru	Guo, Y., et Conway Cc	1994	USA	35.31667	-92.7167	N	30
Quercus ve	Guo, Y., et Fayette Co	1994	USA	35.16667	-89.3833	N	30
Quercus ni	Guo, Y., et Fayette Co	1994	USA	35.16667	-89.3833	N	30
Stellaria me	Grundy, A. Wellsbourn	1996	UK	52.18333	-1.6	N	0
Prunus avi	Finch-Sava Wellsbourn	1994	UK	52.18333	-1.58333	N	0
Acer platan	Finch-Sava Wellsbourn	1994	UK	52.18333	-1.58333	N	84
Stellaria me	Grundy, A. Wellsbourn	1996	UK	52.18333	-1.6	N	0
Acer pseud	Finch-Sava Wellsbourn	1994	UK	52.18333	-1.58333	N	0
Stellaria me	Grundy, A. Wellsbourn	1996	UK	52.18333	-1.6	N	0
Prunus avi	Finch-Sava Wellsbourn	1994	UK	52.18333	-1.58333	N	119
Stellaria me	Grundy, A. Wellsbourn	1996	UK	52.18333	-1.6	N	0
Stellaria me	Grundy, A. Wellsbourn	1996	UK	52.18333	-1.6	N	0
Acer platan	Finch-Sava Wellsbourn	1994	UK	52.18333	-1.58333	N	0
Acer pseud	Finch-Sava Wellsbourn	1994	UK	52.18333	-1.58333	N	84
Camellia si	Song, D., e Hangzhou,	2015	China	30.01667	120.0167	N	0
Camellia si	Song, D., e Hangzhou,	2015	China	30.01667	120.0167	N	0
Camellia si	Song, D., e Hangzhou,	2015	China	30.01667	120.0167	N	90
Camellia si	Song, D., e Hangzhou,	2015	China	30.01667	120.0167	N	0
Camellia si	Song, D., e Hangzhou,	2015	China	30.01667	120.0167	N	0
Camellia si	Song, D., e Hangzhou,	2015	China	30.01667	120.0167	N	0
Pinus taeda	Cain, M. D. Southeaste	1993	USA	33.61667	-91.7667	N	0
Calluna vul	Vera, M. L. Ptu San Isi	1994	Spain	43.06667	-5.38333	N	0
Erica vagar	Vera, M. L. Ptu San Isi	1994	Spain	43.06667	-5.38333	N	0
Erica cinere	Vera, M. L. Ptu San Isi	1994	Spain	43.06667	-5.38333	N	0
Galium apa	Thompson, Unknown o	1996	UK	52.25	########	N	0
Rubus paln	Suzuki, W. Tohoku Re	1992	Japan	39.75	141.25	N	0
Rubus paln	Suzuki, W. Tohoku Re	1992	Japan	39.75	141.25	N	270
Rubus parv	Suzuki, W. Tohoku Re	1992	Japan	39.75	141.25	N	0
Rubus paln	Suzuki, W. Tohoku Re	1992	Japan	39.75	141.25	N	270
Rubus parv	Suzuki, W. Tohoku Re	1992	Japan	39.75	141.25	N	0
Rubus parv	Suzuki, W. Tohoku Re	1992	Japan	39.75	141.25	N	240
Rubus parv	Suzuki, W. Tohoku Re	1992	Japan	39.75	141.25	N	240
Rubus parv	Suzuki, W. Tohoku Re	1992	Japan	39.75	141.25	N	240
Rubus paln	Suzuki, W. Tohoku Re	1992	Japan	39.75	141.25	N	0
Rubus paln	Suzuki, W. Tohoku Re	1992	Japan	39.75	141.25	N	0

Rubus parv	Suzuki, W.	Tohoku Re	1992	Japan	39.75	141.25	N	240
Rubus parv	Suzuki, W.	Tohoku Re	1992	Japan	39.75	141.25	N	0
Rubus parv	Suzuki, W.	Tohoku Re	1992	Japan	39.75	141.25	N	0
Rubus paln	Suzuki, W.	Tohoku Re	1992	Japan	39.75	141.25	N	270
Rubus paln	Suzuki, W.	Tohoku Re	1992	Japan	39.75	141.25	N	0
Rubus paln	Suzuki, W.	Tohoku Re	1992	Japan	39.75	141.25	N	270
Taraxacum	Noronha, A	Southern S	1994	Sweden	56.08333	14	N	0
Stellaria me	Noronha, A	Southern S	1994	Sweden	56.08333	14	N	0
Stellaria me	Noronha, A	Southern S	1994	Sweden	56.08333	14	N	0
Taraxacum	Noronha, A	Southern S	1994	Sweden	56.08333	14	N	0
Clematis vi	Bungard, R	Christchurc	1996	New Zealar	-43.4833	172.65	N	0
Clematis vi	Bungard, R	Christchurc	1996	New Zealar	-43.4833	172.65	N	84
Clematis vi	Bungard, R	Christchurc	1996	New Zealar	-43.4833	172.65	N	0
Clematis vi	Bungard, R	Christchurc	1996	New Zealar	-43.4833	172.65	N	84
Phragmites	Wijte, A. H.	Canary Cre	1991	USA	38.78333	-75.1667	N	0
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	0
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	42
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	22
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	0
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	22
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	0
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	0
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	0
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	0
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	22
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	22
Betula pen	Vanhatalo,	Haapastens	1993	Finland	60.6	24.41667	N	22
Dioscorea t	Okagami, N	Tohoku Uni	1994	Japan	38.25	140.8667	N	0
Dioscorea t	Okagami, N	Tohoku Uni	1994	Japan	38.25	140.8667	N	0
Dioscorea t	Okagami, N	Tohoku Uni	1994	Japan	38.25	140.8667	N	0
Quercus ni	Bonner, F.	Oktibbeha (	1992	USA	33.41667	-88.95	Y	0
Pinus albic	Sniezko, R.	USFS Regi	2009	USA	45.45	-116.8	Y	90
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Milium effu	Thompson,	Wakehurst	1975	UK	51.05	########	N	0
Quercus ro	Pritchard, H	Wakehurst	1987	UK	51.06667	########	N	0
Quercus ro	Pritchard, H	Wakehurst	1987	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Quercus ro	Pritchard, H	Wakehurst	1987	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Milium effu	Thompson,	Wakehurst	1975	UK	51.05	########	N	0
Milium effu	Thompson,	Wakehurst	1975	UK	51.05	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	########	N	0
Milium effu	Thompson,	Wakehurst	1975	UK	51.05	########	N	0
Milium effu	Thompson,	Wakehurst	1975	UK	51.05	########	N	0

Milium effu	Thompson,	Wakehurst	1975	UK	51.05	######## N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	######## N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	######## N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	######## N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	######## N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	######## N	0
Quercus ro	Pritchard, H	Wakehurst	1987	UK	51.06667	######## N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	######## N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	######## N	0
Quercus ro	Pritchard, H	Wakehurst	1987	UK	51.06667	######## N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	######## N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	######## N	0
Milium effu	Thompson,	Wakehurst	1975	UK	51.05	######## N	0
Quercus ro	Pritchard, H	Wakehurst	1987	UK	51.06667	######## N	0
Arum macu	Pritchard, H	Wakehurst	1988	UK	51.06667	######## N	0
Milium effu	Thompson,	Wakehurst	1975	UK	51.05	######## N	0
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	84
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	14
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	84
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	14
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	84
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	84
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	14
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	84
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	14
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	14
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	14
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	84
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	14
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	84
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	14
Heracleum	Jauzein, P.	Montigny-le	1986	France	48.76667	2 N	84
Arbutus un	Mesl  ard, Vnaco ar		1990	France	42.5	9.2 N	0
Arbutus un	Meslard, Vnaco ar		1990	France	42.5	9.2 N	0
Acer velutir	Pinfield, N.	Westonbirt,	1987	UK	51.6	-2.2 N	0
Acer velutir	Pinfield, N.	Westonbirt,	1987	UK	51.6	-2.2 N	120
Acer pseud	Hong, T. D.	Whiteknigh	1988	UK	51.45	-0.95 N	0
Acer pseud	Hong, T. D.	Whiteknigh	1988	UK	51.45	-0.95 N	0
Acer platan	Hong, T. D.	Whiteknigh	1988	UK	51.45	-0.95 N	0
Poa trivialis	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Agrostis ca	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Milium effu	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Holcus lana	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Taraxacum	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Milium effu	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Brachypodi	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Agrostis ca	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Holcus lana	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Agrostis ca	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Festuca ovi	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Milium effu	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Achillea mil	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Holcus lana	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Taraxacum	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Poa trivialis	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0
Taraxacum	Thompson,	Plymouth, U	1988	UK	50.36667	-4.13333 N	0

Festuca ovi	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Silene dioic	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Agrostis ca	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Poa trivialis	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Achillea mil	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Brachypodi	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Brachypodi	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Milium effu	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Achillea mil	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Taraxacum	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Silene dioic	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Festuca ovi	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Brachypodi	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Silene dioic	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Festuca ovi	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Silene dioic	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Achillea mil	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Poa trivialis	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Holcus lana	Thompson,	Plymouth,	1988	UK	50.36667	-4.13333	N 0
Pinus taeda	Hallgren, S	Texas fores	1985	USA	31.36667	-94.7833	N 0
Pinus taeda	Hallgren, S	Texas fores	1985	USA	31.36667	-94.7833	N 0
Pinus taeda	Hallgren, S	Texas fores	1985	USA	31.36667	-94.7833	N 53
Pinus taeda	Hallgren, S	Texas fores	1985	USA	31.36667	-94.7833	N 53
Pinus echir	Hallgren, S	Oklahoma f	1985	USA	35.13333	-97.2333	N 53
Pinus echir	Hallgren, S	Oklahoma f	1985	USA	35.13333	-97.2333	N 53
Amelanchie	Acharya, S	Population	1984	Canada	53.33333	-117.417	N 84
Dactylis glo	Probert, R.	Nantes, Fra	1985	France	47.21667	-1.55	N 0
Dactylis glo	Probert, R.	Nantes, Fra	1985	France	47.21667	-1.55	N 0
Dactylis glo	Probert, R.	Nantes, Fra	1985	France	47.21667	-1.55	N 0
Dactylis glo	Probert, R.	Nantes, Fra	1985	France	47.21667	-1.55	N 0
Dactylis glo	Probert, R.	Nantes, Fra	1985	France	47.21667	-1.55	N 0
Dactylis glo	Probert, R.	Nantes, Fra	1985	France	47.21667	-1.55	N 0
Dactylis glo	Probert, R.	Nantes, Fra	1985	France	47.21667	-1.55	N 0
Dactylis glo	Probert, R.	Nantes, Fra	1984	France	47.21667	-1.55	N 0
Dactylis glo	Probert, R.	Nantes, Fra	1985	France	47.21667	-1.55	N 0
Dactylis glo	Probert, R.	Nantes, Fra	1984	France	47.21667	-1.55	N 0
Dactylis glo	Probert, R.	Nantes, Fra	1984	France	47.21667	-1.55	N 0
Pinus korai	Song, Y., e	Secondary	2013	China	41.8517	124.9091	N 150
Pinus korai	Song, Y., e	Secondary	2013	China	41.8517	124.9091	N 0
Pinus korai	Song, Y., e	Secondary	2013	China	41.8517	124.9091	N 150
Solidago vi	Sakurai, A.	1600 m asl	2014	Japan	36.1	137.55	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1983	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1983	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1983	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1983	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N 0

Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N	0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N	0
Brachypodi	Schonfeld,	Weed Rese	1982	UK	51.75	-1.25	N	0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N	0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N	0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N	0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N	0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N	0
Holcus lan	Schonfeld,	Weed Rese	1982	UK	51.75	-1.25	N	0
Poa trivialis	Froud-Willi	Weed Rese	1982	UK	51.75	-1.25	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	173
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Solanum di	Pegtel, D. M	Eernewoud	1984	Netherland	53.11667	5.933333	N	0
Rubus idae	Nesme, X.	Vosges, Fra	1984	France	47.98333	6.966667	N	0
Rubus idae	Nesme, X.	Vosges, Fra	1984	France	47.98333	6.966667	Y	0
Rubus idae	Nesme, X.	Vosges, Fra	1984	France	47.98333	6.966667	Y	0
Rubus idae	Nesme, X.	Vosges, Fra	1984	France	47.98333	6.966667	Y	0
Rubus idae	Nesme, X.	Vosges, Fra	1984	France	47.98333	6.966667	Y	0
Rubus idae	Nesme, X.	Vosges, Fra	1984	France	47.98333	6.966667	Y	0
Rubus idae	Nesme, X.	Vosges, Fra	1984	France	47.98333	6.966667	Y	0
Rubus idae	Nesme, X.	Vosges, Fra	1984	France	47.98333	6.966667	Y	0
Fagus sylv	Muller, C. a	Picardie, Fr	1984	France	49.75	2.183333	N	0
Fagus sylv	Muller, C. a	Amance, Fr	1984	France	48.28333	4.45	N	0
Poa trivialis	Froud-Willi	Harwell, UK	1977	UK	51.58333	-1.28333	N	0
Stellaria m	Froud-Willi	Harwell, UK	1977	UK	51.58333	-1.28333	N	0
Dactylis glo	Pannangpe	Galicia, Spa	1983	Spain	42.85	-7.9	N	0
Dactylis glo	Pannangpe	Galicia, Spa	1983	Spain	42.85	-7.9	N	0
Dactylis glo	Pannangpe	Galicia, Spa	1983	Spain	42.85	-7.9	N	0
Dactylis glo	Pannangpe	Galicia, Spa	1983	Spain	42.85	-7.9	N	0
Dactylis glo	Pannangpe	Galicia, Spa	1983	Spain	42.85	-7.9	N	0
Dactylis glo	Pannangpe	Galicia, Spa	1983	Spain	42.85	-7.9	N	0

Dactylis glc	Pannangpe	Galicia, Spa	1983	Spain	42.85	-7.9	N	0
Dactylis glc	Pannangpe	Galicia, Spa	1983	Spain	42.85	-7.9	N	0
Quercus ni	Peterson, J	1978 Missis	1980	USA	33.45	-88.7833	N	0
Quercus ni	Peterson, J	1978 Missis	1979	USA	33.45	-88.7833	N	49
Quercus ni	Peterson, J	1978 Missis	1978	USA	33.45	-88.7833	N	49
Quercus ni	Peterson, J	1978 Missis	1978	USA	33.45	-88.7833	N	0
Quercus ni	Peterson, J	1978 Missis	1980	USA	33.45	-88.7833	N	49
Quercus ni	Peterson, J	1978 Missis	1979	USA	33.45	-88.7833	N	0
Fagus sylv	Muller, C. a	For♦t de H	1980	France	49.26667	2.566667	N	0
Pinus taed	Richter, D.	Mississippi	1981	USA	33	-89.7333	N	0
Solidago vi	Sakurai, A.	1900 m asl	2014	Japan	36.1	137.55	N	0
Lotus corni	McKersie, E	Commercia	1978	Canada	43.53333	-80.2333	Y	0
Betula pap	Bevington,	Fairbanks,	1977	USA	64.86667	-147.767	N	0
Betula pap	Bevington,	Fairbanks,	1977	USA	64.86667	-147.767	N	0
Betula pap	Bevington,	Fairbanks,	1977	USA	64.86667	-147.767	N	42
Betula pap	Bevington,	Fairbanks,	1977	USA	64.86667	-147.767	N	0
Betula pap	Bevington,	Fairbanks,	1977	USA	64.86667	-147.767	N	42
Origanum v	Silvertown,	Castle Hill I	1976	UK	51.01667	0.2	N	0
Achillea mil	Silvertown,	Castle Hill I	1976	UK	51.01667	0.2	N	0
Hypericum	Silvertown,	Castle Hill I	1976	UK	51.01667	0.2	N	0
Prunella vu	Silvertown,	Castle Hill I	1976	UK	51.01667	0.2	N	0
Lotus corni	Silvertown,	Castle Hill I	1976	UK	51.01667	0.2	N	0
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Stellaria me	Baskin, J. M	Lexington,	1973	USA	38.01667	-84.5	N	480
Vaccinium	Aalders, L.	cv 70-36a,	1976	Canada	45.06667	-64.5333	N	0
Hyacinthoic	Thompson,	Bethlehem	1975	UK	51.06667	########	N	0
Hyacinthoic	Thompson,	Bethlehem	1975	UK	51.06667	########	N	0
Hyacinthoic	Thompson,	Bethlehem	1975	UK	51.06667	########	N	0
Hyacinthoic	Thompson,	Bethlehem	1975	UK	51.06667	########	N	0
Hyacinthoic	Thompson,	Bethlehem	1975	UK	51.06667	########	N	0
Hyacinthoic	Thompson,	Bethlehem	1975	UK	51.06667	########	N	0
Hyacinthoic	Thompson,	Bethlehem	1975	UK	51.06667	########	N	0
Hyacinthoic	Thompson,	Bethlehem	1975	UK	51.06667	########	N	0
Hyacinthoic	Thompson,	Great Rack	1975	UK	51.05	########	N	0
Hyacinthoic	Thompson,	Great Rack	1975	UK	51.05	########	N	0
Hyacinthoic	Thompson,	Great Rack	1975	UK	51.05	########	N	0
Hyacinthoic	Thompson,	Great Rack	1975	UK	51.05	########	N	0
Hyacinthoic	Thompson,	Great Rack	1975	UK	51.05	########	N	0
Hyacinthoic	Thompson,	Great Rack	1975	UK	51.05	########	N	0
Hyacinthoic	Thompson,	Great Rack	1975	UK	51.05	########	N	0
Hyacinthoic	Thompson,	Great Rack	1975	UK	51.05	########	N	0
Solanum di	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N	0
Solanum di	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N	180
Solanum di	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N	0

Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 0
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 0
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 180
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 180
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 180
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 180
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 180
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 0
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 180
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 0
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 180
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 0
Solanum dı	Roberts, H.	Compton V	1973	UK	52.16667	-1.55	N 0
Dioscorea t	Okagami, N	Shizuoka P	1975	Japan	35.06667	138.2833	N 0
Dioscorea t	Okagami, N	Shizuoka P	1975	Japan	35.06667	138.2833	N 0
Dioscorea t	Okagami, N	Shizuoka P	1975	Japan	35.06667	138.2833	N 80
Dioscorea t	Okagami, N	Shizuoka P	1975	Japan	35.06667	138.2833	N 80
Solidago vi	Sakurai, A.	2000 m asl	2014	Japan	36.1	137.55	N 0
Corylus ave	Jarvis, B. C	Artindale ar	1973	UK	53.36667	-1.51667	N 0
Corylus ave	Jarvis, B. C	Artindale ar	1973	UK	53.36667	-1.51667	N 0
Lycopus eu	Thompson,	Royal Bota	1973	UK	51.46667	########	N 0
Lycopus eu	Thompson,	Royal Bota	1973	UK	51.46667	########	N 0
Silene dioic	Thompson,	South-east	1973	UK	51.2	########	N 0
Silene dioic	Thompson,	South-east	1973	UK	51.2	########	N 0
Populus ba	Hellum, A.	Bowness, A	1967	Canada	51.08333	-114.2	N 0
Corylus ave	Bradbeer, J	Aberystwyt	1960	UK	52.4	-4.08333	Y 50
Corylus ave	Bradbeer, J	Aberystwyt	1960	UK	52.4	-4.08333	Y 0
Epilobium a	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium a	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium r	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium r	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium r	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium a	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium r	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium a	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium r	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium a	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium a	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Epilobium r	Myerscoug	Edinburgh,	1965	UK	55.93333	-3.18333	N 0
Pinus strob	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus taeda	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus taeda	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus strob	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus taeda	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus strob	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus strob	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus taeda	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus strob	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus taeda	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus taeda	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus strob	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus taeda	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus taeda	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus strob	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus strob	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0
Pinus strob	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N 0

Pinus strob	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N	0
Pinus taeda	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N	0
Pinus taeda	Toole, V. K	Northeaste	1955	USA	39.96667	-75.4	N	0
Pseudotsug	Ching, T. M	Weyerhaus	1957	USA	46.71667	-122.95	N	0
Fragaria vir	Toole, E. H	USDA, Belt	1954	USA	39.01667	-76.9167	N	0
Fragaria vir	Toole, E. H	USDA, Belt	1954	USA	39.01667	-76.9167	N	0
Rosa multif	Stewart, R.	USDA, Belt	1964	USA	38.96667	-77	N	120
Fragaria vir	Toole, E. H	USDA, Belt	1954	USA	39.01667	-76.9167	N	0
Fragaria vir	Toole, E. H	USDA, Belt	1954	USA	39.01667	-76.9167	N	0
Rosa multif	Stewart, R.	USDA, Belt	1964	USA	38.96667	-77	N	120
Fragaria vir	Toole, E. H	USDA, Belt	1954	USA	39.01667	-76.9167	N	0
Rosa multif	Stewart, R.	USDA, Belt	1964	USA	38.96667	-77	N	120
Fragaria vir	Toole, E. H	USDA, Belt	1954	USA	39.01667	-76.9167	N	0
Rosa multif	Stewart, R.	USDA, Belt	1964	USA	38.96667	-77	N	120
Fragaria vir	Toole, E. H	USDA, Belt	1954	USA	39.01667	-76.9167	N	0
Fragaria vir	Toole, E. H	USDA, Belt	1954	USA	39.01667	-76.9167	N	0
Fragaria vir	Toole, E. H	USDA, Belt	1954	USA	39.01667	-76.9167	N	0
Fragaria vir	Toole, E. H	USDA, Belt	1954	USA	39.01667	-76.9167	N	0
Primula ela	Ahmad, H.	Various sup	2006	USA	39.58333	-95.9667	N	0
Primula vul	Ahmad, H.	Various sup	2006	USA	39.58333	-95.9667	N	0
Primula vul	Ahmad, H.	Various sup	2006	USA	39.58333	-95.9667	N	60
Primula ver	Ahmad, H.	Various sup	2006	USA	39.58333	-95.9667	N	60
Primula ela	Ahmad, H.	Various sup	2006	USA	39.58333	-95.9667	N	150
Primula ver	Ahmad, H.	Various sup	2006	USA	39.58333	-95.9667	N	0
Solidago vi	Sakurai, A.	2400 m asl	2014	Japan	36.1	137.55	N	0
Kalmia latif	Li, H. Z., D	Hybrids of	2016	USA	33.95	-83.4167	N	0
Pinus korai	Kim, D. H.	Chuncheon	2017	South Kore	37.88333	127.6167	N	0
Fagus cren	Endoh, K.	Ozedake N	2015	Japan	37.61667	139.5333	N	60
Fagus cren	Endoh, K.	Ozedake N	2015	Japan	37.61667	139.5333	N	30
Erechtites h	White, S. N	Queen&#65533;s	2015	Canada	44.1	-64.9333	N	0
Erechtites h	White, S. N	Queen&#65533;s	2015	Canada	44.1	-64.9333	N	90
Erechtites h	White, S. N	Queen&#65533;s	2015	Canada	44.1	-64.9333	N	0
Erechtites h	White, S. N	Queen&#65533;s	2015	Canada	44.1	-64.9333	N	90
Ulmus davi	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	0
Ulmus lacir	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	0
Ulmus davi	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	84
Ulmus davi	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	84
Ulmus lacir	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	84
Ulmus lacir	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	84
Ulmus davi	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	0
Ulmus lacir	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	0
Ulmus davi	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	0
Ulmus lacir	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	0
Ulmus lacir	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	0
Ulmus lacir	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	84
Ulmus davi	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	0
Ulmus davi	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	84
Ulmus davi	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	84
Ulmus lacir	Nomiya, H.	Natural fore	1997	Japan	36.75	139.4333	N	84
Phragmites	Martin, R. M	New York p	2016	USA	40.86667	-73.3667	N	0
Phragmites	Martin, R. M	New York p	2016	USA	40.86667	-73.3667	N	0
Poa trivialis	Liu, M. H.,	Seed Rese	2013	USA	44.53333	-123.1	N	0
Poa trivialis	Liu, M. H.,	Seed Rese	2013	USA	44.53333	-123.1	N	0
Poa trivialis	Liu, M. H.,	Seed Rese	2013	USA	44.53333	-123.1	N	0
Galium apa	Boyd, N. V.	Several col	2003	Canada	54.75	-105.683	N	0
Galium apa	Boyd, N. V.	Several col	2003	Canada	54.75	-105.683	N	0

Taraxacum	Boyd, N. V.	Several col	2003	Canada	54.75	-105.683	N	0
Taraxacum	Boyd, N. V.	Several col	2003	Canada	54.75	-105.683	N	0
Robinia ps	Bouteiller,)	Gabarnac,	2016	France	44.6	-0.25	Y	0
Robinia ps	Bouteiller,)	Gabarnac,	2016	France	44.6	-0.25	N	0
Origanum v	P�voa, O.	EN4, Sta. M	2015	Portugal	38.81667	-7.53333	N	0
Albizia julib	Bouteiller,)	Sunshine S	2016	Germany	51.75	7.9	N	0
Albizia julib	Bouteiller,)	Sunshine S	2016	Germany	51.75	7.9	Y	0
Agrostis ca	Soares, V.	Seed mixes	2015	Brazil	-31.8333	-52.4667	N	7
Prunus spir	Afroze, F. (	Coillte See	2010	Ireland	52.71667	-6.68333	N	70
Prunus spir	Afroze, F. (	Coillte See	2010	Ireland	52.71667	-6.68333	N	91
Prunus spir	Afroze, F. (	Coillte See	2010	Ireland	52.71667	-6.68333	N	70
Prunus spir	Afroze, F. (	Coillte See	2010	Ireland	52.71667	-6.68333	N	91
Salix cinere	Hopley, T.	Victoria, Au	2008	Australia	-37.2	144.0833	N	0
Miscanthus	Sun, Q. Y.,	Fukagawa,	2013	Japan	43.01667	142.0167	N	0
Miscanthus	Sun, Q. Y.,	Kamui, Jap	2013	Japan	43.01667	140.0167	N	0
Miscanthus	Sun, Q. Y.,	Iwanai, Jap	2013	Japan	42.01667	140.0167	N	0
Miscanthus	Sun, Q. Y.,	Niseko, Jap	2013	Japan	42.01667	140.0167	N	0
Miscanthus	Sun, Q. Y.,	Oshamanb	2013	Japan	42.01667	140.0167	N	0
Miscanthus	Sun, Q. Y.,	Toya, Japa	2013	Japan	42.01667	140.0167	N	0
Origanum v	P�voa, O.	Vila Boim, I	2015	Portugal	38.86667	-7.26667	N	0
Miscanthus	Sun, Q. Y.,	Makkari, Ja	2013	Japan	42.01667	140.0167	N	0
Miscanthus	Sun, Q. Y.,	Hakodate, .	2013	Japan	41.01667	141.0167	N	0
Miscanthus	Sun, Q. Y.,	Esashi, Jap	2013	Japan	41.01667	140.0167	N	0
Miscanthus	Sun, Q. Y.,	Onuma, Ja	2013	Japan	42.01667	140.0167	N	0
Miscanthus	Sun, Q. Y.,	Iozan, Japa	2013	Japan	43.01667	144.0167	N	0
Miscanthus	Sun, Q. Y.,	Bihoro, Jap	2013	Japan	43.01667	144.0167	N	0
Miscanthus	Sun, Q. Y.,	Kobuchizav	2013	Japan	35.01667	138.0167	N	0
Miscanthus	Sun, Q. Y.,	Nagasaka,	2013	Japan	35.01667	138.0167	N	0
Miscanthus	Sun, Q. Y.,	Shiozuka, .	2013	Japan	33.01667	133.0167	N	0
Miscanthus	Sun, Q. Y.,	Kochi, Japa	2013	Japan	33.01667	133.0167	N	0
Arbutus un	Pipinis, E.,	Rodopi, Gr	2013	Greece	41.13333	25.25	N	0
Arbutus un	Pipinis, E.,	Rodopi, Gr	2013	Greece	41.13333	25.25	N	30
Miscanthus	Sun, Q. Y.,	Takachino,	2013	Japan	32.01667	131.0167	N	0
Prunus avi	Javanmard	Iran	2011	Iran	31.7	53.71667	N	28
Prunus avi	Javanmard	Iran	2011	Iran	31.7	53.71667	N	56
Lysimachia	Dillon, K. R	Washingtor	2013	USA	47.51667	-122.283	N	0
Lysimachia	Dillon, K. R	Washingtor	2013	USA	47.51667	-122.283	N	0
Lysimachia	Dillon, K. R	Washingtor	2013	USA	47.51667	-122.283	N	0
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	60
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	0
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	0
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	0
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	0
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	0
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	60
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	60
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	60
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	60
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	60
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	0
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	0
Vitis amure	Wang, W. (	Changbai M	2010	China	42.05	127.7833	N	60
Carex flacc	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Stachys off	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Carex flacc	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Carex flacc	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35

Stachys off	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Carex flacc	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Stachys off	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Helianthem	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Stachys off	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Stachys off	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Stachys off	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Helianthem	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Helianthem	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Carex flacc	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Helianthem	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Helianthem	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Carex flacc	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Stachys off	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Helianthem	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Carex flacc	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Helianthem	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Helianthem	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Stachys off	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	35
Carex flacc	Wagner, M	Calcareous	2007	UK	53.2	-1.63333	N	0
Apocynum	Boyd, N. S.	Mt. Stewart	2008	Canada	46.35	-62.8667	N	0
Apocynum	Boyd, N. S.	Mt. Stewart	2008	Canada	46.35	-62.8667	N	0
Apocynum	Boyd, N. S.	Mt. Stewart	2008	Canada	46.35	-62.8667	N	0
Apocynum	Boyd, N. S.	Mt. Stewart	2008	Canada	46.35	-62.8667	N	0
Apocynum	Boyd, N. S.	Mt. Stewart	2008	Canada	46.35	-62.8667	N	0
Apocynum	Boyd, N. S.	Mt. Stewart	2008	Canada	46.35	-62.8667	N	0
Pinus cont	Aoki, C. F.	Rocky Mou	2007	USA	40.33333	-105.683	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	28
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	28
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	28
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	28
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	28
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	0
Acer trunca	Li, Y. L. C.,	Beijing Bota	2008	China	39.98333	116.2167	N	28
Alliaria peti	Raghu, S. I	Tazawell C	2006	USA	40.72072	-89.5056	N	115
Alliaria peti	Raghu, S. I	Tazawell C	2006	USA	40.72072	-89.5056	N	40
Abies nordı	Kirdar, E. E	Savsat-Mey	2006	Turkey	41.48333	42.13333	N	23
Arbutus un	Pipinis, E.,	Chalkidiki,	2013	Greece	40.58333	23.78333	N	0
Arbutus un	Pipinis, E.,	Chalkidiki,	2013	Greece	40.58333	23.78333	N	30
Abies nordı	Kirdar, E. E	Savsat-Yay	2006	Turkey	41.21667	42.45	N	23
Abies nordı	Kirdar, E. E	Savsat-Veli	2006	Turkey	41.31667	42.51667	N	23
Abies nordı	Kirdar, E. E	Artvin-Ortal	2006	Turkey	41.26667	41.95	N	23
Neolitsea a	Chen, S. Y.	Peitungyen	2002	Taiwan	24.08333	121.1167	N	0
Phellodend	Chien, C. T	Taiping Mo	2004	Taiwan	24.5	121.4833	N	0
Phellodend	Chien, C. T	Taiping Mo	2004	Taiwan	24.5	121.4833	N	0

Phellodend	Chien, C. T	Taiping Mo	2004	Taiwan	24.5	121.4833	N	140
Phellodend	Chien, C. T	Taiping Mo	2004	Taiwan	24.5	121.4833	N	0
Phellodend	Chien, C. T	Taiping Mo	2004	Taiwan	24.5	121.4833	N	0
Pinus sylve	Tilki, F. (20	Akyaz?-Dol	2004	Turkey	40.61667	30.83333	N	0
Pinus sylve	Tilki, F. (20	Artvin-Merk	2004	Turkey	41.13333	41.6	N	0
Pinus sylve	Tilki, F. (20	Kutahya-S.	2004	Turkey	39.61667	30.3	N	0
Pinus sylve	Tilki, F. (20	Kastamonu	2004	Turkey	41.36667	33.46667	N	0
Pinus sylve	Tilki, F. (20	Akdagmade	2004	Turkey	39.5	35.86667	N	0
Arbutus un	Pipinis, E.,	Pieria, Gree	2013	Greece	40.18333	22.31667	N	30
Arbutus un	Pipinis, E.,	Pieria, Gree	2013	Greece	40.18333	22.31667	N	0
Pinus sylve	Tilki, F. (20	Kayseri-Pin	2004	Turkey	38.71667	36.21667	N	0
Agrostis ca	Hanslin, H.	DLF-TRIFC	2004	Denmark	55.75	9.683333	N	0
Achillea mil	Hanslin, H.	Olberg, Nor	2004	Norway	58.85	5.566667	N	0
Filipendula	Hanslin, H.	Klepp St., N	2004	Norway	58.76667	5.666667	N	0
Abies proce	Doody, P. (	Three lots,	2004	Denmark	55.43333	9.033333	N	0
Abies proce	Doody, P. (	Three lots,	2004	Denmark	55.43333	9.033333	N	8
Abies proce	Doody, P. (	Three lots,	2004	Denmark	55.43333	9.033333	N	8
Abies proce	Doody, P. (	Three lots,	2004	Denmark	55.43333	9.033333	N	0
Pseudotsug	Doody, P. (	Three lots,	2004	USA	46.73333	-121.567	N	56
Pseudotsug	Doody, P. (	Three lots,	2004	USA	46.73333	-121.567	N	0
Pseudotsug	Doody, P. (	Three lots,	2004	USA	46.73333	-121.567	N	56
Pseudotsug	Doody, P. (	Three lots,	2004	USA	46.73333	-121.567	N	0
Aristolochia	Adams, C.	Pine Mount	2000	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	2000	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	2000	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	84
Aristolochia	Adams, C.	Pine Mount	2000	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	2000	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	1999	USA	37.05	-82.8667	N	0
Aristolochia	Adams, C.	Pine Mount	2000	USA	37.05	-82.8667	N	0
Lotus corni	Artola, A. C	Prosedel S	2004	Uruguay	-33.8167	-56.1167	N	0
Poa trivialis	Camberato	Several cul	2003	USA	34.66667	-82.8333	N	0
Reynoutria	Bram, M. R	Carroll Park	2000	USA	39.96667	-75.2333	N	30
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	0
Clematis vi	Picciau, R.,	Monte Pade	2012	Italy	39	8.983333	N	90

Clematis vi	Picciau, R.,	Monte Pad	2012	Italy	39	8.983333	N	90
Reynoutria	Bram, M. R	Tacony Cre	2000	USA	40.03333	-75.1	N	30
Reynoutria	Bram, M. R	Friends Ho	2000	USA	40.01667	-75.1	N	30
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	0
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	336
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	0
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	0
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	336
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	336
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Quercus ro	Gosling, P.	Forestry Co	1988	UK	53.18333	-1.58333	N	0
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	0
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	336
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	336
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	0
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	0
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	336
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pseudotsug	Gosling, P.	Forestry Co	2002	UK	52.75	########	N	0
Pinus sylve	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pseudotsug	Gosling, P.	Forestry Co	1987	UK	53.18333	-1.58333	N	21
Pinus mont	Feurtado, J	BC Ministry	2002	Canada	49.05	-122.7	N	72
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	84
Alliaria peti	Baskin, J. M	Jessamine	1985	USA	37.86667	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	180
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	180
Alliaria peti	Baskin, J. M	Jessamine	1985	USA	37.86667	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	180
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	84
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	180
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Cardamine	Baskin, C.	Jessamine	1987	USA	37.78333	-84	N	0

Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	180
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	180
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	84
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Cardamine	Baskin, C. (	Jessamine	1987	USA	37.78333	-84	N	0
Cardamine	Baskin, C. (	Jessamine	1987	USA	37.78333	-84	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	180
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	180
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	180
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	84
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	84
Alliaria peti	Baskin, J. M	Jessamine	1985	USA	37.86667	-84.5833	N	112
Alliaria peti	Baskin, J. M	Jessamine	1985	USA	37.86667	-84.5833	N	112
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Cardamine	Baskin, C. (	Jessamine	1987	USA	37.78333	-84	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	84
Alliaria peti	Baskin, J. M	Jessamine	1985	USA	37.86667	-84.5833	N	112
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	84
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	180
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	84
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	84
Alliaria peti	Baskin, J. M	Jessamine	1985	USA	37.86667	-84.5833	N	112
Alliaria peti	Baskin, J. M	Jessamine	1985	USA	37.86667	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Cardamine	Baskin, C. (	Jessamine	1987	USA	37.78333	-84	N	0
Alliaria peti	Baskin, J. M	Jessamine	1985	USA	37.86667	-84.5833	N	112
Alliaria peti	Baskin, J. M	Jessamine	1985	USA	37.86667	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	0
Lonicera ja	Hidayati, S.	Jessamine	1997	USA	37.85	-84.5833	N	84
Alliaria peti	Baskin, J. M	Jessamine	1985	USA	37.86667	-84.5833	N	0
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	42
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	0
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	0
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	42
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	0
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	42
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	42
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	0
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	0
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	0
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	Y	0
Pueraria m	Susko, D. J	North Caro	1999	USA	35.78333	-78.6667	N	42
Poa trivialis	Liu, C. H. C	Cypress A	2000	USA	34.66667	-82.8333	N	0
Poa trivialis	Liu, C. H. C	Cypress A	2000	USA	34.66667	-82.8333	N	0
Poa trivialis	Liu, C. H. C	Cypress A	2000	USA	34.66667	-82.8333	N	0
Poa trivialis	Liu, C. H. C	Cypress A	2000	USA	34.66667	-82.8333	N	0

Quercus pe	Le Pichon, Commercia	1998	France	45.88333	4.35	N	0
Tsuga mert	El-Kassaby Sale Mtn., I	2000	Canada	51.16667	-118.167	N	84
Tsuga mert	El-Kassaby Sale Mtn., I	2000	Canada	51.16667	-118.167	N	84
Tsuga mert	El-Kassaby Sale Mtn., I	2000	Canada	51.16667	-118.167	N	0
Tsuga mert	El-Kassaby Sale Mtn., I	2000	Canada	51.16667	-118.167	N	0
Tsuga mert	El-Kassaby Sale Mtn., I	2000	Canada	51.16667	-118.167	N	84
Tsuga mert	El-Kassaby Sale Mtn., I	2000	Canada	51.16667	-118.167	N	0
Tsuga mert	El-Kassaby Sale Mtn., I	2000	Canada	51.16667	-118.167	N	84
Tsuga mert	El-Kassaby Sale Mtn., I	2000	Canada	51.16667	-118.167	N	0
Phalaris ar	Sahramaa, Jokioinen, I	1995	Finland	60.8	23.46667	N	0
Euonymus	Rounsaville Scott's Gro	2012	USA	36.63333	-88.3	N	0
Euonymus	Rounsaville Scott's Gro	2012	USA	36.63333	-88.3	N	0
Euonymus	Rounsaville Scott's Gro	2012	USA	36.63333	-88.3	N	0
Euonymus	Rounsaville Scott's Gro	2012	USA	36.63333	-88.3	N	0
Euonymus	Rounsaville Scott's Gro	2012	USA	36.63333	-88.3	N	0
Robinia ps	Pedrol, N., Semillas M	2017	Spain	40.83333	-3.48333	N	0
Robinia ps	Pedrol, N., Semillas M	2017	Spain	40.83333	-3.48333	Y	0
Diervilla lor	Hidayati, S. Randolph C	1998	USA	38.8	-79.8667	N	0
Diervilla lor	Hidayati, S. Randolph C	1998	USA	38.8	-79.8667	N	0
Diervilla lor	Hidayati, S. Randolph C	1998	USA	38.8	-79.8667	N	0
Diervilla lor	Hidayati, S. Randolph C	1998	USA	38.8	-79.8667	N	0
Diervilla lor	Hidayati, S. Randolph C	1998	USA	38.8	-79.8667	N	0
Diervilla lor	Hidayati, S. Randolph C	1998	USA	38.8	-79.8667	N	0
Diervilla lor	Hidayati, S. Randolph C	1998	USA	38.8	-79.8667	N	0
Diervilla lor	Hidayati, S. Randolph C	1998	USA	38.8	-79.8667	N	0
Diervilla lor	Hidayati, S. Randolph C	1998	USA	38.8	-79.8667	N	0
Diervilla lor	Hidayati, S. Randolph C	1998	USA	38.8	-79.8667	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	0
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14
Campsis ra	Chachalis, Southern W	1998	USA	33.41667	-90.9	N	14

Campsis ra	Chachalis,	Southern W	1998	USA	33.41667	-90.9	N 0
Campsis ra	Chachalis,	Southern W	1998	USA	33.41667	-90.9	N 0
Campsis ra	Chachalis,	Southern W	1998	USA	33.41667	-90.9	N 14
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 0
Vaccinium	Baskin, C.	Gysinge, G	1997	Sweden	60.28333	16.88333	N 84
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 84
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 0
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 0
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 84
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 84
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 0
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 0
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 84
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 0
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 84
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 84
Vaccinium	Baskin, C.	Vimmerby,	1997	Sweden	57.66667	15.85	N 0
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 0
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 84
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 84
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 84
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 0
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 0
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 84
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 84
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 0
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 84
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 0
Vaccinium	Baskin, C.	Arjeplog, La	1997	Sweden	66.05	17.88333	N 0
Vaccinium	Baskin, C.	Mj&#65533;lby, &#65533;	1997	Sweden	58.31667	15.11667	N 0
Vaccinium	Baskin, C.	Mj&#65533;lby, &#65533;	1997	Sweden	58.31667	15.11667	N 84
Vaccinium	Baskin, C.	Mj&#65533;lby, &#65533;	1997	Sweden	58.31667	15.11667	N 84
Vaccinium	Baskin, C.	Mj&#65533;lby, &#65533;	1997	Sweden	58.31667	15.11667	N 84
Vaccinium	Baskin, C.	Mj&#65533;lby, &#65533;	1997	Sweden	58.31667	15.11667	N 84

Vaccinium	Baskin, C.	Mj�lby,	1997	Sweden	58.31667	15.11667	N	0
Vaccinium	Baskin, C.	Mj�lby,	1997	Sweden	58.31667	15.11667	N	0
Vaccinium	Baskin, C.	Mj�lby,	1997	Sweden	58.31667	15.11667	N	0
Vaccinium	Baskin, C.	Mj�lby,	1997	Sweden	58.31667	15.11667	N	0
Vaccinium	Baskin, C.	Mj�lby,	1997	Sweden	58.31667	15.11667	N	84
Vaccinium	Baskin, C.	Mj�lby,	1997	Sweden	58.31667	15.11667	N	0
Vaccinium	Baskin, C.	Mj�lby,	1997	Sweden	58.31667	15.11667	N	84
Quercus pe	Zitnik, S. H	Slovenia	1998	Slovenia	46.01667	15.71667	Y	0
Pseudotsu	Muller, C. F	Bout, 04 Es	1998	France	45.1	2.666667	N	196
Pseudotsu	Muller, C. F	Bout, 04 Es	1998	France	45.1	2.666667	N	0
Pseudotsu	Muller, C. F	Bout, 04 Es	1998	France	45.1	2.666667	N	196
Pseudotsu	Muller, C. F	Bout, 04 Es	1998	France	45.1	2.666667	N	0
Comptonia	Dow, M. A.	Kelly Rd, O	1989	USA	44.86667	-68.7	N	0
Comptonia	Dow, M. A.	Kelly Rd, O	1989	USA	44.86667	-68.7	N	0
Comptonia	Dow, M. A.	Kelly Rd, O	1989	USA	44.86667	-68.7	N	0
Comptonia	Dow, M. A.	Kelly Rd, O	1989	USA	44.86667	-68.7	N	60
Artemisia tr	Booth, D. T	Wind River	1998	USA	44.23333	-107.967	N	0
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	0
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	90
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	90
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	0
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	0
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	0
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	90
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	90
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	90
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	90
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	0
Vaccinium	Nin, S., et a	Abetone ar	2016	Italy	44.13333	10.65	N	0
Purshia trid	Booth, D. T	Utah	1998	USA	39.41667	-111.617	N	28
Purshia trid	Booth, D. T	Utah	1998	USA	39.41667	-111.617	N	14
Purshia trid	Booth, D. T	California	1998	USA	36.21667	-119.75	N	28
Purshia trid	Booth, D. T	California	1998	USA	36.21667	-119.75	N	14
Purshia trid	Booth, D. T	Oregon	1998	USA	44.51667	-120.55	N	14
Purshia trid	Booth, D. T	Oregon	1998	USA	44.51667	-120.55	N	28
Pinus nigra	Pita, J. M.	ICONA, Ma	1997	Spain	40.4	-3.68333	N	0
Pinus sylve	Pita, J. M.	ICONA, Ma	1997	Spain	40.4	-3.68333	N	0
Picea abies	Leinonen, I	Inkoo, Finla	1997	Finland	60.01667	23.95	N	0
Picea abies	Leinonen, I	Inkoo, Finla	1997	Finland	60.01667	23.95	N	0
Picea abies	Leinonen, I	Inkoo, Finla	1997	Finland	60.01667	23.95	N	0
Picea abies	Leinonen, I	Inkoo, Finla	1997	Finland	60.01667	23.95	N	0
Picea abies	Leinonen, I	Inkoo, Finla	1997	Finland	60.01667	23.95	N	0
Picea abies	Leinonen, I	Inkoo, Finla	1997	Finland	60.01667	23.95	N	0
Picea abies	Leinonen, I	Inkoo, Finla	1997	Finland	60.01667	23.95	N	0
Picea abies	Leinonen, I	Inkoo, Finla	1997	Finland	60.01667	23.95	N	0
Ranunculus	Harris, S. M	Kings Cour	1997	Canada	45	-64.7	N	0
Ranunculus	Harris, S. M	Kings Cour	1997	Canada	45	-64.7	N	0
Ranunculus	Harris, S. M	Kings Cour	1997	Canada	45	-64.7	N	0
Ranunculus	Harris, S. M	Kings Cour	1997	Canada	45	-64.7	N	0
Primula vul	Ewald, A. Z	Best nonhy	1997	Germany	50.96667	11.01667	N	7
Tsuga mert	El-Kassaby	Hoodoo Cr	1979	Canada	51.33333	-125.533	N	0
Tsuga mert	El-Kassaby	Hoodoo Cr	1979	Canada	51.33333	-125.533	N	28
Tsuga mert	El-Kassaby	Garbage C	1982	Canada	48.55	-124.1	N	28
Tsuga mert	El-Kassaby	Garbage C	1982	Canada	48.55	-124.1	N	0
Tsuga mert	El-Kassaby	Hkusam Mt	1982	Canada	50.33333	-125.833	N	28
Tsuga mert	El-Kassaby	Hkusam Mt	1982	Canada	50.33333	-125.833	N	0

MiscanthusNie, G., et ¿Sichuan, C	2010	China	30	102.45	N	0
MiscanthusNie, G., et ¿Sichuan, C	2010	China	29.88333	103.35	N	28
Tsuga mertEl-KassabyKearsley C	1982	Canada	49.31667	-122.367	N	0
Tsuga mertEl-KassabyKearsley C	1982	Canada	49.31667	-122.367	N	28
Tsuga mertEl-KassabyPort Alice,	1982	Canada	50.4	-127.45	N	0
Tsuga mertEl-KassabyPort Alice,	1982	Canada	50.4	-127.45	N	28
Tsuga mertEl-KassabySale Mt., B	1988	Canada	51.16667	-118.167	N	0
Tsuga mertEl-KassabySale Mt., B	1988	Canada	51.16667	-118.167	N	28
Tsuga mertEl-KassabyLyon Lake,	1982	Canada	49.65	-123.9	N	0
Tsuga mertEl-KassabyLyon Lake,	1982	Canada	49.65	-123.9	N	28
Tsuga mertEl-KassabyHanna Ridg	1990	Canada	56.3	-129.333	N	0
Tsuga mertEl-KassabyHanna Ridg	1990	Canada	56.3	-129.333	N	28
Picea glaucDownie, B. Hawk Hills,	1979	Canada	57.58333	-117.617	N	0
Picea glaucDownie, B. High Level,	1995	Canada	58.46667	-117.267	N	0
Picea glaucDownie, B. High Level,	1988	Canada	57.58333	-117.617	N	0
Picea glaucDownie, B. Bear River,	1979	Canada	57.58333	-117.617	N	0
Picea glaucDownie, B. Paddle Pra	1987	Canada	57.58333	-117.617	N	0
Betula papyBrunvatne, Old Ridge M	1997	USA	45.13333	-67.2	N	0
Galium apaMennan, H Winter popu	2000	Turkey	41.26667	36.3	N	0
Bromus tecBauer, M. (Potosi Pass	1995	USA	35.98333	-115.517	N	126
Bromus tecBeckstead, Potosi Pass	1992	USA	35.98333	-115.517	N	0
Bromus tecBauer, M. (Potosi Pass	1995	USA	35.98333	-115.517	N	126
Bromus tecBeckstead, Potosi Pass	1992	USA	35.98333	-115.517	N	0
Bromus tecBeckstead, Potosi Pass	1992	USA	35.98333	-115.517	N	0
Bromus tecBauer, M. (Potosi Pass	1995	USA	35.98333	-115.517	N	0
Bromus tecBauer, M. (Potosi Pass	1995	USA	35.98333	-115.517	N	0
Bromus tecBeckstead, Potosi Pass	1992	USA	35.98333	-115.517	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	70
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	70
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	70
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	70
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	70
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	70
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	70
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	70
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	0
Ageratina aWalck, J. L Nicholas C	1994	USA	38.33333	-84.0333	N	70
Carex remcSch&#x0000;tz, WKiel, Germa	1993	Germany	54.36667	10.16667	N	180
Carex remcSch&#x0000;tz, WKiel, Germa	1993	Germany	54.36667	10.16667	N	180
Carex remcSch&#x0000;tz, WKiel, Germa	1993	Germany	54.36667	10.16667	N	180
Carex remcSch&#x0000;tz, WKiel, Germa	1993	Germany	54.36667	10.16667	N	180
Carex remcSch&#x0000;tz, WKiel, Germa	1993	Germany	54.36667	10.16667	N	180
Carex remcSch&#x0000;tz, WKiel, Germa	1993	Germany	54.36667	10.16667	N	180
Carex remcSch&#x0000;tz, WKiel, Germa	1993	Germany	54.36667	10.16667	N	180
Carex remcSch&#x0000;tz, WKiel, Germa	1993	Germany	54.36667	10.16667	N	180
Carex remcSch&#x0000;tz, WKiel, Germa	1993	Germany	54.36667	10.16667	N	180
Carex remcSch&#x0000;tz, WKiel, Germa	1993	Germany	54.36667	10.16667	N	180

Carex remc	Schðtz, W	Kiel, Germa	1993	Germany	54.36667	10.16667	N	180
Carex remc	Schðtz, W	Kiel, Germa	1993	Germany	54.36667	10.16667	N	180
Lapsana cc	Milberg, P.	Normlosa, (	1996	Sweden	58.4	15.21667	N	0
Lapsana cc	Milberg, P.	Normlosa, (	1996	Sweden	58.4	15.21667	N	0
Bromus tec	Meyer, S. E	Strawberry,	1996	USA	40.16667	-110.65	N	0
Bromus tec	Meyer, S. E	Strawberry,	1996	USA	40.16667	-110.65	N	0
Bromus tec	Meyer, S. E	Strawberry,	1996	USA	40.16667	-110.65	N	0
Bromus tec	Meyer, S. E	Strawberry,	1996	USA	40.16667	-110.65	N	0
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	210
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	0
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	210
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	0
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	0
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	210
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	210
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	0
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	210
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	210
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	210
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	0
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	0
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	0
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	210
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	0
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	210
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	0
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	210
Reynoutria	Nishitani, S	Mt Fuji, Jap	1985	Japan	35.35	138.7167	N	0
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	210
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	0
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	0
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	0
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	210
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	0
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	210
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	210
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	210
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	0
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	0
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	210
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	0
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	210
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	210
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	0
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	210
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	0
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	210
Reynoutria	Nishitani, S	Shizuoka, J	1985	Japan	35.05	138.3833	N	0
Taraxacum	Letchamo,	Offstein, Ge	1993	Germany	49.6	8.233333	N	0
Pilea pumil	Leck, M. A.	Hamilton M	1995	USA	40.15	-74.7	N	0
Impatiens c	Leck, M. A.	Hamilton M	1995	USA	40.15	-74.7	N	0
Pilea pumil	Leck, M. A.	Hamilton M	1995	USA	40.15	-74.7	N	252
Phalaris ar	Leck, M. A.	Hamilton M	1995	USA	40.15	-74.7	N	252
Phalaris ar	Leck, M. A.	Hamilton M	1995	USA	40.15	-74.7	N	0
Populus tre	Jaderlund,	Alidhem, S	1995	Sweden	63.8	20.3	N	0
Galium apa	Mennan, H	Spring popı	2000	Turkey	41.26667	36.3	N	0

Betula pen	Jaderlund,	Mattismyra	1995	Norway	65.43333	13.43333	N	0
Picea abies	Jaderlund,	Lillpite, Swe	1995	Sweden	65.36667	21.15	N	0
Pinus sylve	Jaderlund,	Skaholma,	1995	Sweden	64.3	19.73333	N	0
Bromus tec	Goodwin, J	Combs Flat	1995	USA	44.3	-120.817	N	0
Bromus tec	Goodwin, J	Combs Flat	1995	USA	44.3	-120.817	N	0
Festuca ida	Goodwin, J	Combs Flat	1995	USA	44.3	-120.817	N	0
Bromus tec	Goodwin, J	Combs Flat	1995	USA	44.3	-120.817	N	0
Festuca ida	Goodwin, J	Combs Flat	1995	USA	44.3	-120.817	N	0
Festuca ida	Goodwin, J	Combs Flat	1995	USA	44.3	-120.817	N	0
Bromus tec	Goodwin, J	Lone Pine,	1995	USA	42.58333	-121.633	N	0
Bromus tec	Goodwin, J	Lone Pine,	1995	USA	42.58333	-121.633	N	0
Bromus tec	Goodwin, J	Lone Pine,	1995	USA	42.58333	-121.633	N	0
Festuca ida	Goodwin, J	Lone Pine,	1995	USA	42.58333	-121.633	N	0
Festuca ida	Goodwin, J	Lone Pine,	1995	USA	42.58333	-121.633	N	0
Festuca ida	Goodwin, J	Lone Pine,	1995	USA	42.58333	-121.633	N	0
Bromus tec	Goodwin, J	Blanchard,	1995	USA	45.33333	-122.617	N	0
Festuca ida	Goodwin, J	Blanchard,	1995	USA	45.33333	-122.617	N	0
Festuca ida	Goodwin, J	Blanchard,	1995	USA	45.33333	-122.617	N	0
Bromus tec	Goodwin, J	Blanchard,	1995	USA	45.33333	-122.617	N	0
Festuca ida	Goodwin, J	Blanchard,	1995	USA	45.33333	-122.617	N	0
Bromus tec	Goodwin, J	Blanchard,	1995	USA	45.33333	-122.617	N	0
Festuca ida	Goodwin, J	McCoin, Or	1989	USA	45.03333	-123.217	N	182
Bromus tec	Goodwin, J	McCoin, Or	1995	USA	42	-120.633	N	0
Bromus tec	Goodwin, J	McCoin, Or	1995	USA	42	-120.633	N	0
Festuca ida	Goodwin, J	McCoin, Or	1995	USA	42	-120.633	N	0
Festuca ida	Goodwin, J	McCoin, Or	1995	USA	42	-120.633	N	0
Festuca ida	Goodwin, J	McCoin, Or	1995	USA	42	-120.633	N	0
Festuca ida	Goodwin, J	McCoin, Or	1989	USA	45.03333	-123.217	N	0
Bromus tec	Goodwin, J	McCoin, Or	1995	USA	42	-120.633	N	0
Vaccinium	Ehlenfeldt,	Cv Bluecro	1995	USA	39.81667	-74.5333	N	0
Picea glauc	Downie, B.	Slava Lake	1995	Canada	57	-114.833	N	0
Abies amat	Davidson, I	Ronning Cr	1995	Canada	50.73333	-128	N	28
Abies amat	Davidson, I	Ronning Cr	1995	Canada	50.73333	-128	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Taraxacum	Masin, R.,	Padova Un	2011	Italy	45.35	11.96667	N	0
Abies amat	Davidson, I	Hathaway (	1995	Canada	50.71667	-124.433	N	28
Abies amat	Davidson, I	Hathaway (	1995	Canada	50.71667	-124.433	N	0
Abies amat	Davidson, I	Sebalhall C	1995	Canada	49.95	-126.417	N	28
Abies amat	Davidson, I	Sebalhall C	1995	Canada	49.95	-126.417	N	0
Abies amat	Davidson, I	Maquila Cr	1995	Canada	50.06667	-126.35	N	0
Abies amat	Davidson, I	Maquila Cr	1995	Canada	50.06667	-126.35	N	28
Abies amat	Davidson, I	Fleet River,	1995	Canada	50.65	-124.1	N	28

Abies amat	Davidson, I	Fleet River,	1995	Canada	50.65	-124.1	N	0
Abies amat	Davidson, I	Mystery Cr	1995	Canada	50.8	-128.15	N	0
Abies amat	Davidson, I	Mystery Cr	1995	Canada	50.8	-128.15	N	28
Bromus tec	Beckstead,	Whiterocks	1993	USA	40.45	-109.917	N	0
Bromus tec	Beckstead,	Whiterocks	1993	USA	40.45	-109.917	N	0
Bromus tec	Beckstead,	Whiterocks	1993	USA	40.45	-109.917	N	0
Bromus tec	Beckstead,	Whiterocks	1993	USA	40.45	-109.917	N	0
Bromus tec	Beckstead,	Castle Roc	1993	USA	39.36667	-104.833	N	0
Bromus tec	Beckstead,	Castle Roc	1993	USA	39.36667	-104.833	N	0
Bromus tec	Beckstead,	Castle Roc	1993	USA	39.36667	-104.833	N	0
Bromus tec	Beckstead,	Castle Roc	1993	USA	39.36667	-104.833	N	0
Bromus tec	Beckstead,	Hobble Cre	1992	USA	40.15	-111.6	N	0
Bromus tec	Beckstead,	Hobble Cre	1992	USA	40.15	-111.6	N	0
Bromus tec	Beckstead,	Hobble Cre	1992	USA	40.15	-111.6	N	0
Bromus tec	Beckstead,	Hobble Cre	1992	USA	40.15	-111.6	N	0
Rosa multif	Yambe, Y.	Faculty of A	1991	Japan	38.25	140.8333	N	0
Rosa multif	Yambe, Y.	Faculty of A	1991	Japan	38.25	140.8333	N	0
Salix alba	Vansplund	Nijmegen, I	1994	Netherland	51.86667	6.116667	N	0
Salix alba	Vansplund	Nijmegen, I	1994	Netherland	51.86667	6.116667	N	0
Salix alba	Vansplund	Nijmegen, I	1994	Netherland	51.86667	6.116667	N	0
Salix alba	Vansplund	Nijmegen, I	1994	Netherland	51.86667	6.116667	N	0
Salix alba	Vansplund	Nijmegen, I	1994	Netherland	51.86667	6.116667	N	0
Pseudotsu	McCartan,	seed lot 03	2008	USA	43.03333	-107.6	N	224
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Origanum v	Thanos, C.	Mournies, C	1992	Greece	35.48333	24	N	0
Daboecia c	Gonzlez-Ra	Monte Cast	1994	Spain	42.73333	-8.63333	N	45
Calluna vul	Gonzlez-Ra	Monte Cast	1994	Spain	42.73333	-8.63333	N	45
Osmorhiza	Baskin, C.	Loafer Can	1991	USA	40.01667	-111.667	N	0
Osmorhiza	Baskin, C.	Loafer Can	1991	USA	40.01667	-111.667	N	0
Osmorhiza	Baskin, C.	Loafer Can	1991	USA	40.01667	-111.667	N	0
Osmorhiza	Baskin, C.	Loafer Can	1991	USA	40.01667	-111.667	N	0
Primula ver	Milberg, P.	Akerby, Up	1993	Sweden	60.41667	17.75	N	120
Primula ver	Milberg, P.	Akerby, Up	1993	Sweden	60.41667	17.75	N	120
Primula ver	Milberg, P.	Akerby, Up	1993	Sweden	60.41667	17.75	N	120
Primula ver	Milberg, P.	Akerby, Up	1993	Sweden	60.41667	17.75	N	120
Primula ver	Milberg, P.	Akerby, Up	1993	Sweden	60.41667	17.75	N	120
Primula ver	Milberg, P.	Akerby, Up	1993	Sweden	60.41667	17.75	N	120
Primula ver	Milberg, P.	Akerby, Up	1993	Sweden	60.41667	17.75	N	120
Primula ver	Milberg, P.	Akerby, Up	1993	Sweden	60.41667	17.75	N	120
Primula ver	Milberg, P.	Akerby, Up	1993	Sweden	60.41667	17.75	N	120
Ficus carica	Lisci, M. (1	Botanical G	1992	Italy	43.3	11.31667	N	0
Ficus carica	Lisci, M. (1	Botanical G	1992	Italy	43.3	11.31667	N	0
Ficus carica	Lisci, M. (1	Botanical G	1992	Italy	43.3	11.31667	N	0
Ficus carica	Lisci, M. (1	Botanical G	1992	Italy	43.3	11.31667	N	0
Ficus carica	Lisci, M. (1	Botanical G	1992	Italy	43.3	11.31667	N	0

Ficus caric	Lisci, M. (1	Botanical G	1992	Italy	43.3	11.31667	N 0
Ficus caric	Lisci, M. (1	Botanical G	1992	Italy	43.3	11.31667	N 0
Ficus caric	Lisci, M. (1	Botanical G	1992	Italy	43.3	11.31667	N 0
Festuca ovi	Hardegree,	Commercia	1991	USA	43.61667	-116.217	N 0
Bromus tec	Hardegree,	Commercia	1991	USA	43.61667	-116.217	N 0
Pseudoscle	Hardegree,	Commercia	1991	USA	43.61667	-116.217	N 0
Elymus ely	Hardegree,	Commercia	1991	USA	43.61667	-116.217	N 0
Quercus ro	Finch-Sava	Wellesbour	1992	UK	52.18333	-1.6	Y 0
Quercus ro	Finch-Sava	Wellesbour	1991	UK	52.18333	-1.58333	N 0
Quercus ro	Finch-Sava	Wellesbour	1992	UK	52.18333	-1.6	N 0
Larix occid	Carlson, C.	Missoula, M	1991	USA	46.86667	-114	N 30
Picea abies	Bavcon, J.	Jelovica 2,	1993	Slovenia	46.16667	14.15	N 0
Reynoutria	Mariko, S. I	Upland Mt I	1989	Japan	35.35	138.7167	N 10
Reynoutria	Mariko, S. I	Upland Mt I	1989	Japan	35.35	138.7167	N 10
Reynoutria	Mariko, S. I	Upland Mt I	1989	Japan	35.35	138.7167	N 10
Robinia pse	Masaka, K.	Iwamizawa	2006	Japan	43.16667	141.8	N 180
Robinia pse	Masaka, K.	Iwamizawa	2006	Japan	43.16667	141.8	N 0
Robinia pse	Masaka, K.	Iwamizawa	2006	Japan	43.16667	141.8	N 180
Robinia pse	Masaka, K.	Iwamizawa	2006	Japan	43.16667	141.8	N 180
Robinia pse	Masaka, K.	Iwamizawa	2006	Japan	43.16667	141.8	Y 0
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 0
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 0
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 0
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 0
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 14
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 0
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 0
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 0
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 14
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 14
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 14
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 14
Pinus resin	Flannigan,	Alexander I	1983	Canada	48.66667	-54.1	N 0
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 0
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 0
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 14
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 0
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 0
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 0
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 0
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 14
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 0
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 14
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 14
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 0
Pinus resin	Flannigan,	Chalk River	1989	Canada	46.01667	-77.45	N 14
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N 0
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N 0
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N 14
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N 0
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N 14
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N 0
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N 14
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N 14
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N 0
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N 0

Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N	14
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N	0
Pinus resin	Flannigan,	Upper Peni	1990	USA	46.25	-87.2833	N	0
Picea mari	Wang, Z. M	Peatland 1,	1991	Canada	55.13333	-114.25	N	0
Picea mari	Wang, Z. M	Peatland 1,	1991	Canada	55.13333	-114.25	N	0
Picea mari	Wang, Z. M	Peatland 1,	1991	Canada	55.13333	-114.25	N	0
Picea mari	Wang, Z. M	Upland 1, A	1991	Canada	55.13333	-114.25	N	0
Picea mari	Wang, Z. M	Upland 1, A	1991	Canada	55.13333	-114.25	N	0
Picea mari	Wang, Z. M	Upland 1, A	1991	Canada	55.13333	-114.25	N	0
Picea mari	Wang, Z. M	Peatland 2,	1991	Canada	55.03333	-114.033	N	0
Picea mari	Wang, Z. M	Peatland 2,	1991	Canada	55.03333	-114.033	N	0
Picea mari	Wang, Z. M	Peatland 2,	1991	Canada	55.03333	-114.033	N	0
Picea mari	Wang, Z. M	Upland 2, A	1991	Canada	55.03333	-114.033	N	0
Picea mari	Wang, Z. M	Upland 2, A	1991	Canada	55.03333	-114.033	N	0
Picea mari	Wang, Z. M	Upland 2, A	1991	Canada	55.03333	-114.033	N	0
Picea mari	Wang, Z. M	Peatland 3,	1991	Canada	53.41667	-116.017	N	0
Picea mari	Wang, Z. M	Peatland 3,	1991	Canada	53.41667	-116.017	N	0
Picea mari	Wang, Z. M	Peatland 3,	1991	Canada	53.41667	-116.017	N	0
Picea mari	Wang, Z. M	Upland 3, A	1991	Canada	53.41667	-116.017	N	0
Picea mari	Wang, Z. M	Upland 3, A	1991	Canada	53.41667	-116.017	N	0
Picea mari	Wang, Z. M	Upland 3, A	1991	Canada	53.41667	-116.017	N	0
Cercis can	Tipton, J. L	Texas A&M	1987	USA	31.75	-106.4	N	0
Cercis can	Tipton, J. L	Texas A&M	1987	USA	31.75	-106.4	N	0
Cercis can	Tipton, J. L	Texas A&M	1987	USA	31.75	-106.4	N	0
Robinia pse	Masaka, K.	Kami-Suna	2006	Japan	43.46667	142	N	0
Robinia pse	Masaka, K.	Kami-Suna	2006	Japan	43.46667	142	N	180
Robinia pse	Masaka, K.	Kami-Suna	2006	Japan	43.46667	142	N	180
Robinia pse	Masaka, K.	Kami-Suna	2006	Japan	43.46667	142	Y	0
Robinia pse	Masaka, K.	Kami-Suna	2006	Japan	43.46667	142	N	180
Trifolium ca	Russi, L. C	Tel Hadya,	1991	Syria	36.01667	36.93333	N	0
Trifolium ca	Thomson, I	Tel Hadya,	1989	Syria	36.01667	36.93333	Y	0
Trifolium ca	Thomson, I	Tel Hadya,	1989	Syria	36.01667	36.93333	N	0
Trifolium ca	Russi, L. C	Tel Hadya,	1991	Syria	36.01667	36.93333	Y	0
Stellaria me	Gange, A. (	Silwood Pa	1991	UK	51.4	#########	N	0
Aquilegia c	Finnerty, T.	Texas A&M	1991	USA	30.61667	-96.3333	N	30
Aquilegia c	Finnerty, T.	Texas A&M	1991	USA	30.61667	-96.3333	N	0
Aquilegia c	Finnerty, T.	Texas A&M	1991	USA	30.61667	-96.3333	N	0
Aquilegia c	Finnerty, T.	Texas A&M	1991	USA	30.61667	-96.3333	N	30
Pinus cont	Downie, B.	Clearwater,	1991	Canada	51.66667	-119.933	N	0
Pinus cont	Downie, B.	Fort St Jam	1991	Canada	54.5	-124.25	N	0
Pinus cont	Downie, B.	Lake le Jea	1991	Canada	50.5	-120.6	N	0
Pinus cont	Downie, B.	1296, Cana	1991	Canada	54.18333	-125.717	N	0
Pinus cont	Downie, B.	2176, Cana	1991	Canada	50.91667	-120.083	N	0
Pinus bank	Downie, B.	Shinnickbu	1991	Canada	46.5	-66	N	0
Pinus bank	Downie, B.	Big River, (	1991	Canada	54.73333	-107.2	N	0
Robinia pse	Masaka, K.	Bibai, Hokk	2006	Japan	43.3	141.8833	N	180
Robinia pse	Masaka, K.	Bibai, Hokk	2006	Japan	43.3	141.8833	N	180
Robinia pse	Masaka, K.	Bibai, Hokk	2006	Japan	43.3	141.8833	N	180
Robinia pse	Masaka, K.	Bibai, Hokk	2006	Japan	43.3	141.8833	Y	0
Robinia pse	Masaka, K.	Bibai, Hokk	2006	Japan	43.3	141.8833	N	0
Pinus bank	Downie, B.	Lake la Ro	1991	Canada	55.2	-105.3	N	0
Cornus ser	Acharya, S	Hazeldine,	1984	Canada	53.56667	-110.433	N	30
Quercus ru	Struve, D. I	Ohio State	1988	USA	40	-83.0167	N	0
Phalaris ar	Shipley, B.	Eastern Ca	1988	Canada	49.13333	-80.3167	N	0
Carex crinit	Shipley, B.	Eastern Ca	1988	Canada	49.13333	-80.3167	N	0
Juncus effu	Shipley, B.	Eastern Ca	1988	Canada	49.13333	-80.3167	N	0

Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	56
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	56
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	0
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	0
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	0
Origanum v	Pons, T. L.	Vrakelberg	1984	Netherland	50.86667	5.916667	N	150
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	56
Origanum v	Pons, T. L.	Vrakelberg	1984	Netherland	50.86667	5.916667	N	150
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	56
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	0
Origanum v	Pons, T. L.	Vrakelberg	1984	Netherland	50.86667	5.916667	N	0
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	0
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	56
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	0
Origanum v	van Tooren	Vrakelberg	1985	Netherland	50.86667	5.916667	N	56
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus dens	Kashiwagi,	Sugadaira,	1984	Japan	36.5	138.3333	N	0
Pinus strob	Geneve, R.	New Bruns	1987	Canada	46.91667	-67.3833	N	0
Pinus strob	Geneve, R.	New Bruns	1987	Canada	46.91667	-67.3833	N	28
Pinus pond	Weber, J. C	Central Ore	1981	USA	43.81667	-120.7	N	15
Pinus pond	Weber, J. C	Central Ore	1981	USA	43.81667	-120.7	N	15
Pinus pond	Weber, J. C	Central Ore	1981	USA	43.81667	-120.7	N	15
Pinus pond	Weber, J. C	Central Ore	1981	USA	43.81667	-120.7	N	120
Pinus pond	Weber, J. C	Central Ore	1981	USA	43.81667	-120.7	N	120
Pinus pond	Weber, J. C	Central Ore	1981	USA	43.81667	-120.7	N	120
Pinus pond	Weber, J. C	Central Ore	1981	USA	43.81667	-120.7	N	15
Pinus pond	Weber, J. C	Central Ore	1981	USA	43.81667	-120.7	N	120
Corylus ave	Li, L. I. R.,	Whiteknigh	1989	UK	51.43333	########	N	56
Corylus ave	Li, L. I. R.,	Whiteknigh	1989	UK	51.43333	########	N	7
Artemisia tr	Meyer, S. E	Caliente, N	1989	USA	37.61667	-114.717	N	0
Artemisia tr	Meyer, S. E	Caliente, N	1989	USA	37.61667	-114.717	N	0
Artemisia tr	Meyer, S. E	Caliente, N	1989	USA	37.61667	-114.717	N	0
Artemisia tr	Meyer, S. E	Caliente, N	1989	USA	37.61667	-114.717	N	14
Artemisia tr	Meyer, S. E	Caliente, N	1989	USA	37.61667	-114.717	N	0
Artemisia tr	Meyer, S. E	Caliente, N	1989	USA	37.61667	-114.717	N	14
Alliaria peti	Yasin, M. a	Snubbekors	2017	Denmark	55.63333	12.28333	N	0
Pinus sylve	Kune, I.,	Plzen, Cze	2009	Czech Rep	49.73333	13.36667	N	0
Picea abies	Kune, I.,	Plzen, Cze	2009	Czech Rep	49.73333	13.36667	N	0
Quercus ro	Kune, I.,	Plzen, Cze	2009	Czech Rep	49.73333	13.36667	Y	0
Picea glauc	Caron, G. E	Petawawa,	1984	Canada	46.08333	-77.4333	N	0

Picea glauc	Winston, D	Petawawa,	1978	Canada	45.96667	-77.4167	N	0
Pinus resin	Winston, D	Petawawa,	1978	Canada	45.96667	-77.4167	N	0
Picea glauc	Winston, D	Petawawa,	1978	Canada	45.96667	-77.4167	N	21
Pinus bank	Campbell, I	Petawawa,	1978	Canada	45.86667	-77.3	N	0
Picea glauc	Caron, G. E	Petawawa,	1984	Canada	46.08333	-77.4333	N	42
Pinus bank	Campbell, I	Petawawa,	1978	Canada	45.86667	-77.3	N	0
Dioscorea t	Terui, K. O.	Suzaki, Shi	1986	Japan	34.65	138.9667	N	0
Dioscorea t	Terui, K. O.	Suzaki, Shi	1986	Japan	34.65	138.9667	N	30
Dioscorea t	Terui, K. O.	Suzaki, Shi	1986	Japan	34.65	138.9667	N	0
Dioscorea t	Terui, K. O.	Suzaki, Shi	1986	Japan	34.65	138.9667	N	0
Dioscorea t	Terui, K. O.	Suzaki, Shi	1986	Japan	34.65	138.9667	N	0
Dioscorea t	Terui, K. O.	Suzaki, Shi	1986	Japan	34.65	138.9667	N	0
Dioscorea t	Terui, K. O.	Suzaki, Shi	1986	Japan	34.65	138.9667	N	0
Dioscorea t	Terui, K. O.	Suzaki, Shi	1986	Japan	34.65	138.9667	N	0
Purshia trid	Meyer, S. E	Intermounta	1986	USA	40.21667	-111.633	N	14
Purshia trid	Meyer, S. E	Intermounta	1986	USA	40.21667	-111.633	N	28
Purshia trid	Meyer, S. E	Intermounta	1986	USA	40.21667	-111.633	N	14
Purshia trid	Meyer, S. E	Intermounta	1986	USA	40.21667	-111.633	N	28
Brucea jav	Washitani,	University F	1984	Japan	35.7	139.75	N	0
Brucea jav	Washitani,	University F	1984	Japan	35.7	139.75	Y	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	Y	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	N	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	N	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	Y	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	N	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	N	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	N	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	N	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	N	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	N	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	N	0
Cistus creti	Thanos, C.	University (	1982	Greece	37.93333	23.8	Y	0
Pinus bank	Pitel, J. A.	Audrey Lak	1973	Canada	49.75	-94.1667	N	0
Picea glauc	Nosko, P. E	Bracebridge	1987	Canada	45.01667	-79.2833	N	0
Pinus cont	Hellum, A.	Grande Pra	1984	Canada	54.63333	-119.083	N	0
Pinus cont	Hellum, A.	Grande Pra	1984	Canada	54.63333	-119.083	N	42
Abies lasio	Woodard, F	University c	1986	Canada	53.51667	-113.517	N	21
Pinus cont	Woodard, F	University c	1986	Canada	53.51667	-113.517	N	21
Picea enge	Woodard, F	University c	1986	Canada	53.51667	-113.517	N	21
Rumex ace	Escarr&#65533;, J	Fontainebl	1982	France	48.4	2.7	N	0
Rumex ace	Escarr&#65533;, J	Fontainebl	1982	France	48.4	2.7	N	0
Rumex ace	Escarr&#65533;, J	Fontainebl	1982	France	48.4	2.7	N	0
Rumex ace	Escarr&#65533;, J	Fontainebl	1982	France	48.4	2.7	N	0
Rumex ace	Escarr&#65533;, J	Fontainebl	1982	France	48.4	2.7	N	0
Rumex ace	Escarr&#65533;, J	Fontainebl	1982	France	48.4	2.7	N	0
Pseudotsu	Kune&#65533;, I.,	Snoqualmie	2009	USA	47.51667	-121.833	N	0
Rumex ace	Taylorson,	Beltsville, M	1986	USA	39.03333	-76.9167	N	0
Rumex ace	Taylorson,	Beltsville, M	1986	USA	39.03333	-76.9167	N	0
Abies balsa	Scherbatsk	Schumache	1986	USA	41.73333	-70.4667	N	0
Betula alle	Scherbatsk	Schumache	1986	USA	41.73333	-70.4667	N	0
Picea rube	Scherbatsk	Schumache	1986	USA	41.73333	-70.4667	N	0
Betula pap	Scherbatsk	Schumache	1986	USA	41.73333	-70.4667	N	0
Acer pseud	Pinfield, N.	University c	1985	UK	51.45	-2.6	N	100
Acer pseud	Pinfield, N.	University c	1985	UK	51.45	-2.6	N	0
Pinus dens	Washitani,	Ibaraki, Ho	1983	Japan	36.28333	140.4167	N	0
Pinus dens	Washitani,	Ibaraki, Ho	1983	Japan	36.28333	140.4167	N	0

Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Pinus dens	Washitani,	Ibaraki, Hor	1983	Japan	36.28333	140.4167	N 0
Abies amat	Leadem, C	3636, Victo	1985	Canada	48.41667	-123.35	N 56
Abies amat	Leadem, C	3636, Victo	1985	Canada	48.41667	-123.35	N 56
Abies amat	Leadem, C	4217, Victo	1985	Canada	48.41667	-123.35	N 56
Abies amat	Leadem, C	4217, Victo	1985	Canada	48.41667	-123.35	N 56
Abies amat	Leadem, C	4293, Victo	1985	Canada	48.41667	-123.35	N 56
Abies amat	Leadem, C	4293, Victo	1985	Canada	48.41667	-123.35	N 56
Abies amat	Leadem, C	4347, Victo	1985	Canada	48.41667	-123.35	N 56
Abies amat	Leadem, C	4347, Victo	1985	Canada	48.41667	-123.35	N 56
Abies amat	Leadem, C	4348, Victo	1985	Canada	48.41667	-123.35	N 56
Abies amat	Leadem, C	4348, Victo	1985	Canada	48.41667	-123.35	N 56
Phragmites	Galinato, M	Delta Marsl	1985	Canada	50.18333	-98.3167	N 0
Phragmites	Galinato, M	Delta Marsl	1985	Canada	50.18333	-98.3167	N 0
Phragmites	Galinato, M	Delta Marsl	1985	Canada	50.18333	-98.3167	N 0
Phragmites	Galinato, M	Delta Marsl	1985	Canada	50.18333	-98.3167	N 0
Phragmites	Galinato, M	Delta Marsl	1985	Canada	50.18333	-98.3167	N 0
Phragmites	Galinato, M	Delta Marsl	1985	Canada	50.18333	-98.3167	N 0
Phragmites	Galinato, M	Delta Marsl	1985	Canada	50.18333	-98.3167	N 0
Phragmites	Galinato, M	Delta Marsl	1985	Canada	50.18333	-98.3167	N 0
Securigera	K‰Vendi-J	Ny‰rs‰g,	2013	Hungary	47.95	21.65	N 30
Securigera	K‰Vendi-J	Ny‰rs‰g,	2013	Hungary	47.95	21.65	N 0
Betula pap	Bevington,	65B, Porcu	1985	USA	67.15	-142.1	N 0
Betula pap	Bevington,	65B, Porcu	1985	USA	67.15	-142.1	N 0
Betula pap	Bevington,	65B, Porcu	1985	USA	67.15	-142.1	N 0
Betula pap	Bevington,	65B, Porcu	1985	USA	67.15	-142.1	N 0
Betula pap	Bevington,	65B, Porcu	1985	USA	67.15	-142.1	N 0
Betula pap	Bevington,	65B, Porcu	1985	USA	67.15	-142.1	N 0
Betula pap	Bevington,	65B, Porcu	1985	USA	67.15	-142.1	N 0
Betula pap	Bevington,	73B, White	1985	USA	44.28333	-71.2833	N 0
Betula pap	Bevington,	73B, White	1985	USA	44.28333	-71.2833	N 0
Betula pap	Bevington,	73B, White	1985	USA	44.28333	-71.2833	N 0
Betula pap	Bevington,	73B, White	1985	USA	44.28333	-71.2833	N 0
Betula pap	Bevington,	73B, White	1985	USA	44.28333	-71.2833	N 0
Betula pap	Bevington,	73B, White	1985	USA	44.28333	-71.2833	N 0
Betula pap	Bevington,	73B, White	1985	USA	44.28333	-71.2833	N 0
Stellaria me	Baskin, J. M	Fayette Co	1982	USA	38.03333	-84.5	N 90
Stellaria me	Baskin, J. M	Fayette Co	1982	USA	38.03333	-84.5	N 90
Stellaria me	Baskin, J. M	Fayette Co	1982	USA	38.03333	-84.5	N 90
Asarum car	Baskin, J. M	Fayette Co	1980	USA	38.03333	-84.5	N 42
Asarum car	Baskin, J. M	Fayette Co	1980	USA	38.03333	-84.5	N 0
Stellaria me	Baskin, J. M	Fayette Co	1982	USA	38.03333	-84.5	N 90
Stellaria me	Baskin, J. M	Fayette Co	1982	USA	38.03333	-84.5	N 90

Stellaria me	Baskin, J. M	Fayette Co	1982	USA	38.03333	-84.5	N	90
Pinus mont	Pitel, J. A. \	Adams Lak	1970	Canada	51.41667	-119.5	N	0
Pinus mont	Pitel, J. A. \	Adams Lak	1970	Canada	51.41667	-119.5	N	63
Pinus mont	Pitel, J. A. \	Adams Lak	1970	Canada	51.41667	-119.5	N	63
Pinus mont	Pitel, J. A. \	Adams Lak	1970	Canada	51.41667	-119.5	N	63
Pinus mont	Pitel, J. A. \	Adams Lak	1970	Canada	51.41667	-119.5	N	0
Pinus mont	Pitel, J. A. \	Adams Lak	1970	Canada	51.41667	-119.5	N	0
Pinus mont	Pitel, J. A. \	Adams Lak	1970	Canada	51.41667	-119.5	N	0
Pinus mont	Pitel, J. A. \	Adams Lak	1970	Canada	51.41667	-119.5	N	63
Pinus mont	Pitel, J. A. \	Jackson Cc	1965	USA	43.01667	-120.5	N	0
Pinus mont	Pitel, J. A. \	Jackson Cc	1965	USA	43.01667	-120.5	N	0
Pinus mont	Pitel, J. A. \	Jackson Cc	1965	USA	43.01667	-120.5	N	63
Pinus mont	Pitel, J. A. \	Jackson Cc	1965	USA	43.01667	-120.5	N	63
Pinus mont	Pitel, J. A. \	Jackson Cc	1965	USA	43.01667	-120.5	N	63
Pinus mont	Pitel, J. A. \	Jackson Cc	1965	USA	43.01667	-120.5	N	0
Pinus mont	Pitel, J. A. \	Jackson Cc	1965	USA	43.01667	-120.5	N	0
Pinus mont	Pitel, J. A. \	Jackson Cc	1965	USA	43.01667	-120.5	N	63
Fraxinus ex	Krauss, N.	Greifswald,	1984	Germany	54.08333	13.38333	N	126
Heracleum	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Elymus gla	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Heracleum	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Elymus gla	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Bromus cili	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Bromus cili	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Heracleum	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	120
Bromus cili	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	120
Elymus gla	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	120
Bromus cili	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Bromus cili	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Elymus gla	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Heracleum	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Heracleum	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Heracleum	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Elymus gla	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	120
Elymus gla	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Bromus cili	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Bromus cili	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	120
Elymus gla	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	0
Heracleum	Hoffman, G	Routt Natio	1981	USA	40.55	-106.683	N	120
Festuca ida	Doescher, I	Hampton 1	1984	USA	45.68333	-121.5	N	0
Festuca ida	Doescher, I	Hampton 1	1984	USA	45.68333	-121.5	N	0
Festuca ida	Doescher, I	Hampton 1	1984	USA	45.68333	-121.5	N	0
Festuca ida	Doescher, I	Hampton 1	1984	USA	45.68333	-121.5	N	0
Festuca ida	Doescher, I	Hampton 1	1984	USA	45.68333	-121.5	N	0
Festuca ida	Doescher, I	Hampton 1	1984	USA	45.68333	-121.5	N	0
Festuca ida	Doescher, I	Brothers, C	1984	USA	43.8	-120.6	N	0
Festuca ida	Doescher, I	Brothers, C	1984	USA	43.8	-120.6	N	0
Festuca ida	Doescher, I	Brothers, C	1984	USA	43.8	-120.6	N	0
Festuca ida	Doescher, I	Brothers, C	1984	USA	43.8	-120.6	N	0
Festuca ida	Doescher, I	Brothers, C	1984	USA	43.8	-120.6	N	0
Festuca ida	Doescher, I	Brothers, C	1984	USA	43.8	-120.6	N	0
Festuca ida	Doescher, I	Hampton 2	1984	USA	45.65	-121.45	N	0
Festuca ida	Doescher, I	Hampton 2	1984	USA	45.65	-121.45	N	0
Festuca ida	Doescher, I	Hampton 2	1984	USA	45.65	-121.45	N	0
Festuca ida	Doescher, I	Hampton 2	1984	USA	45.65	-121.45	N	0
Festuca ida	Doescher, I	Hampton 2	1984	USA	45.65	-121.45	N	0

Festuca ida	Doescher, I	Hampton 2	1984	USA	45.65	-121.45	N 0
Melica nuta	Kolodziejek	Podd?bice,	2015	Poland	52.51667	19.48333	N 112
Melica nuta	Kolodziejek	Podd?bice,	2015	Poland	52.51667	19.48333	N 112
Melica nuta	Kolodziejek	Podd?bice,	2015	Poland	52.51667	19.48333	N 0
Stachys off	Kolodziejek	Podd?bice,	2015	Poland	52.51667	19.48333	N 112
Stachys off	Kolodziejek	Podd?bice,	2015	Poland	52.51667	19.48333	N 112
Stachys off	Kolodziejek	Podd?bice,	2015	Poland	52.51667	19.48333	N 0
Festuca ida	Doescher, I	Millican, Or	1984	USA	43.86667	-120.917	N 0
Festuca ida	Doescher, I	Millican, Or	1984	USA	43.86667	-120.917	N 0
Festuca ida	Doescher, I	Millican, Or	1984	USA	43.86667	-120.917	N 0
Festuca ida	Doescher, I	Millican, Or	1984	USA	43.86667	-120.917	N 0
Festuca ida	Doescher, I	Millican, Or	1984	USA	43.86667	-120.917	N 0
Festuca ida	Doescher, I	Millican, Or	1984	USA	43.86667	-120.917	N 0
Hypericum	Campbell, I	Tuena, Aus	1974	Australia	-34	149.3	N 0
Hypericum	Campbell, I	Tuena, Aus	1974	Australia	-34	149.3	N 0
Cirsium pal	Ballegaard,	Jutland, De	1984	Denmark	55.61667	9.183333	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Taraxacum	Washitani,	University c	1983	Japan	35.7	139.75	N 0
Cirsium pal	Pons, T. L.	Utrecht, Th	1981	Netherland	52.08333	5.083333	N 0
Ostrya virgi	Pitel, J. A. \	Ross Town	1979	Canada	45.68333	-76.7167	Y 0
Ostrya virgi	Pitel, J. A. \	Ross Town	1979	Canada	45.68333	-76.7167	Y 90
Ostrya virgi	Pitel, J. A. \	Ross Town	1979	Canada	45.68333	-76.7167	N 90
Ostrya virgi	Pitel, J. A. \	Ross Town	1979	Canada	45.68333	-76.7167	N 0
Calluna vul	Helsper, H.	Heide, The	1982	Netherland	51.5	5.933333	N 0
Populus de	Hardin, E. I	Ohio Unive	1982	USA	39.31667	-82.1	N 0
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 24
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 0
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 0
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 0
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 0
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 24
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 24
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 24
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 0
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 0
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 24
Picea mari	Farmer, R.	Thunder Ba	1982	Canada	48.66667	-89.25	N 24
Dactylis glo	Bean, E. W	Gap, Franc	1983	France	44.55	6.066667	N 0
Peucedanu	Kolodziejek	Primary out	2016	Poland	53.98333	17.4	N 150
Dactylis glo	Bean, E. W	Bocca Trab	1983	Italy	43.58333	12.23333	N 0
Dactylis glo	Bean, E. W	Chateaux-C	1983	France	47.81667	-0.7	N 0
Poa trivialis	Williams, E	Yarnton, Ox	1981	UK	51.8	-1.3	N 0
Poa trivialis	Williams, E	Yarnton, Ox	1981	UK	51.8	-1.3	N 336
Poa trivialis	Williams, E	Yarnton, Ox	1981	UK	51.8	-1.3	N 0

Poa trivialis	Williams, E	Yarnton, O	1981	UK	51.8	-1.3	N	336
Poa trivialis	Williams, E	Yarnton, O	1981	UK	51.8	-1.3	N	0
Poa trivialis	Williams, E	Yarnton, O	1981	UK	51.8	-1.3	N	0
Poa trivialis	Williams, E	Yarnton, O	1981	UK	51.8	-1.3	N	336
Poa trivialis	Williams, E	Yarnton, O	1981	UK	51.8	-1.3	N	336
Gardenia ja	Shimomura	Tokyo Colle	1982	Japan	35.68333	139.7	N	0
Corylus ave	Shannon, F	University c	1982	UK	53.36667	-1.48333	N	0
Corylus ave	Shannon, F	University c	1982	UK	53.36667	-1.48333	N	0
Corylus ave	Shannon, F	University c	1982	UK	53.36667	-1.48333	Y	0
Corylus ave	Shannon, F	University c	1982	UK	53.36667	-1.48333	Y	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Juncus effu	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Juncus effu	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Juncus effu	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Juncus effu	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Juncus effu	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Juncus effu	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0

Stellaria me	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Stellaria me	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Ranunculus	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Stellaria me	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Stellaria me	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Ranunculus	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Ranunculus	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Stellaria me	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Stellaria me	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Ranunculus	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Stellaria me	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Ranunculus	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Stellaria me	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Ranunculus	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Ranunculus	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Ranunculus	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Stellaria me	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Ranunculus	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Holcus lana	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Juncus effu	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0
Urtica dioic	Thompson, Sheffield, U	1982	UK	53.36667	-1.46667	N 0

Juncus effu	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Stellaria me	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Urtica dioic	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Juncus effu	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Holcus lana	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Juncus effu	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Ranunculus	Thompson,	Sheffield, U	1982	UK	53.36667	-1.46667	N	0
Picea enge	Taylor, R. J	Koksilals R	1982	Canada	53.73333	-127.65	N	30
Pinus conto	Taylor, R. J	Koksilals R	1982	Canada	54.05	-127.817	N	20
Abies lasio	Taylor, R. J	Koksilals R	1982	Canada	54.05	-127.817	N	50
Tsuga mert	Taylor, R. J	Koksilals R	1982	Canada	54.05	-127.817	N	50
Origanum v	Putievsky, I	Greece	1982	Greece	39.2	22.21667	N	0
Origanum v	Putievsky, I	Greece	1982	Greece	39.2	22.21667	N	0
Origanum v	Putievsky, I	Greece	1982	Greece	39.2	22.21667	N	0
Origanum v	Putievsky, I	Greece	1982	Greece	39.2	22.21667	N	0
Origanum v	Putievsky, I	Greece	1982	Greece	39.2	22.21667	N	0
Origanum v	Putievsky, I	Greece	1982	Greece	39.2	22.21667	N	0
Origanum v	Putievsky, I	Greece	1982	Greece	39.2	22.21667	N	0
Origanum v	Putievsky, I	Greece	1982	Greece	39.2	22.21667	N	0
Impatiens c	Nozzolillo,	Rideau Riv	1980	Canada	45.21667	-75.6833	N	140
Ledum palu	Karlin, E. F	Heatherdov	1977	Canada	53.61667	-114.267	N	0
Ledum palu	Karlin, E. F	Heatherdov	1977	Canada	53.61667	-114.267	N	0
Ledum palu	Karlin, E. F	Heatherdov	1977	Canada	53.61667	-114.267	N	0
Peucedanu	Kolodziejek	Primary cer	2016	Poland	53.98333	17.4	N	150
Epilobium a	Etherington	Cardiff, UK	1982	UK	51.48333	-3.2	N	0
Pinus taeda	Dunlap, J. I	Washingtor	1983	USA	35.55	-77.05	N	30
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N	35
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N	35
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N	35
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N	35
Dioscorea r	Okagami, N	Niigata, Jap	1976	Japan	37.9	139.05	N	0
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N	35
Dioscorea r	Okagami, N	Niigata, Jap	1976	Japan	37.9	139.05	N	0
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N	35
Dioscorea r	Okagami, N	Niigata, Jap	1976	Japan	37.9	139.05	N	0
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N	35
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N	35
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N	35
Dioscorea r	Okagami, N	Niigata, Jap	1976	Japan	37.9	139.05	N	0
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N	35
Dioscorea r	Okagami, N	Niigata, Jap	1976	Japan	37.9	139.05	N	0
Dioscorea r	Okagami, N	Niigata, Jap	1976	Japan	37.9	139.05	N	0
Dioscorea r	Okagami, N	Niigata, Jap	1976	Japan	37.9	139.05	N	0
Dioscorea r	Okagami, N	Niigata, Jap	1976	Japan	37.9	139.05	N	0
Dioscorea r	Okagami, N	Niigata, Jap	1976	Japan	37.9	139.05	N	0

Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N 35
Dioscorea r	Okagami, N	Niigata, Jap	1976	Japan	37.9	139.05	N 0
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N 35
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N 35
Dioscorea r	Okagami, N	Niigata, Jap	1978	Japan	37.9	139.05	N 35
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65

Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 65
Dioscorea t	Okagami, N	Kagoshima	1978	Japan	31.56667	130.5333	N 35
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea t	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea j	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Dioscorea (	Okagami, N	Kagoshima	1976	Japan	31.56667	130.5333	N 0
Populus tre	Fechner, G	Larimer Co	1977	USA	40.61667	-105.483	N 0
Populus tre	Fechner, G	Larimer Co	1977	USA	40.61667	-105.483	N 0
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 60
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 60
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 0
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 60
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 0
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 60
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 0
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 60
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 0
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 60
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 0
Melampyru	Masselink,	Appelberge	1974	Netherland	53.13333	6.633333	N 0
Melampyru	Masselink,	Eext, The N	1974	Netherland	53.01667	6.733333	N 60
Melampyru	Masselink,	Eext, The N	1974	Netherland	53.01667	6.733333	N 60
Melampyru	Masselink,	Eext, The N	1974	Netherland	53.01667	6.733333	N 0
Melampyru	Masselink,	Eext, The N	1974	Netherland	53.01667	6.733333	N 60
Melampyru	Masselink,	Eext, The N	1974	Netherland	53.01667	6.733333	N 60
Melampyru	Masselink,	Eext, The N	1974	Netherland	53.01667	6.733333	N 60
Melampyru	Masselink,	Eext, The N	1974	Netherland	53.01667	6.733333	N 0
Melampyru	Masselink,	Eext, The N	1974	Netherland	53.01667	6.733333	N 0
Melampyru	Masselink,	Eext, The N	1974	Netherland	53.01667	6.733333	N 60

Melampyru	Masselink, Eext, The N		1974	Netherland	53.01667	6.733333	N	0
Melampyru	Masselink, Eext, The N		1974	Netherland	53.01667	6.733333	N	0
Melampyru	Masselink, Eext, The N		1974	Netherland	53.01667	6.733333	N	0
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	60
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	60
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	0
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	0
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	0
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	0
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	0
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	60
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	60
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	60
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	0
Melampyru	Masselink, Annen, The		1974	Netherland	53.05	6.716667	N	60
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	60
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	0
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	60
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	60
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	0
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	60
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	0
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	0
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	60
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	0
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	60
Melampyru	Masselink, Norg, The N		1974	Netherland	53.06667	6.45	N	0
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	60
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	60
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	0
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	60
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	0
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	60
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	0
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	0
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	0
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	60
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	0
Melampyru	Masselink, Amen, The		1974	Netherland	52.91667	6.583333	N	60
Peucedanu	Kolodziejek	Secondary	2016	Poland	53.98333	17.4	N	150
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N	0

Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0

Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 0
Balsamorhi	Young, J. A	Northeaste	1976	USA	39.01667	-120.4	N 28
Phalaris ar	Landgraff, /	Tjotta, Norv	1978	Norway	65.81667	12.41667	N 0
Phalaris ar	Landgraff, /	Tjotta, Norv	1978	Norway	65.81667	12.41667	N 28
Phalaris ar	Landgraff, /	Tjotta, Norv	1978	Norway	65.81667	12.41667	N 28
Phalaris ar	Landgraff, /	Tjotta, Norv	1978	Norway	65.81667	12.41667	N 0
Corylus ave	Bradbeer, .	King's Colle	1977	UK	51.5	-0.1	N 0
Corylus ave	Bradbeer, .	King's Colle	1977	UK	51.5	-0.1	Y 42
Corylus ave	Bradbeer, .	King's Colle	1977	UK	51.5	-0.1	N 0
Corylus ave	Bradbeer, .	King's Colle	1977	UK	51.5	-0.1	N 42
Corylus ave	Bradbeer, .	King's Colle	1977	UK	51.5	-0.1	Y 0
Corylus ave	Bradbeer, .	King's Colle	1977	UK	51.5	-0.1	Y 0
Liriodendro	Barnett, P.	Low elevati	1971	USA	35.16667	-84.3667	N 56
Liriodendro	Barnett, P.	Low elevati	1971	USA	35.16667	-84.3667	N 56
Liriodendro	Barnett, P.	Low elevati	1971	USA	35.16667	-84.3667	N 56
Liriodendro	Barnett, P.	Low elevati	1971	USA	35.16667	-84.3667	N 168
Liriodendro	Barnett, P.	Low elevati	1971	USA	35.16667	-84.3667	N 56
Liriodendro	Barnett, P.	Low elevati	1971	USA	35.16667	-84.3667	N 168
Liriodendro	Barnett, P.	Low elevati	1971	USA	35.16667	-84.3667	N 168
Liriodendro	Barnett, P.	Low elevati	1971	USA	35.16667	-84.3667	N 168

Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0

Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Purshia tridı	Evans, R. A	Nevada and	1971	USA	39.1	-119.883 N 0
Elymus elyı	Young, J. A	Nevada and	1967	USA	39.1	-119.883 N 0

Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Purshia trid	Evans, R. A	Nevada and	1971	USA	39.1	-119.883	N	0
Elymus ely	Young, J. A	Nevada and	1967	USA	39.1	-119.883	N	0
Achillea mil	Robocker, '	Washingtor	1971	USA	46.71667	-117.15	N	0
Achillea mil	Robocker, '	Washingtor	1972	USA	46.71667	-117.15	N	0
Achillea mil	Robocker, '	Washingtor	1972	USA	46.71667	-117.15	N	0
Achillea mil	Robocker, '	Washingtor	1972	USA	46.71667	-117.15	N	0
Achillea mil	Robocker, '	Washingtor	1972	USA	46.71667	-117.15	N	0
Achillea mil	Robocker, '	Washingtor	1971	USA	46.71667	-117.15	N	0
Achillea mil	Robocker, '	Washingtor	1971	USA	46.71667	-117.15	N	0
Achillea mil	Robocker, '	Washingtor	1971	USA	46.71667	-117.15	N	0
Cornus am	Allen, R. F.	Norris, Ten	1973	USA	36.01667	-84.0167	N	84
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	0

Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	112
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1973	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1973	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	112
Cornus am	Allen, R. F.	Norris, Ten	1973	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	112
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	112
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1973	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	112
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1973	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1973	USA	36.01667	-84.0167	N	0
Cornus am	Allen, R. F.	Norris, Ten	1974	USA	36.01667	-84.0167	N	112
Cornus am	Allen, R. F.	Norris, Ten	1973	USA	36.01667	-84.0167	N	0
Betula pub	Junttila, O.	1 Finland	1975	Finland	61.66667	29.5	N	0
Betula pub	Junttila, O.	1 Finland	1975	Finland	61.66667	29.5	N	0
Betula pub	Junttila, O.	2 Finland	1975	Finland	62	25	N	0
Betula pub	Junttila, O.	2 Finland	1975	Finland	62	25	N	0
Betula pub	Junttila, O.	3 Finland	1975	Finland	64.5	29	N	0
Betula pub	Junttila, O.	3 Finland	1975	Finland	64.5	29	N	0
PeucedanuKolodziejek		Secondary	2016	Poland	53.98333	17.4	N	150
Betula pub	Junttila, O.	4 Finland	1975	Finland	64.5	29	N	0
Betula pub	Junttila, O.	4 Finland	1975	Finland	64.5	29	N	0
Betula pub	Junttila, O.	5 Norway	1975	Norway	60.75	11.16667	N	0
Betula pub	Junttila, O.	5 Norway	1975	Norway	60.75	11.16667	N	0
Betula pen	Junttila, O.	6 Finland	1975	Finland	60.08333	24	N	0
Betula pen	Junttila, O.	6 Finland	1975	Finland	60.08333	24	N	0
Betula pen	Junttila, O.	7 Finland	1975	Finland	60.5	24.5	N	0
Betula pen	Junttila, O.	7 Finland	1975	Finland	60.5	24.5	N	0
Betula pen	Junttila, O.	8 Finland	1975	Finland	62	25	N	0
Betula pen	Junttila, O.	8 Finland	1975	Finland	62	25	N	0
Betula pen	Junttila, O.	9 Finland	1975	Finland	62.5	27	N	0
Betula pen	Junttila, O.	9 Finland	1975	Finland	62.5	27	N	0
Betula pen	Junttila, O.	10 Finland	1975	Finland	64.5	29	N	0
Betula pen	Junttila, O.	10 Finland	1975	Finland	64.5	29	N	0
Betula pen	Junttila, O.	11 Finland	1975	Finland	65.25	27	N	0
Betula pen	Junttila, O.	11 Finland	1975	Finland	65.25	27	N	0
Betula pen	Junttila, O.	12 Norway	1975	Norway	60.75	11.16667	N	0
Betula pen	Junttila, O.	12 Norway	1975	Norway	60.75	11.16667	N	0
Artemisia tr	McDonoug	Dubois, Ida	1971	USA	44.16667	-112.217	N	35
Artemisia tr	McDonoug	Dubois, Ida	1971	USA	44.16667	-112.217	N	0
Artemisia tr	McDonoug	Dubois, Ida	1971	USA	44.16667	-112.217	N	0
Artemisia tr	Harniss, R.	Dubois, Ida	1973	USA	44.16667	-112.217	N	0
Artemisia tr	McDonoug	Dubois, Ida	1971	USA	44.16667	-112.217	N	0
Artemisia tr	McDonoug	Dubois, Ida	1971	USA	44.16667	-112.217	N	0
Artemisia tr	McDonoug	Dubois, Ida	1971	USA	44.16667	-112.217	N	0
Artemisia tr	McDonoug	Dubois, Ida	1971	USA	44.16667	-112.217	N	0
Artemisia tr	McDonoug	Dubois, Ida	1971	USA	44.16667	-112.217	N	0
Artemisia tr	McDonoug	Dubois, Ida	1971	USA	44.16667	-112.217	N	0
PeucedanuKolodziejek		Primary ou	2016	Poland	50.96667	16.98333	N	150
Picea glauc	Radvanyi, A	Alberta For	1974	Canada	53.36667	-115.517	N	0
Robinia ps	Bicknell, S.	New Haver	1973	USA	41.3	-72.9333	N	0

Quercus ce	Bicknell, S.	New Haver	1973	USA	41.3	-72.9333	N	0
Quercus cc	Bicknell, S.	New Haver	1973	USA	41.3	-72.9333	N	0
Betula alle	Bicknell, S.	New Haver	1973	USA	41.3	-72.9333	N	0
Humulus lu	Haunold, A	USDA, Ore	1973	USA	43.95	-122.117	N	56
Humulus lu	Smith, D. C	USDA, Ore	1936	USA	43.78333	-121.917	N	35
Ledum pal	Junttila, O.	Finland	1968	Finland	61.11667	24.33333	N	0
Ledum pal	Junttila, O.	Finland	1968	Finland	61.11667	24.33333	N	0
Ledum pal	Junttila, O.	Finland	1968	Finland	61.11667	24.33333	N	0
Ledum pal	Junttila, O.	Finland	1968	Finland	61.11667	24.33333	N	0
Ledum pal	Junttila, O.	Finland	1968	Finland	61.11667	24.33333	N	0
Ledum pal	Junttila, O.	Finland	1968	Finland	61.11667	24.33333	N	0
Ledum pal	Junttila, O.	Finland	1968	Finland	61.11667	24.33333	N	0
Ledum pal	Junttila, O.	Finland	1968	Finland	61.11667	24.33333	N	0
Pinus taed	Biswas, P.	American F	1971	USA	31.11667	-92.4333	N	84
Pinus taed	Biswas, P.	American F	1971	USA	31.11667	-92.4333	N	0
Acer sacch	Webb, D. F	Vermont, U	1966	USA	43.9	-72.6	N	41
Acer sacch	Webb, D. F	Vermont, U	1966	USA	43.9	-72.6	N	41
Acer sacch	Webb, D. F	Vermont, U	1966	USA	43.9	-72.6	N	41
Acer sacch	Webb, D. F	Vermont, U	1966	USA	43.9	-72.6	N	41
Acer sacch	Webb, D. F	Vermont, U	1966	USA	43.9	-72.6	N	41
Corylus av	Bradbeer,	Mereworth,	1966	USA	51.25	########	N	0
Corylus av	Bradbeer,	Mereworth,	1966	USA	51.25	########	Y	0
Alnus incar	Schalin, I.	(Vihti, Finlar	1964	Finland	60.4	24.31667	N	180
Alnus glutir	Schalin, I.	(Vihti, Finlar	1964	Finland	60.4	24.31667	N	0
Alnus incar	Schalin, I.	(Vihti, Finlar	1964	Finland	60.4	24.31667	N	0
Alnus glutir	Schalin, I.	(Vihti, Finlar	1964	Finland	60.4	24.31667	N	180
Populus de	Farmer, R.	Stoneville,	1966	USA	33.41667	-90.9	N	0
Populus de	Farmer, R.	Stoneville,	1966	USA	33.41667	-90.9	N	0
Populus de	Farmer, R.	Stoneville,	1966	USA	33.41667	-90.9	N	0
Liquidamb	Bonner, F.	Stoneville,	1963	USA	33.41667	-90.9	N	28
Liquidamb	Bonner, F.	Stoneville,	1963	USA	33.41667	-90.9	N	0
Populus de	Farmer, R.	Stoneville,	1966	USA	33.41667	-90.9	N	0
Liquidamb	Bonner, F.	Stoneville,	1963	USA	33.41667	-90.9	N	0
Liquidamb	Bonner, F.	Stoneville,	1963	USA	33.41667	-90.9	N	28
Liquidamb	Bonner, F.	Stoneville,	1963	USA	33.41667	-90.9	N	0
Liquidamb	Bonner, F.	Stoneville,	1963	USA	33.41667	-90.9	N	0
Liquidamb	Bonner, F.	Stoneville,	1963	USA	33.41667	-90.9	N	28
Liquidamb	Bonner, F.	Stoneville,	1963	USA	33.41667	-90.9	N	28
Populus de	Farmer, R.	Stoneville,	1966	USA	33.41667	-90.9	N	0
Peucedanu	Kolodziejek	Primary cer	2016	Poland	50.96667	16.98333	N	150
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamp	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0

Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Deschamps	Sayers, R.	False Mum	1962	USA	40.5	-105.65	N	0
Picea enge	Patten, D.	Golden, Co	1959	USA	39.73333	-105.2	N	0
Picea enge	Patten, D.	Golden, Co	1959	USA	39.73333	-105.2	N	0
Picea enge	Patten, D.	Golden, Co	1959	USA	39.73333	-105.2	N	0
Picea enge	Patten, D.	Golden, Co	1959	USA	39.73333	-105.2	N	0
Picea enge	Patten, D.	Golden, Co	1959	USA	39.73333	-105.2	N	0
Picea enge	Patten, D.	Golden, Co	1959	USA	39.73333	-105.2	N	0
Picea enge	Patten, D.	Golden, Co	1959	USA	39.73333	-105.2	N	0
Picea enge	Patten, D.	Golden, Co	1959	USA	39.73333	-105.2	N	0
Picea enge	Patten, D.	Golden, Co	1959	USA	39.73333	-105.2	N	0
Picea enge	Patten, D.	Golden, Co	1959	USA	39.73333	-105.2	N	0
Pinus virgir	Snow, A. G	Beltsville E	1953	USA	39.03333	-76.9167	N	0
Pinus virgir	Snow, A. G	Beltsville E	1953	USA	39.03333	-76.9167	N	0
Hypericum	Tisdale, E.	Colville, Wa	1950	USA	48.53333	-117.9	N	0
Hypericum	Tisdale, E.	Salmon Riv	1951	USA	45.36667	-115.5	N	0
Hypericum	Tisdale, E.	Salmon Riv	1951	USA	45.43333	-115.433	N	0
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	70
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	0
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	70
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	70
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	0
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	0
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	70
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	0
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	70
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	0
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	70
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	0
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	0
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	0
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	70
Tsuga cana	Stearns, F.	Five popula	1953	USA	41.9	-83.55	N	70
Betula pub	Black, M. W	Southern E	1954	UK	51.33333	########	N	0
Pinus sylve	Sarvas, R.	Helsinki, Fi	1949	Finland	60.16667	24.93333	N	0
Betula pub	Sarvas, R.	Helsinki, Fi	1949	Finland	60.16667	24.93333	N	0

Betula pen	Sarvas, R.	Helsinki, Fi	1949	Finland	60.16667	24.93333	N	0
Betula pub	Sarvas, R.	Helsinki, Fi	1949	Finland	60.16667	24.93333	N	0
Betula pen	Sarvas, R.	Helsinki, Fi	1949	Finland	60.16667	24.93333	N	0
Pinus sylve	Sarvas, R.	Helsinki, Fi	1949	Finland	60.16667	24.93333	N	0
Pinus strob	Baldwin, H.	Hillboro, Ne	1933	USA	43.15	-71.9333	N	112
Pinus strob	Baldwin, H.	Hillboro, Ne	1933	USA	43.15	-71.9333	N	0
Achillea mil	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Elymus ely	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Artemisia tr	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Festuca ida	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Elymus ely	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Festuca ida	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Artemisia tr	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Achillea mil	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Achillea mil	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Artemisia tr	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Festuca ida	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Achillea mil	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Achillea mil	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Festuca ida	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Elymus ely	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Elymus ely	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Artemisia tr	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Elymus ely	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Artemisia tr	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Festuca ida	Richardson	Certified lot	2017	USA	40.41667	-111.85	N	0
Peucedanu	Kolodziejek	Secondary	2016	Poland	50.96667	16.98333	N	150
Pinus cont	Haasis, F.	\Shuswap L	1927	Canada	50.96667	-119.283	N	0
Pinus cont	Haasis, F.	\Shuswap L	1927	Canada	50.96667	-119.283	N	0
Pinus cont	Haasis, F.	\Shuswap L	1927	Canada	50.96667	-119.283	N	0
Pinus cont	Haasis, F.	\Shuswap L	1927	Canada	50.96667	-119.283	N	0
Pinus cont	Haasis, F.	\Shuswap L	1927	Canada	50.96667	-119.283	N	0
Pinus cont	Haasis, F.	\Shuswap L	1927	Canada	50.96667	-119.283	N	0
Pinus cont	Haasis, F.	\Shuswap L	1927	Canada	50.96667	-119.283	N	0
Pinus cont	Haasis, F.	\Mount Ida,	1927	Canada	50.63333	-119.3	N	0
Pinus cont	Haasis, F.	\Mount Ida,	1927	Canada	50.63333	-119.3	N	0
Pinus cont	Haasis, F.	\Mount Ida,	1927	Canada	50.63333	-119.3	N	0
Pinus cont	Haasis, F.	\Mount Ida,	1927	Canada	50.63333	-119.3	N	0
Pinus cont	Haasis, F.	\Mount Ida,	1927	Canada	50.63333	-119.3	N	0
Pinus cont	Haasis, F.	\Mount Ida,	1927	Canada	50.63333	-119.3	N	0
Pinus cont	Haasis, F.	\Mount Ida,	1927	Canada	50.63333	-119.3	N	0
Pinus cont	Haasis, F.	\Highland V	1927	Canada	50.56667	-121.133	N	0
Pinus cont	Haasis, F.	\Highland V	1927	Canada	50.56667	-121.133	N	0
Pinus cont	Haasis, F.	\Highland V	1927	Canada	50.56667	-121.133	N	0
Pinus cont	Haasis, F.	\Highland V	1927	Canada	50.56667	-121.133	N	0
Pinus cont	Haasis, F.	\Highland V	1927	Canada	50.56667	-121.133	N	0
Pinus cont	Haasis, F.	\Highland V	1927	Canada	50.56667	-121.133	N	0
Pinus cont	Haasis, F.	\Highland V	1927	Canada	50.56667	-121.133	N	0
Pinus cont	Haasis, F.	\Long Lake,	1927	Canada	49.2	-124.017	N	0
Pinus cont	Haasis, F.	\Long Lake,	1927	Canada	49.2	-124.017	N	0
Pinus cont	Haasis, F.	\Long Lake,	1927	Canada	49.2	-124.017	N	0
Pinus cont	Haasis, F.	\Long Lake,	1927	Canada	49.2	-124.017	N	0
Pinus cont	Haasis, F.	\Long Lake,	1927	Canada	49.2	-124.017	N	0
Pinus cont	Haasis, F.	\Long Lake,	1927	Canada	49.2	-124.017	N	0
Pinus cont	Haasis, F.	\Long Lake,	1927	Canada	49.2	-124.017	N	0
Pinus cont	Haasis, F.	\Barnes Cre	1927	Canada	50.68333	-121.233	N	0

Pinus contc	Haasis, F. \	Barnes Cre	1927	Canada	50.68333	-121.233	N 0
Pinus contc	Haasis, F. \	Barnes Cre	1927	Canada	50.68333	-121.233	N 0
Pinus contc	Haasis, F. \	Barnes Cre	1927	Canada	50.68333	-121.233	N 0
Pinus contc	Haasis, F. \	Upper Hat (	1927	Canada	50.81667	-121.567	N 0
Pinus contc	Haasis, F. \	Upper Hat (	1927	Canada	50.81667	-121.567	N 0
Pinus contc	Haasis, F. \	Upper Hat (	1927	Canada	50.81667	-121.567	N 0
Pinus contc	Haasis, F. \	Upper Hat (	1927	Canada	50.81667	-121.567	N 0
Betula lenta	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8833	N 70
Betula lenta	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8833	N 0
Betula alleg	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8667	N 0
Betula papy	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8667	N 0
Betula alleg	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8667	N 0
Betula alleg	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8667	N 0
Betula lenta	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8833	N 0
Betula lenta	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8833	N 0
Betula papy	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8667	N 0
Betula lenta	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8833	N 70
Betula lenta	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8833	N 70
Betula lenta	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8833	N 0
Betula lenta	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8833	N 70
Betula alleg	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8667	N 0
Betula papy	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8667	N 0
Betula lenta	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8833	N 0
Betula alleg	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8667	N 0
Betula lenta	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8833	N 70
Betula papy	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8667	N 0
Betula papy	Joseph, H.	Boyce Thor	1926	USA	40.96667	-73.8667	N 0
Cornus flori	Davis, O. H	Hudson Riv	1925	USA	40.93333	-73.9	N 0
Cornus flori	Davis, O. H	Hudson Riv	1925	USA	40.93333	-73.9	N 0
Cornus flori	Davis, O. H	Hudson Riv	1925	USA	40.93333	-73.9	N 0
Cornus flori	Davis, O. H	Hudson Riv	1925	USA	40.93333	-73.9	N 0
Maianthem	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Solanum di	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Achillea mil	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Rhamnus c	Mitchell, E.	Dutchess C	1924	USA	41.75	-73.7333	N 0
Dioscorea \	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	Y 0
Anaphalis r	Mitchell, E.	Dutchess C	1924	USA	41.75	-73.7333	N 0
Dioscorea \	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Rhus copal	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Viburnum p	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Rhus copal	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	Y 0
Rhamnus c	Mitchell, E.	Dutchess C	1924	USA	41.75	-73.7333	N 0
Anaphalis r	Mitchell, E.	Dutchess C	1924	USA	41.75	-73.7333	N 0
Rhus copal	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	Y 0
Viburnum a	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Viburnum a	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Maianthem	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Viburnum p	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Polygonatu	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Dioscorea \	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Rhus copal	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Polygonatu	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Dioscorea \	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	Y 0
Maianthem	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Achillea mil	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0
Maianthem	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N 0

Solanum d	Mitchell, E.	Dutchess C	1923	USA	41.75	-73.7333	N	0
Ilex opaca	Ives, S. A.	North Carol	1920	USA	35.61667	-79.1833	N	0
Ilex opaca	Ives, S. A.	North Carol	1920	USA	35.61667	-79.1833	Y	0
Ilex opaca	Ives, S. A.	North Carol	1920	USA	35.61667	-79.1833	Y	0
Ilex opaca	Ives, S. A.	North Carol	1920	USA	35.61667	-79.1833	N	0
Peucedanu	Kolodziejek	Secondary	2016	Poland	50.96667	16.98333	N	150
Acer pictur	Zhang, M.,	Estaci&#65533;n E	2011	China	41.85	124.9	N	0
Acer pictur	Zhang, M.,	Estaci&#65533;n E	2011	China	41.85	124.9	N	0
Fraxinus m	Zhang, M.,	Estaci&#65533;n E	2011	China	41.85	124.9	N	0
Fraxinus m	Zhang, M.,	Estaci&#65533;n E	2011	China	41.85	124.9	N	0
Phellodend	Zhang, M.,	Estaci&#65533;n E	2011	China	41.85	124.9	N	0
Pinus korai	Zhang, M.,	Estaci&#65533;n E	2011	China	41.85	124.9	N	0
Phellodend	Zhang, M.,	Estaci&#65533;n E	2011	China	41.85	124.9	N	0
Pinus korai	Zhang, M.,	Estaci&#65533;n E	2011	China	41.85	124.9	N	0
Ribes triste	Voronkova,	Bystrinsky,	2010	Russia	55.61667	158.25	N	124
Lycopus eu	Babenko, L	All-Russian	2015	Russia	55.75	37.58333	N	0
Rhododenc	Seong, C. H	Mt. Goryeo	2013	South Kore	37.73333	126.4333	N	0
Rhododenc	Seong, C. H	Mt. Goryeo	2013	South Kore	37.73333	126.4333	N	0
Rhododenc	Seong, C. H	Mt. Goryeo	2013	South Kore	37.73333	126.4333	N	0
Rhododenc	Seong, C. H	Mt. Goryeo	2013	South Kore	37.73333	126.4333	N	0
Rhododenc	Seong, C. H	Mt. Goryeo	2013	South Kore	37.73333	126.4333	N	0
Rhododenc	Seong, C. H	Mt. Goryeo	2013	South Kore	37.73333	126.4333	N	0
Hydrangea	Lee, S. Y.,	Hantaek, Y	2006	South Kore	37.08333	127.4	N	0
Hydrangea	Lee, S. Y.,	Hantaek, Y	2006	South Kore	37.08333	127.4	N	0
Hydrangea	Lee, S. Y.,	Hantaek, Y	2006	South Kore	37.08333	127.4	N	0
Hydrangea	Lee, S. Y.,	Hantaek, Y	2006	South Kore	37.08333	127.4	N	0
Hydrangea	Lee, S. Y.,	Hantaek, Y	2006	South Kore	37.08333	127.4	N	0
Hydrangea	Lee, S. Y.,	Hantaek, Y	2006	South Kore	37.08333	127.4	N	0
Hydrangea	Lee, S. Y.,	Hantaek, Y	2006	South Kore	37.08333	127.4	N	0
Hydrangea	Lee, S. Y.,	Hantaek, Y	2006	South Kore	37.08333	127.4	N	0
Symphyotri	Kim, J. S.,	Cheongwor	2014	South Kore	36.61667	127.45	N	0
Symphyotri	Kim, J. S.,	Cheongwor	2014	South Kore	36.61667	127.45	N	0
Symphyotri	Kim, J. S.,	Cheongwor	2014	South Kore	36.61667	127.45	N	0
Symphyotri	Kim, J. S.,	Cheongwor	2014	South Kore	36.61667	127.45	N	0
Symphyotri	Kim, J. S.,	Cheongwor	2014	South Kore	36.61667	127.45	N	0
Symphyotri	Kim, J. S.,	Cheongwor	2014	South Kore	36.61667	127.45	N	0
Symphyotri	Kim, J. S.,	Cheongwor	2014	South Kore	36.61667	127.45	N	0
Symphyotri	Kim, J. S.,	Cheongwor	2014	South Kore	36.61667	127.45	N	0
Zanthoxylu	Ahn, S.-Y.,	Jirisan Fue	2013	South Kore	35.33333	127.7167	N	240
Zanthoxylu	Ahn, S.-Y.,	Jirisan Fue	2013	South Kore	35.33333	127.7167	Y	240
Zanthoxylu	Ahn, S.-Y.,	Jirisan Fue	2013	South Kore	35.33333	127.7167	N	240
Zanthoxylu	Ahn, S.-Y.,	Jirisan Fue	2013	South Kore	35.33333	127.7167	N	240
Zanthoxylu	Ahn, S.-Y.,	Jirisan Fue	2013	South Kore	35.33333	127.7167	Y	240
Zanthoxylu	Ahn, S.-Y.,	Jirisan Fue	2013	South Kore	35.33333	127.7167	Y	240
Rhododenc	Lee, J. H.,	Korea Fore	2013	South Kore	36.96667	127.9167	N	0
Rhododenc	Lee, J. H.,	Korea Fore	2013	South Kore	36.96667	127.9167	N	0
Pinus pumi	Lim, H.-I. K	Daecheong	2014	South Kore	38.11667	128.45	N	42
Pinus pumi	Lim, H.-I. K	Daecheong	2014	South Kore	38.11667	128.45	N	0
Lespedeza	Ibyeongtae	Departmen	2003	South Kore	36.4	128	N	0
Robinia ps	Jastrz?bow	Radomicko	2013	Poland	52.13333	14.91667	Y	0
Robinia ps	Jastrz?bow	Radomicko	2013	Poland	52.13333	14.91667	N	0
Ligularia fis	Yoon, J.-H.	Yanggu, Ga	2013	South Kore	38.15	127.9833	N	0
Ligularia fis	Yoon, J.-H.	Yanggu, Ga	2013	South Kore	38.15	127.9833	N	0
Ligularia fis	Yoon, J.-H.	Yanggu, Ga	2013	South Kore	38.15	127.9833	N	0
Ligularia fis	Yoon, J.-H.	Yanggu, Ga	2013	South Kore	38.15	127.9833	N	0
Pimpinella	Kim, J. J., e	Yeongwol,	2013	South Kore	37.18333	128.5	N	0

Pimpinella l	Kim, J. J., ε	Yeongwol,	2013	South Kore	37.18333	128.5	N 0
Pimpinella l	Kim, J. J., ε	Yeongwol,	2013	South Kore	37.18333	128.5	N 40
Pimpinella l	Kim, J. J., ε	Yeongwol,	2013	South Kore	37.18333	128.5	N 0
Pimpinella l	Kim, J. J., ε	Yeongwol,	2013	South Kore	37.18333	128.5	N 0
Pimpinella l	Kim, J. J., ε	Yeongwol,	2013	South Kore	37.18333	128.5	N 0
Pimpinella l	Kim, J. J., ε	Yeongwol,	2013	South Kore	37.18333	128.5	N 0
Lespedeza	Kang, H.-K	Chungnam	2013	South Kore	36.51667	126.9333	N 0
Lespedeza	Kang, H.-K	Chungnam	2013	South Kore	36.51667	126.9333	N 0
Lespedeza	Kang, H.-K	Chungnam	2013	South Kore	36.51667	126.9333	N 0
Lespedeza	Kang, H.-K	Chungnam	2013	South Kore	36.51667	126.9333	N 0
Miscanthus	Kang, H.-K	Chungchec	2015	South Kore	36.65	126.9	N 0
Phragmites	Kang, H.-K	Chungchec	2015	South Kore	36.65	126.9	N 0
Phragmites	Kang, H.-K	Chungchec	2015	South Kore	36.65	126.9	N 0
Miscanthus	Kang, H.-K	Chungchec	2015	South Kore	36.65	126.9	N 0
Miscanthus	Kang, H.-K	Chungchec	2015	South Kore	36.65	126.9	N 0
Miscanthus	Kang, H.-K	Chungchec	2015	South Kore	36.65	126.9	N 0
Phragmites	Kang, H.-K	Chungchec	2015	South Kore	36.65	126.9	N 0
Phragmites	Kang, H.-K	Chungchec	2015	South Kore	36.65	126.9	N 0
Miscanthus	Kang, H., e	South Kore	2011	South Kore	36.41667	127.8833	N 0
Robinia pse	Kim, r., et a	South Kore	2005	South Kore	36.41667	127.9	N 0
Lespedeza	Kim, r., et a	South Kore	2005	South Kore	36.41667	127.9	N 0
Lespedeza	Kang, H., e	South Kore	2011	South Kore	36.41667	127.8833	N 0
Pinus dens	Kim, r., et a	South Kore	2005	South Kore	36.41667	127.9	N 0
Lespedeza	Kang, H., e	South Kore	2011	South Kore	36.41667	127.8833	Y 0
Rhododenc	Kang, S.-Y.	Daejeon, S	2002	South Kore	36.35	127.3833	N 0
Rhododenc	Kang, S.-Y.	Daejeon, S	2002	South Kore	36.35	127.3833	N 0
Lespedeza	Young, A. T	Dankook U	2009	South Kore	37.31667	127.1167	N 0
Taraxacum	Lee, I.-J. (2	Hayang-eu	2012	South Kore	35.9	128.7833	N 0
Hydrangea	Cho, J. S.,	Jeju, South	2011	South Kore	33.38333	126.5667	N 0
Hydrangea	Cho, J. S.,	Jeju, South	2011	South Kore	33.38333	126.5667	N 0
Hydrangea	Cho, J. S.,	Jeju, South	2011	South Kore	33.38333	126.5667	N 0
Hydrangea	Cho, J. S.,	Jeju, South	2011	South Kore	33.38333	126.5667	N 0
Hydrangea	Cho, J. S.,	Jeju, South	2011	South Kore	33.38333	126.5667	N 0
Miscanthus	Ijongseok a	Jeju, South	2006	South Kore	33.38333	126.5667	N 0
Hydrangea	Cho, J. S.,	Jeju, South	2011	South Kore	33.38333	126.5667	N 0
Hydrangea	Cho, J. S.,	Jeju, South	2011	South Kore	33.38333	126.5667	N 0
Hydrangea	Cho, J. S.,	Jeju, South	2011	South Kore	33.38333	126.5667	N 0
Robinia pse	Jastrz?bow	Gestowice,	2013	Poland	52.15	14.9	Y 0
Robinia pse	Jastrz?bow	Gestowice,	2013	Poland	52.15	14.9	N 0
Robinia pse	Jastrz?bow	Rudnica, M	2013	Poland	51.85	14.18333	Y 0
Robinia pse	Jastrz?bow	Rudnica, M	2013	Poland	51.85	14.18333	N 0
Microstegiu	Huebner, C	2005 collec	2005	USA	39.65	-79.7833	N 0
Microstegiu	Huebner, C	2008 collec	2008	USA	39.65	-79.7833	N 0
Microstegiu	Huebner, C	2008 collec	2008	USA	39.65	-79.7833	N 0
Calluna vul	Henning, K	Oranienbau	2012	Germany	51.76667	12.35	N 56
Calluna vul	Henning, K	Oranienbau	2012	Germany	51.76667	12.35	N 56
Bromus tec	Rawlins, J.	Spanish Fo	2002	USA	40.1	-111.65	N 0
Bromus tec	Rawlins, J.	Spanish Fo	2002	USA	40.1	-111.65	N 0
Bromus tec	Hawkins, K	Spanish Fo	2011	USA	40.1	-111.633	N 0
Bromus tec	Rawlins, J.	Spanish Fo	2002	USA	40.1	-111.65	N 0
Bromus tec	Rawlins, J.	Spanish Fo	2002	USA	40.1	-111.65	N 0
Bromus tec	Rawlins, J.	Spanish Fo	2002	USA	40.1	-111.65	N 0
Bromus tec	Rawlins, J.	Spanish Fo	2002	USA	40.1	-111.65	N 0
Bromus tec	Rawlins, J.	Spanish Fo	2002	USA	40.1	-111.65	N 0
Taraxacum	Hale, A. N.	Springfield,	2005	USA	39.15	-84.5167	N 0

Stratificatio	Stratificatio	Light	Photoperio	Alternating	Tdif	Tmax	Tmin	Tmean
None	N	Y	24	N	0	25	25	25
None	N	Y	24	N	0	25	25	25
Cold	Y	Y	12	N	0	25	25	25
Warm	Y	Y	12	N	0	25	25	25
Cold	Y	N	0	Y	10	30	20	25
Cold	Y	N	0	Y	10	30	20	25
Cold	Y	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
None	N	N	0	N	0	5	5	5
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	20	20	20
None	N	N	0	Y	10	20	10	15
None	N	Y	12	Y	10	30	20	25
None	N	Y	12	N	0	5	5	5
None	N	N	0	N	0	10	10	10
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	25	25	25
None	N	Y	12	Y	10	20	10	15
None	N	N	0	N	0	25	25	25
None	N	Y	12	N	0	10	10	10
None	N	Y	12	N	0	20	20	20
None	N	N	0	Y	10	30	20	25
Cold	Y	Y	12	Y	10	25	15	20
None	N	Y	12	N	0	0.9	0.9	0.9
None	N	Y	12	Y	10	25	15	20
Cold	Y	Y	12	Y	10	25	15	20
Cold	Y	Y	12	N	0	0.9	0.9	0.9
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	Y	10	25	15	20
Cold	Y	Y	12	Y	10	25	15	20
None	N	Y	12	Y	10	25	15	20
Cold	Y	Y	12	Y	10	25	15	20
None	N	Y	13	N	0	20	20	20
None	N	Y	13	N	0	25	25	25
None	N	Y	13	N	0	30	30	30
None	N	Y	13	N	0	35	35	35
None	N	Y	13	N	0	10	10	10
None	N	Y	13	N	0	15	15	15
None	N	Y	13	N	0	5	5	5
None	N	Y	13	N	0	20	20	20
None	N	Y	13	N	0	25	25	25
None	N	Y	13	N	0	35	35	35
None	N	Y	13	N	0	15	15	15
None	N	Y	13	N	0	10	10	10
None	N	Y	13	N	0	5	5	5
None	N	Y	13	N	0	30	30	30
None	N	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
None	N	NA	NA	N	0	4	4	4
None	N	Y	8	N	0	22.5	22.5	22.5
None	N	Y	8	N	0	20	20	20
None	N	Y	12	N	0	26	26	26
Cold	Y	Y	12	N	0	26	26	26
None	N	NA	NA	N	0	4	4	4
None	N	Y	12	N	0	21	21	21

None	N	NA	NA	N	0	4	4	4
None	N	NA	NA	N	0	4	4	4
None	N	NA	NA	N	0	4	4	4
None	N	NA	NA	N	0	23	23	23
None	N	NA	NA	N	0	4	4	4
None	N	NA	NA	N	0	4	4	4
None	N	NA	NA	N	0	4	4	4
Cold	Y	N	0	N	0	3	3	3
Cold	Y	N	0	N	0	-1	-1	-1
Cold	Y	N	0	N	0	13	13	13
None	N	NA	NA	N	0	4	4	4
Cold	Y	N	0	N	0	7	7	7
Cold	Y	N	0	N	0	11	11	11
Cold	Y	N	0	N	0	1	1	1
Cold	Y	N	0	N	0	9	9	9
Cold	Y	N	0	N	0	5	5	5
Cold	Y	N	0	N	0	0	0	0
None	N	NA	NA	N	0	4	4	4
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	8	N	0	20	20	20
None	N	Y	14	Y	5	25	20	22.91667
Cold	Y	N	0	N	0	20	20	20
Cold	Y	Y	16	N	0	20	20	20
Cold	Y	Y	16	Y	20	30	10	23.33333
Cold	Y	N	0	N	0	20	20	20
Cold	Y	Y	16	N	0	20	20	20
Cold	Y	N	0	N	0	20	20	20
Cold	Y	N	0	Y	20	30	10	20
Cold	Y	Y	16	Y	20	30	10	23.33333
Cold	Y	N	0	Y	20	30	10	20
Cold	Y	Y	16	Y	20	30	10	23.33333
Cold	Y	Y	16	N	0	20	20	20
Cold	Y	N	0	N	0	20	20	20
Cold	Y	Y	16	N	0	20	20	20
Cold	Y	N	0	Y	20	30	10	20
Cold	Y	Y	16	Y	20	30	10	23.33333
Cold	Y	Y	16	Y	20	30	10	23.33333
Cold	Y	N	0	Y	20	30	10	20
Cold	Y	Y	16	N	0	20	20	20
Cold	Y	N	0	N	0	20	20	20
Cold	Y	N	0	Y	20	30	10	20
Cold	Y	Y	16	N	0	20	20	20
Cold	Y	Y	16	N	0	20	20	20
Cold	Y	Y	16	Y	20	30	10	23.33333
Cold	Y	N	0	N	0	20	20	20
Cold	Y	Y	16	Y	20	30	10	23.33333
Cold	Y	N	0	Y	20	30	10	20
Cold	Y	N	0	N	0	20	20	20
Cold	Y	N	0	Y	20	30	10	20
None	N	Y	14	N	0	20	20	20
None	N	Y	12	N	0	6	6	6
None	N	Y	12	N	0	12	12	12
None	N	Y	12	N	0	18	18	18
None	N	NA	NA	N	0	20	20	20

None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	Y		14	N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
Cold	Y	N		0	N	0	5	5	5
Cold	Y	N		0	N	0	3	3	3
Cold	Y	N		0	N	0	11	11	11
Cold	Y	N		0	N	0	13	13	13
Cold	Y	N		0	N	0	9	9	9
Cold	Y	N		0	N	0	0	0	0
Cold	Y	N		0	N	0	-1	-1	-1
Cold	Y	N		0	N	0	1	1	1
Cold	Y	N		0	N	0	7	7	7
Cold	Y	NA	NA		Y	22	32	10	21
Cold	Y	N		0	N	0	9	9	9
Cold	Y	NA	NA		Y	5	20	15	17.5
Cold	Y	NA	NA		Y	9	24	15	19.5
Cold	Y	NA	NA		Y	17	32	15	23.5
Cold	Y	NA	NA		Y	12	32	20	26
Cold	Y	N		0	N	0	-1	-1	-1
Cold	Y	NA	NA		N	0	32	32	32
Cold	Y	N		0	N	0	11	11	11
Cold	Y	N		0	N	0	0	0	0
Cold	Y	NA	NA		N	0	24	24	24
Cold	Y	NA	NA		Y	10	20	10	15
Cold	Y	N		0	N	0	5	5	5
Cold	Y	N		0	N	0	3	3	3
Cold	Y	NA	NA		Y	12	27	15	21
Cold	Y	NA	NA		Y	17	27	10	18.5
Cold	Y	NA	NA		N	0	20	20	20
Cold	Y	N		0	N	0	13	13	13
Cold	Y	NA	NA		Y	7	27	20	23.5
Cold	Y	NA	NA		N	0	27	27	27
Cold	Y	N		0	N	0	7	7	7
Cold	Y	N		0	N	0	1	1	1
Cold	Y	NA	NA		N	0	15	15	15
Cold	Y	NA	NA		N	0	10	10	10
Cold	Y	N		0	N	0	13	13	13
Cold	Y	N		0	N	0	1	1	1
Cold	Y	N		0	N	0	0	0	0
Cold	Y	N		0	N	0	5	5	5
Cold	Y	N		0	N	0	-1	-1	-1
Cold	Y	N		0	N	0	3	3	3
Cold	Y	N		0	N	0	11	11	11
Cold	Y	N		0	N	0	7	7	7

Cold	Y	N		0	N	0	9	9	9
Cold	Y	N		0	N	0	-1	-1	-1
Cold	Y	N		0	N	0	3	3	3
Cold	Y	N		0	N	0	1	1	1
Cold	Y	N		0	N	0	7	7	7
Cold	Y	N		0	N	0	11	11	11
Cold	Y	N		0	N	0	5	5	5
Cold	Y	N		0	N	0	0	0	0
Cold	Y	N		0	N	0	13	13	13
Cold	Y	N		0	N	0	9	9	9
None	N	Y		14	N	0	20	20	20
Cold	Y	N		0	N	0	5	5	5
Cold	Y	N		0	N	0	-1	-1	-1
Cold	Y	N		0	N	0	11	11	11
Cold	Y	N		0	N	0	0	0	0
Cold	Y	N		0	N	0	1	1	1
Cold	Y	N		0	N	0	9	9	9
Cold	Y	N		0	N	0	7	7	7
Cold	Y	N		0	N	0	13	13	13
Cold	Y	N		0	N	0	3	3	3
Cold	Y	N		0	N	0	7	7	7
Cold	Y	N		0	N	0	13	13	13
Cold	Y	N		0	N	0	-1	-1	-1
Cold	Y	N		0	N	0	3	3	3
Cold	Y	N		0	N	0	0	0	0
Cold	Y	N		0	N	0	5	5	5
Cold	Y	N		0	N	0	9	9	9
Cold	Y	N		0	N	0	11	11	11
Cold	Y	N		0	N	0	1	1	1
None	N	Y		12	N	0	20	20	20
None	N	NA	NA		N	0	23.5	23.5	23.5
Cold	Y	NA	NA		N	0	23.5	23.5	23.5
Cold	Y	NA	NA		N	0	23.5	23.5	23.5
None	N	NA	NA		N	0	23.5	23.5	23.5
Cold	Y	NA	NA		N	0	23.5	23.5	23.5
None	N	NA	NA		N	0	23.5	23.5	23.5
None	N	NA	NA		N	0	22.5	22.5	22.5
None	N	Y		15	N	0	25	25	25
None	N	Y		15	N	0	15	15	15
None	N	Y		15	N	0	30	30	30
None	N	Y		15	N	0	20	20	20
None	N	Y		14	N	0	20	20	20
None	N	Y		14	Y	10	25	15	20.83333
Cold	Y	Y		14	Y	10	25	15	20.83333
Cold	Y	Y		14	Y	10	25	15	20.83333
Cold	Y	Y		14	Y	10	25	15	20.83333
Cold	Y	Y		14	Y	10	25	15	20.83333
None	N	Y		14	Y	10	25	15	20.83333
None	N	Y		12	N	0	20.5	20.5	20.5
None	N	Y		12	N	0	20.5	20.5	20.5
None	N	Y		8	N	0	16	16	16
Cold	Y	Y		15	Y	9	24	15	20.625
None	N	Y		8	N	0	8	8	8
Cold	Y	Y		15	Y	9	24	15	20.625
Cold	Y	Y		15	Y	9	24	15	20.625
None	N	Y		8	N	0	20	20	20

None	N	Y		8	N	0	20	20	20
Cold	Y	Y		15	Y	9	24	15	20.625
None	N	Y		8	N	0	4	4	4
None	N	Y		8	N	0	20	20	20
None	N	Y		8	N	0	28	28	28
Cold	Y	Y		15	Y	9	24	15	20.625
None	N	Y		8	N	0	12	12	12
None	N	Y		8	N	0	15	15	15
None	N	Y		8	N	0	24	24	24
Cold	Y	Y		16	Y	10	30	20	26.66667
None	N	Y		16	Y	10	30	20	26.66667
None	N	Y		12	Y	10	20	10	15
Cold	Y	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	20	10	15
Cold	Y	Y		12	Y	10	20	10	15
Cold	Y	Y		14	Y	15	25	10	18.75
None	N	Y		14	Y	15	25	10	18.75
None	N	Y		18	Y	10	15	5	12.5
None	N	Y		16	N	0	22	22	22
None	N	Y		14	Y	14	24	10	18.16667
None	N	Y		14	N	0	20	20	20
None	N	Y		14	Y	14	24	10	18.16667
None	N	N		0	N	0	20	20	20
None	N	Y		12	Y	10	30	20	25
None	N	NA	NA		N	0	25	25	25
Cold	Y	NA	NA		N	0	25	25	25
None	N	Y		8	Y	5	25	20	21.66667
Cold	Y	Y		8	Y	5	25	20	21.66667
None	N	Y		12	N	0	25	25	25
None	N	Y		12	N	0	26	26	26
Cold	Y	Y		12	N	0	26	26	26
None	N	Y		12	N	0	26	26	26
None	N	Y		12	N	0	20	20	20
Cold	Y	Y		12	N	0	26	26	26
None	N	Y		12	N	0	20	20	20
Cold	Y	Y		12	N	0	13	13	13
None	N	Y		12	N	0	10	10	10
None	N	Y		12	N	0	35	35	35
Cold	Y	Y		12	N	0	10	10	10
Cold	Y	Y		12	N	0	35	35	35
None	N	Y		12	N	0	30	30	30
None	N	Y		12	N	0	25	25	25
None	N	Y		12	N	0	17	17	17
None	N	Y		12	N	0	13	13	13
Cold	Y	Y		12	N	0	17	17	17
Cold	Y	Y		12	N	0	30	30	30
Cold	Y	Y		12	N	0	25	25	25
Cold	Y	Y		12	N	0	20	20	20
None	N	Y		12	N	0	20	20	20
Cold	Y	Y		12	N	0	10	10	10
None	N	Y		12	N	0	13	13	13
None	N	Y		12	N	0	10	10	10

Cold	Y	Y	12	N	0	25	25	25
None	N	Y	12	N	0	20	20	20
None	N	Y	12	N	0	25	25	25
Cold	Y	Y	12	N	0	35	35	35
Cold	Y	Y	12	N	0	20	20	20
None	N	Y	12	N	0	35	35	35
None	N	Y	12	N	0	30	30	30
Cold	Y	Y	12	N	0	13	13	13
Cold	Y	Y	12	N	0	17	17	17
None	N	Y	12	N	0	17	17	17
Cold	Y	Y	12	N	0	30	30	30
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	5	5	5
None	N	Y	12	N	0	25	25	25
None	N	Y	12	N	0	20	20	20
None	N	Y	12	N	0	5	5	5
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	10	10	10
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	10	10	10
None	N	N	0	N	0	20	20	20
None	N	Y	12	N	0	10	10	10
None	N	Y	12	N	0	20	20	20
Cold	Y	Y	12	N	0	13	13	13
Cold	Y	Y	12	N	0	30	30	30
None	N	Y	12	N	0	17	17	17
Cold	Y	Y	12	N	0	35	35	35
None	N	Y	12	N	0	25	25	25
Cold	Y	Y	12	N	0	17	17	17
Cold	Y	Y	12	N	0	10	10	10
None	N	Y	12	N	0	30	30	30
None	N	Y	12	N	0	35	35	35
Cold	Y	Y	12	N	0	20	20	20
Cold	Y	Y	12	N	0	25	25	25
None	N	Y	12	N	0	13	13	13
Cold	Y	Y	12	N	0	20	20	20
Cold	Y	Y	12	N	0	30	30	30
Cold	Y	Y	12	N	0	17	17	17
None	N	Y	12	N	0	30	30	30
Cold	Y	Y	12	N	0	10	10	10
Cold	Y	Y	12	N	0	35	35	35
None	N	Y	12	N	0	17	17	17
None	N	Y	12	N	0	25	25	25
None	N	Y	12	N	0	13	13	13
Cold	Y	Y	12	N	0	13	13	13
Cold	Y	Y	12	N	0	25	25	25
None	N	Y	12	N	0	35	35	35
None	N	Y	12	N	0	10	10	10
None	N	Y	12	N	0	20	20	20
None	N	Y	12	N	0	35	35	35
Cold	Y	Y	12	N	0	13	13	13
Cold	Y	Y	12	N	0	35	35	35
None	N	Y	12	N	0	20	20	20
None	N	Y	12	N	0	30	30	30
Cold	Y	Y	12	N	0	17	17	17
Cold	Y	Y	12	N	0	10	10	10

None	N	Y		12	N	0	25	25	25
None	N	Y		12	N	0	10	10	10
Cold	Y	Y		12	N	0	25	25	25
Cold	Y	Y		12	N	0	20	20	20
None	N	Y		12	N	0	13	13	13
None	N	Y		12	N	0	17	17	17
Cold	Y	Y		12	N	0	30	30	30
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	35	35	35
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	30	30	30
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	30	30	30
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	35	35	35
None	N	Y		14	N	0	17	17	17
None	N	Y		14	N	0	26	26	26
None	N	Y		14	N	0	23	23	23
None	N	Y		14	N	0	20	20	20
None	N	N		0	Y	10	30	20	25
None	N	N		0	Y	10	30	20	25
Cold	Y	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	6	21	15	17
None	N	N		0	Y	10	30	20	25
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	Y		8	Y	10	30	20	23.33333
Cold	Y	N		0	Y	10	30	20	25
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	N		0	Y	10	30	20	25
None	N	N		0	Y	10	30	20	25
None	N	N		0	Y	10	30	20	25
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	Y		16	N	0	23	23	23
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	N	0	3	3	3
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	Y		8	Y	10	30	20	23.33333

Cold	Y	N		0	Y	10	30	20	25
None	N	N		0	Y	10	30	20	25
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	Y		24	N	0	20	20	20
Cold	Y	Y		8	Y	10	30	20	23.33333
Cold	Y	N		0	Y	10	30	20	25
None	N	Y		24	N	0	20	20	20
Cold	Y	N		0	Y	10	30	20	25
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	Y		8	Y	6	21	15	17
Cold	Y	Y		8	Y	6	21	15	17
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	N		0	N	0	20	20	20
None	N	N		0	Y	10	30	20	25
None	N	N		0	Y	10	30	20	25
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	N		0	N	0	20	20	20
None	N	N		0	Y	10	30	20	25
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	6	21	15	17
None	N	N		0	Y	10	30	20	25
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	25	25	25
Cold	Y	Y		8	N	0	25	25	25
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	25	25	25
Warm	Y	Y		12	Y	20	25	5	15
Warm	Y	Y		12	N	0	20	20	20
Warm	Y	Y		12	N	0	5	5	5
Warm	Y	Y		12	N	0	15	15	15
Warm	Y	Y		12	N	0	25	25	25
Warm	Y	Y		12	N	0	10	10	10
None	N	N		0	N	0	30	30	30
None	N	N		0	N	0	20	20	20
None	N	N		0	Y	10	30	20	25
Cold	Y	Y		12	N	0	20	20	20
None	N	N		0	N	0	5	5	5
None	N	N		0	Y	10	25	15	20
None	N	N		0	Y	10	20	10	15
None	N	N		0	Y	10	15	5	10
Cold	Y	N		0	N	0	20	20	20
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	15	15	15
Warm	Y	Y		14	N	0	15	15	15
Cold	Y	Y		14	N	0	15	15	15
Warm	Y	Y		14	N	0	15	15	15

	Cold	Y	Y	14	N	0	15	15	15
	Cold	Y	Y	14	N	0	15	15	15
	Warm	Y	Y	14	N	0	15	15	15
	Cold	Y	Y	14	N	0	15	15	15
	Warm	Y	Y	14	N	0	15	15	15
	None	N	N	0	N	0	15	15	15
	None	N	N	0	N	0	18	18	18
	None	N	N	0	N	0	12	12	12
	None	N	N	0	N	0	18	18	18
	None	N	N	0	N	0	21	21	21
	None	N	N	0	N	0	9	9	9
	Cold	Y	Y	12	N	0	27	27	27
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	None	N	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333
	Cold	Y	Y	14	Y	10	20	10	15.83333

Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333
None	N	Y	14	Y	10	20	10	15.83333
Cold	Y	Y	14	Y	10	20	10	15.83333

None	N	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	20	10	15.83333
W+C	Y	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	20	10	15
W+C	Y	NA	NA		N	0	20	20	20
None	N	Y		12	Y	10	20	10	15
W+C	Y	Y		12	Y	10	20	10	15
Cold	Y	Y		8	N	0	15	15	15
None	N	Y		8	N	0	15	15	15
Cold	Y	Y		8	N	0	15	15	15
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		12	N	0	21	21	21
None	N	Y		16	N	0	20	20	20
Cold	Y	Y		16	N	0	20	20	20
None	N	Y		16	N	0	20	20	20
Cold	Y	Y		16	N	0	20	20	20
Cold	Y	Y		16	N	0	20	20	20
None	N	Y		16	N	0	20	20	20
None	N	Y		18	N	0	24	24	24
None	N	Y		12	Y	13	25	12	18.5
None	N	Y		12	Y	13	25	12	18.5
None	N	Y		12	Y	13	25	12	18.5
None	N	N		0	Y	11	15	4	9.5
None	N	Y		12	Y	13	20	7	13.5
W+C	Y	N		0	Y	15	25	10	17.5
C+W	Y	Y		12	Y	11	15	4	9.5
C+W	Y	Y		12	N	0	5	5	5
None	N	N		0	Y	13	20	7	13.5
C+W	Y	N		0	N	0	5	5	5
W+C	Y	N		0	Y	13	20	7	13.5
None	N	Y		12	Y	11	15	4	9.5
W+C	Y	Y		12	Y	15	25	10	17.5

None	N	N	0	Y	15	25	10	17.5
C+W	Y	Y	12	Y	13	20	7	13.5
W+C	Y	Y	12	Y	13	20	7	13.5
W+C	Y	Y	12	N	0	5	5	5
W+C	Y	Y	12	Y	11	15	4	9.5
W+C	Y	N	0	Y	11	15	4	9.5
None	N	N	0	N	0	5	5	5
C+W	Y	N	0	Y	11	15	4	9.5
None	N	Y	12	Y	15	25	10	17.5
W+C	Y	N	0	N	0	5	5	5
C+W	Y	N	0	Y	13	20	7	13.5
None	N	Y	12	N	0	5	5	5
C+W	Y	Y	12	Y	15	25	10	17.5
C+W	Y	N	0	Y	15	25	10	17.5
None	N	Y	8	Y	5	25	20	21.66667
Cold	Y	Y	8	Y	5	25	20	21.66667
Cold	Y	Y	8	Y	5	25	20	21.66667
None	N	Y	8	Y	5	25	20	21.66667
None	N	Y	8	Y	5	25	20	21.66667
Cold	Y	Y	8	Y	5	25	20	21.66667
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	N	0	25	25	25
None	N	Y	12	N	0	5	5	5
None	N	Y	12	Y	10	15	5	10
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	N	0	15	15	15
None	N	Y	12	Y	10	30	20	25
Cold	Y	Y	12	Y	10	15	5	10
Cold	Y	Y	12	Y	10	20	10	15
Cold	Y	Y	12	Y	10	20	10	15
Cold	Y	Y	12	Y	10	15	5	10
Cold	Y	Y	12	Y	10	15	5	10
Cold	Y	Y	12	Y	10	20	10	15
Cold	Y	Y	12	Y	10	20	10	15
Cold	Y	Y	12	Y	10	15	5	10
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	16	N	0	27	27	27
None	N	Y	16	N	0	24	24	24
None	N	Y	16	N	0	24	24	24
None	N	Y	16	N	0	27	27	27
None	N	Y	16	N	0	27	27	27
Cold	Y	Y	16	N	0	24	24	24
None	N	Y	16	N	0	24	24	24
None	N	Y	16	N	0	27	27	27
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	16	N	0	22	22	22
None	N	Y	12	Y	5	15	10	12.5
None	N	Y	12	Y	10	30	20	25

None	N	Y		12	Y	5	15	10	12.5
None	N	Y		12	Y	10	30	20	25
None	N	Y		12	Y	5	15	10	12.5
None	N	Y		12	Y	10	30	20	25
None	N	Y		24	N	0	22	22	22
Cold	Y	Y		16	N	0	27	27	27
Cold	Y	Y		16	N	0	24	24	24
None	N	Y		24	N	0	22	22	22
None	N	NA	NA		Y	10	20	10	15
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		Y	10	20	10	15
None	N	NA	NA		Y	10	20	10	15
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		Y	10	20	10	15
None	N	NA	NA		N	0	20	20	20
None	N	N		0	Y	10	15	5	10
None	N	N		0	Y	10	25	15	20
None	N	N		0	Y	10	20	10	15
None	N	N		0	Y	10	15	5	10
None	N	N		0	Y	10	20	10	15
None	N	N		0	Y	10	25	15	20
Cold	Y	Y		16	Y	10	15	5	11.66667
None	N	Y		16	Y	10	15	5	11.66667
Cold	Y	Y		16	Y	10	15	5	11.66667
None	N	Y		16	Y	10	15	5	11.66667
None	N	Y		16	Y	10	15	5	11.66667
Cold	Y	Y		16	Y	10	15	5	11.66667
Cold	Y	Y		16	N	0	27	27	27
None	N	Y		16	N	0	24	24	24
None	N	Y		16	N	0	27	27	27
Cold	Y	Y		16	N	0	24	24	24
None	N	Y		16	Y	10	15	5	11.66667
Cold	Y	Y		16	Y	10	15	5	11.66667
None	N	Y		16	Y	10	15	5	11.66667
Cold	Y	Y		16	Y	10	15	5	11.66667
None	N	Y		16	Y	10	15	5	11.66667
Cold	Y	Y		16	Y	10	15	5	11.66667
None	N	Y		16	Y	10	15	5	11.66667
Cold	Y	Y		16	Y	10	15	5	11.66667
Cold	Y	Y		16	Y	10	25	15	21.66667
None	N	Y		16	Y	10	25	15	21.66667
None	N	Y		16	Y	10	25	15	21.66667
Cold	Y	Y		12	Y	10	20	10	15
Cold	Y	Y		12	Y	10	20	10	15
Cold	Y	Y		12	Y	10	20	10	15
Cold	Y	Y		12	Y	10	20	10	15
W+C	Y	N		0	N	0	15	15	15
Cold	Y	Y		16	N	0	20	20	20
None	N	Y		16	N	0	20	20	20
None	N	Y		8	N	0	5	5	5
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		12	Y	11	15	4	9.5
None	N	N		0	N	0	5	5	5
None	N	N		0	Y	15	25	10	17.5
None	N	Y		12	Y	14	28	14	21

None	N	N	0	Y	14	28	14	21
None	N	Y	12	N	0	5	5	5
None	N	N	0	Y	11	15	4	9.5
None	N	Y	12	Y	14	32	18	25
None	N	N	0	Y	13	20	7	13.5
None	N	N	0	Y	14	32	18	25
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	13	20	7	13.5
Cold	Y	Y	16	N	0	24	24	24
Cold	Y	Y	16	N	0	27	27	27
None	N	N	0	N	0	5	5	5
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	0	0	0
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	10	10	10
None	N	N	0	N	0	25	25	25
Cold	Y	Y	8	Y	17	20	3	8.666667
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	N	0	25	25	25
None	N	Y	14	N	0	20	20	20
None	N	Y	14	N	0	25	25	25
None	N	Y	14	N	0	25	25	25
None	N	Y	14	N	0	20	20	20
None	N	Y	14	N	0	25	25	25
None	N	Y	14	N	0	30	30	30
None	N	Y	14	N	0	25	25	25
None	N	Y	14	N	0	30	30	30
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	10	10	10
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	5	5	5
Cold	Y	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	16	N	0	20	20	20
None	N	Y	16	N	0	20	20	20
None	N	Y	16	N	0	20	20	20
Cold	Y	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	24	N	0	20	20	20
None	N	Y	24	N	0	20	20	20
None	N	Y	24	N	0	20	20	20
Cold	Y	Y	24	N	0	20	20	20
Cold	Y	Y	24	N	0	20	20	20
None	N	Y	24	N	0	20	20	20
None	N	Y	24	N	0	20	20	20
Cold	Y	Y	24	N	0	20	20	20
None	N	Y	24	N	0	20	20	20

Cold	Y	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	20	20	20
Cold	Y	Y		8	N	0	20	20	20
Cold	Y	Y		8	N	0	20	20	20
None	N	NA	NA		N	0	3	3	3
None	N	NA	NA		N	0	3	3	3
None	N	NA	NA		N	0	3	3	3
None	N	NA	NA		N	0	3	3	3
None	N	NA	NA		N	0	3	3	3
None	N	NA	NA		N	0	3	3	3
None	N	Y		16	N	0	25	25	25
None	N	Y		16	N	0	10	10	10
Cold	Y	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
Cold	Y	Y		16	N	0	25	25	25
Cold	Y	Y		16	N	0	20	20	20
Cold	Y	Y		16	N	0	10	10	10
None	N	Y		16	N	0	20	20	20
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	25	15	20
Cold	Y	Y		8	N	0	20	20	20
Cold	Y	Y		8	N	0	15	15	15
Cold	Y	Y		8	Y	20	25	5	11.66667
Cold	Y	Y		8	Y	10	25	15	18.33333
Cold	Y	Y		8	Y	10	15	5	8.333333
Cold	Y	Y		8	N	0	25	25	25
Cold	Y	Y		8	Y	15	20	5	10
Cold	Y	Y		8	N	0	5	5	5
Cold	Y	Y		8	N	0	20	20	20
Cold	Y	Y		8	N	0	20	20	20
Cold	Y	Y		8	Y	20	25	5	11.66667
Cold	Y	Y		8	Y	10	15	5	8.333333
Cold	Y	Y		8	N	0	15	15	15
Cold	Y	Y		8	N	0	25	25	25
Cold	Y	Y		8	N	0	20	20	20
Cold	Y	Y		8	Y	10	25	15	18.33333
Cold	Y	Y		8	Y	15	20	5	10
Cold	Y	Y		8	N	0	5	5	5
Cold	Y	Y		8	Y	20	25	5	11.66667
Cold	Y	Y		8	N	0	25	25	25
Cold	Y	Y		8	N	0	15	15	15
Cold	Y	Y		8	Y	15	20	5	10
Cold	Y	Y		8	Y	10	25	15	18.33333
Cold	Y	Y		8	N	0	20	20	20
Cold	Y	Y		8	Y	10	15	5	8.333333
Cold	Y	Y		8	N	0	5	5	5
Cold	Y	Y		12	Y	10	25	15	20
Cold	Y	Y		12	N	0	5	5	5
Cold	Y	Y		12	Y	10	15	5	10
Cold	Y	Y		12	Y	10	20	10	15
Cold	Y	Y		12	Y	15	30	15	22.5
Cold	Y	Y		12	Y	10	25	15	20
Cold	Y	Y		12	Y	10	20	10	15
Cold	Y	Y		12	N	0	5	5	5
Cold	Y	Y		12	Y	10	15	5	10

Cold	Y	Y		12	Y	15	30	15	22.5
Cold	Y	Y		12	Y	10	20	10	15
Cold	Y	Y		12	Y	10	15	5	10
Cold	Y	Y		12	N	0	5	5	5
Cold	Y	Y		12	Y	10	25	15	20
Cold	Y	Y		12	Y	10	30	20	25
None	N	Y		12	Y	9	15	6	10.5
None	N	Y		12	N	0	30	30	30
Cold	Y	N		0	N	0	20	20	20
Cold	Y	Y		12	N	0	10	10	10
None	N	Y		12	Y	10	20	10	15
None	N	N		0	Y	10	20	10	15
Cold	Y	N		0	Y	9	15	6	10.5
None	N	Y		12	N	0	25	25	25
None	N	Y		12	N	0	20	20	20
None	N	Y		12	N	0	10	10	10
None	N	Y		12	Y	10	25	15	20
None	N	Y		12	Y	-4	25	29	27
None	N	Y		12	Y	5	15	10	12.5
None	N	Y		12	Y	5	30	25	27.5
None	N	N		0	N	0	10	10	10
None	N	Y		12	Y	5	20	15	17.5
None	N	Y		12	Y	20	30	10	20
None	N	N		0	Y	9	15	6	10.5
None	N	Y		12	N	0	15	15	15
None	N	Y		12	Y	10	30	20	25
None	N	Y		12	N	0	20	20	20
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	N	0	10	10	10
Cold	Y	N		0	N	0	10	10	10
None	N	N		0	N	0	20	20	20
Cold	Y	Y		12	Y	10	20	10	15
Cold	Y	N		0	Y	10	20	10	15
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	30	15	22.5
Cold	Y	Y		12	Y	9	15	6	10.5
Cold	Y	Y		12	N	0	20	20	20
Cold	Y	Y		8	Y	9	25	16	19
Cold	Y	Y		16	N	0	15	15	15
Cold	Y	Y		16	N	0	15	15	15
Cold	Y	Y		16	N	0	15	15	15
Cold	Y	Y		8	N	0	20	20	20
Cold	Y	Y		8	N	0	20	20	20
Cold	Y	Y		16	N	0	15	15	15
Cold	Y	Y		16	N	0	15	15	15
Cold	Y	Y		16	N	0	15	15	15
Cold	Y	Y		16	N	0	15	15	15
Cold	Y	Y		16	N	0	15	15	15
Cold	Y	Y		16	N	0	15	15	15
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	35	35	35
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	30	30	30
None	N	NA	NA		N	0	20	20	20

	None	N	NA	NA	N	0	10	10	10
	None	N	NA	NA	N	0	20	20	20
	None	N	NA	NA	N	0	30	30	30
	None	N	NA	NA	N	0	5	5	5
	None	N	NA	NA	N	0	10	10	10
	None	N	NA	NA	N	0	35	35	35
	None	N	NA	NA	N	0	15	15	15
	None	N	NA	NA	N	0	25	25	25
	None	N	NA	NA	N	0	30	30	30
	None	N	NA	NA	N	0	15	15	15
	None	N	NA	NA	N	0	25	25	25
	None	N	NA	NA	N	0	5	5	5
	None	N	NA	NA	N	0	35	35	35
	None	N	NA	NA	N	0	20	20	20
	None	N	NA	NA	N	0	10	10	10
	None	N	NA	NA	N	0	35	35	35
	None	N	NA	NA	N	0	25	25	25
	None	N	NA	NA	N	0	15	15	15
	None	N	NA	NA	N	0	10	10	10
	None	N	NA	NA	N	0	20	20	20
	None	N	NA	NA	N	0	30	30	30
	None	N	NA	NA	N	0	5	5	5
	None	N	NA	NA	Y	10	30	20	25
	Cold	Y	Y	8	Y	5	25	20	21.66667
	None	N	Y	16	Y	7	25	18	22.66667
	None	N	Y	16	Y	7	25	18	22.66667
	None	N	Y	16	Y	7	25	18	22.66667
	None	N	Y	8	Y	5	25	20	21.66667
	Cold	Y	Y	8	Y	5	25	20	21.66667
	Cold	Y	Y	8	Y	5	25	20	21.66667
	Cold	Y	Y	16	N	0	20	20	20
	None	N	Y	8	N	0	25	25	25
	None	N	Y	8	N	0	25	25	25
	None	N	Y	8	N	0	25	25	25
	None	N	Y	24	N	0	12	12	12
	None	N	N	0	N	0	24	24	24
	None	N	Y	24	N	0	18	18	18
	None	N	N	0	N	0	20	20	20
	None	N	Y	24	N	0	30	30	30
	None	N	Y	24	N	0	22	22	22
	None	N	Y	24	N	0	26	26	26
	None	N	N	0	N	0	26	26	26
	None	N	N	0	N	0	30	30	30
	None	N	Y	24	N	0	14	14	14
	None	N	Y	24	N	0	16	16	16
	None	N	Y	12	Y	10	35	25	30
	None	N	Y	24	N	0	28	28	28
	None	N	N	0	N	0	14	14	14
	None	N	N	0	N	0	22	22	22
	None	N	Y	24	N	0	24	24	24
	None	N	N	0	N	0	18	18	18
	None	N	N	0	N	0	12	12	12
	None	N	N	0	N	0	28	28	28
	None	N	Y	12	Y	10	25	15	20
	None	N	N	0	N	0	16	16	16
	None	N	Y	12	Y	10	15	5	10

None	N	Y		24	N	0	20	20	20
None	N	NA	NA		N	0	25	25	25
Cold	Y	NA	NA		N	0	25	25	25
Cold	Y	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	25	25	25
None	N	Y		16	Y	5	25	20	23.33333
None	N	NA	NA		Y	10	30	20	25
None	N	Y		12	N	0	22	22	22
None	N	Y		12	N	0	22	22	22
W+C	Y	Y		16	Y	15	30	15	25
W+C	Y	Y		16	Y	15	30	15	25
None	N	Y		12	Y	6	24	18	21
None	N	Y		12	Y	6	8	2	5
None	N	Y		12	Y	6	24	18	21
None	N	Y		12	Y	5	20	15	17.5
None	N	Y		12	Y	6	12	6	9
None	N	Y		12	Y	5	15	10	12.5
None	N	Y		12	Y	6	12	6	9
None	N	Y		12	Y	5	15	10	12.5
None	N	Y		12	Y	5	20	15	17.5
W+C	Y	Y		16	Y	15	30	15	25
W+C	Y	Y		16	Y	15	30	15	25
W+C	Y	Y		16	Y	15	30	15	25
W+C	Y	Y		16	Y	15	30	15	25
W+C	Y	Y		16	Y	15	30	15	25
W+C	Y	Y		16	Y	15	30	15	25
None	N	N		0	N	0	22	22	22
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
Cold	Y	N		0	N	0	20	20	20
Cold	Y	Y		8	Y	10	25	15	18.33333
None	N	Y		16	N	0	24	24	24
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	NA	NA		Y	10	30	20	25
Cold	Y	Y		12	N	0	22	22	22
None	N	Y		12	Y	8	26	18	22
Cold	Y	Y		12	Y	8	26	18	22
None	N	Y		12	Y	16	30	14	22
None	N	Y		12	N	0	22	22	22
Cold	Y	Y		12	Y	16	30	14	22
None	N	Y		16	N	0	22	22	22
Cold	Y	N		0	Y	10	30	20	25
None	N	N		0	Y	10	30	20	25
None	N	N		0	N	0	3	3	3
None	N	N		0	N	0	3	3	3
None	N	N		0	N	0	3	3	3
W+C	Y	Y		8	N	0	15	15	15
W+C	Y	Y		8	Y	10	15	5	8.333333
None	N	Y		12	N	0	5.3	5.3	5.3
None	N	Y		12	N	0	14.5	14.5	14.5
None	N	Y		12	N	0	26.5	26.5	26.5
None	N	Y		12	N	0	10.9	10.9	10.9
None	N	Y		12	N	0	12.7	12.7	12.7
None	N	Y		12	N	0	19.4	19.4	19.4
None	N	Y		12	N	0	16.1	16.1	16.1

None	N	Y		12	N	0	25	25	25
None	N	NA	NA		N	0	22	22	22
None	N	Y		12	Y	12	32	20	26
None	N	Y		12	Y	4	8	4	6
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	15	30	15	22.5
None	N	Y		12	Y	15	30	15	22.5
None	N	Y		12	Y	9	15	6	10.5
None	N	Y		12	N	0	5	5	5
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	9	15	6	10.5
None	N	Y		12	N	0	5	5	5
Cold	Y	N		0	Y	10	25	15	20
None	N	Y		14	N	0	5	5	5
Cold	Y	N		0	Y	9	15	6	10.5
None	N	Y		14	Y	9	15	6	11.25
None	N	Y		14	Y	15	30	15	23.75
None	N	Y		14	Y	15	35	20	28.75
Cold	Y	N		0	Y	10	25	15	20
Cold	Y	N		0	Y	15	30	15	22.5
None	N	Y		14	Y	10	25	15	20.83333
Cold	Y	N		0	Y	10	20	10	15
None	N	Y		14	Y	10	20	10	15.83333
Cold	Y	N		0	Y	15	35	20	27.5
None	N	Y		12	N	0	25	25	25
None	N	Y		12	N	0	25	25	25
None	N	Y		12	N	0	25	25	25
Cold	Y	Y		12	N	0	25	25	25
None	N	Y		14	Y	8	28	20	24.66667
Cold	Y	Y		12	N	0	17.5	17.5	17.5
Cold	Y	Y		12	N	0	30	30	30
None	N	Y		12	N	0	15	15	15
None	N	Y		12	N	0	20	20	20
Cold	Y	Y		12	N	0	27.5	27.5	27.5
None	N	N		0	N	0	23	23	23
Cold	Y	Y		12	N	0	12.5	12.5	12.5
Cold	Y	Y		12	N	0	5	5	5
Cold	Y	Y		12	N	0	10	10	10
Cold	Y	Y		12	N	0	22.5	22.5	22.5
None	N	Y		12	N	0	22.5	22.5	22.5
None	N	Y		12	N	0	10	10	10
None	N	Y		12	N	0	10	10	10
W+C	Y	Y		14	N	0	20	20	20
None	N	Y		12	N	0	5	5	5
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	N	0	23	23	23
None	N	Y		12	N	0	10	10	10
None	N	N		0	Y	10	20	10	15
None	N	Y		12	N	0	30	30	30
Cold	Y	Y		12	N	0	20	20	20
Cold	Y	Y		12	N	0	7.5	7.5	7.5
None	N	Y		12	N	0	7.5	7.5	7.5
None	N	Y		12	N	0	25	25	25
None	N	Y		12	N	0	5	5	5
None	N	Y		12	N	0	30	30	30

None	N	Y		12	N	0	23	23	23
None	N	Y		12	N	0	12.5	12.5	12.5
Cold	Y	Y		12	N	0	25	25	25
None	N	Y		12	N	0	27.5	27.5	27.5
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	N	0	30	30	30
None	N	Y		12	N	0	5	5	5
None	N	Y		12	N	0	23	23	23
None	N	Y		12	N	0	23	23	23
Cold	Y	Y		12	N	0	15	15	15
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	N	0	17.5	17.5	17.5
None	N	Y		12	N	0	10	10	10
None	N	Y		12	N	0	5	5	5
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	5	5	5
None	N	Y		16	N	0	24	24	24
None	N	Y		12	N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	30	30	30
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	22	22	22
None	N	N		0	N	0	21	21	21
None	N	N		0	N	0	21	21	21
None	N	N		0	N	0	21	21	21
None	N	N		0	N	0	21	21	21
None	N	N		0	N	0	21	21	21
None	N	Y		12	N	0	35.6	35.6	35.6
None	N	Y		12	N	0	14.9	14.9	14.9
None	N	Y		12	N	0	21.9	21.9	21.9
None	N	Y		12	N	0	16.6	16.6	16.6
None	N	Y		12	N	0	29	29	29
None	N	Y		12	N	0	19.2	19.2	19.2
None	N	Y		12	N	0	10.3	10.3	10.3
None	N	Y		12	N	0	25.5	25.5	25.5
None	N	Y		16	Y	8	24	16	21.33333
None	N	Y		16	Y	8	24	16	21.33333
None	N	Y		16	Y	8	24	16	21.33333
None	N	Y		16	Y	8	24	16	21.33333
None	N	Y		16	Y	10	25	15	21.66667
Cold	Y	Y		12	Y	5	30	25	27.5
None	N	NA	NA		N	0	22	22	22
None	N	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	9	15	6	11.25
Cold	Y	Y		14	Y	10	20	10	15.83333
Cold	Y	Y		14	Y	9	15	6	11.25
W+C	Y	Y		14	Y	10	20	10	15.83333
W+C	Y	Y		14	Y	10	25	15	20.83333
Cold	Y	Y		14	Y	10	25	15	20.83333
None	N	Y		14	Y	10	25	15	20.83333
W+C	Y	Y		14	Y	9	15	6	11.25
None	N	Y		16	N	0	16	16	16
None	N	Y		16	Y	5	21	16	19.33333
None	N	Y		16	N	0	16	16	16
None	N	Y		16	Y	5	21	16	19.33333
None	N	Y		16	Y	6	24	18	22

	Cold	Y	Y		16	Y	6	24	18	22
	None	N	Y		12	Y	5	22.5	17.5	20
	None	N	Y		12	Y	5	22.5	17.5	20
	W+C	Y	Y		14	N	0	20	20	20
	W+C	Y	Y		14	N	0	20	20	20
	W+C	Y	Y		14	N	0	20	20	20
	W+C	Y	Y		14	N	0	20	20	20
	Cold	Y	Y		24	N	0	20	20	20
	None	N	Y		24	N	0	20	20	20
	W+C	Y	Y		14	N	0	20	20	20
	None	N	NA	NA		N	0	22	22	22
	W+C	Y	Y		14	N	0	20	20	20
	Cold	Y	Y		12	Y	8	23	15	19
	None	N	Y		12	Y	8	23	15	19
	Warm	Y	Y		12	Y	8	23	15	19
	None	N	Y		12	Y	8	23	15	19
	W+C	Y	NA	NA		Y	17	20	3	11.5
	None	N	Y		12	N	0	23	23	23
	None	N	Y		12	N	0	23	23	23
	None	N	Y		12	N	0	23	23	23
	None	N	Y		12	N	0	23	23	23
	None	N	Y		12	Y	10	30	20	25
	Cold	Y	Y		12	Y	10	30	20	25
	W+C	Y	NA	NA		Y	12	15	3	9
	W+C	Y	NA	NA		N	0	3	3	3
	W+C	Y	NA	NA		Y	17	20	3	11.5
	Cold	Y	Y		16	N	0	24	24	24
	None	N	NA	NA		N	0	22	22	22
	Cold	Y	Y		16	N	0	24	24	24
	Cold	Y	Y		16	N	0	24	24	24
	Cold	Y	Y		16	N	0	23	23	23
	Cold	Y	Y		16	N	0	23	23	23
	None	N	Y		13	Y	10	20	10	15.41667
	None	N	Y		13	Y	10	20	10	15.41667
	None	N	Y		12	N	0	15	15	15
	None	N	Y		12	Y	10	25	15	20
	None	N	Y		12	N	0	30	30	30
	None	N	N		0	N	0	25	25	25
	None	N	Y		12	N	0	10	10	10
	None	N	Y		12	N	0	25	25	25
	None	N	Y		12	N	0	35	35	35
	None	N	Y		12	N	0	20	20	20
	None	N	Y		12	Y	9	15	6	10.5
	None	N	Y		12	N	0	10	10	10
	None	N	Y		12	N	0	23	23	23
	None	N	Y		12	N	0	5	5	5
	None	N	Y		12	Y	10	20	10	15
	Cold	Y	Y		12	N	0	23	23	23
	None	N	Y		12	Y	10	20	10	15
	Cold	Y	Y		12	N	0	10	10	10
	None	N	N		0	Y	10	20	10	15
	Cold	Y	Y		12	Y	10	20	10	15
	None	N	N		0	N	0	10	10	10
	Cold	Y	Y		12	Y	10	20	10	15
	Cold	Y	Y		12	N	0	10	10	10
	None	N	N		0	N	0	23	23	23

Cold	Y	Y	12	N	0	23	23	23
None	N	Y	12	N	0	23	23	23
None	N	N	0	Y	10	30	20	25
Cold	Y	Y	12	Y	9	15	6	10.5
None	N	Y	12	Y	10	30	20	25
None	N	Y	12	Y	9	15	6	10.5
Cold	Y	N	0	Y	9	15	6	10.5
None	N	Y	12	N	0	23	23	23
None	N	Y	12	Y	9	15	6	10.5
None	N	N	0	N	0	23	23	23
Cold	Y	Y	12	Y	10	30	20	25
Warm	Y	N	0	Y	10	20	10	15
Cold	Y	Y	12	Y	9	15	6	10.5
None	N	Y	12	N	0	10	10	10
Warm	Y	N	0	N	0	23	23	23
Warm	Y	Y	12	N	0	23	23	23
Cold	Y	Y	12	Y	10	20	10	15
Cold	Y	N	0	N	0	23	23	23
None	N	N	0	Y	9	15	6	10.5
None	N	N	0	Y	10	20	10	15
Cold	Y	N	0	N	0	10	10	10
Cold	Y	N	0	N	0	10	10	10
Warm	Y	N	0	Y	10	20	10	15
Cold	Y	N	0	Y	10	20	10	15
Warm	Y	Y	12	Y	9	15	6	10.5
None	N	N	0	Y	10	30	20	25
Cold	Y	Y	12	Y	10	30	20	25
Cold	Y	N	0	N	0	10	10	10
None	N	N	0	N	0	23	23	23
Warm	Y	Y	12	Y	10	20	10	15
Warm	Y	N	0	N	0	10	10	10
Warm	Y	Y	12	Y	10	30	20	25
None	N	Y	12	Y	10	20	10	15
Warm	Y	N	0	Y	9	15	6	10.5
Warm	Y	Y	12	Y	9	15	6	10.5
Warm	Y	N	0	Y	10	30	20	25
Cold	Y	Y	12	N	0	23	23	23
Cold	Y	Y	12	Y	9	15	6	10.5
Cold	Y	N	0	Y	9	15	6	10.5
Cold	Y	N	0	N	0	23	23	23
Warm	Y	N	0	N	0	10	10	10
Cold	Y	Y	12	N	0	23	23	23
Cold	Y	N	0	Y	9	15	6	10.5
None	N	Y	12	Y	10	20	10	15
Cold	Y	Y	12	N	0	10	10	10
None	N	Y	12	N	0	23	23	23
None	N	Y	12	Y	10	20	10	15
Cold	Y	N	0	Y	10	30	20	25
None	N	N	0	N	0	10	10	10
Warm	Y	N	0	Y	9	15	6	10.5
None	N	N	0	Y	10	20	10	15
Cold	Y	Y	12	Y	9	15	6	10.5
Warm	Y	Y	12	Y	10	20	10	15
None	N	Y	12	Y	9	15	6	10.5
Cold	Y	N	0	Y	10	20	10	15
None	N	N	0	N	0	10	10	10

None	N	N		0	Y	9	15	6	10.5
None	N	Y		12	N	0	10	10	10
None	N	Y		12	Y	9	15	6	10.5
None	N	Y		12	N	0	10	10	10
Cold	Y	N		0	Y	10	20	10	15
Warm	Y	N		0	Y	10	30	20	25
Cold	Y	N		0	N	0	23	23	23
None	N	Y		12	N	0	10	10	10
Cold	Y	N		0	Y	10	30	20	25
Warm	Y	Y		12	N	0	10	10	10
Cold	Y	Y		12	N	0	10	10	10
Warm	Y	Y		12	Y	10	30	20	25
None	N	Y		12	N	0	23	23	23
Cold	Y	Y		12	Y	10	20	10	15
Warm	Y	Y		12	N	0	10	10	10
Warm	Y	N		0	N	0	23	23	23
Warm	Y	Y		12	N	0	23	23	23
None	N	Y		12	Y	10	30	20	25
None	N	N		0	Y	9	15	6	10.5
W+C	Y	NA	NA		Y	12	15	3	9
None	N	NA	NA		N	0	3	3	3
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	3	3	3
W+C	Y	NA	NA		Y	12	15	3	9
W+C	Y	NA	NA		Y	12	15	3	9
None	N	N		0	Y	15	25	10	17.5
Cold	Y	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
Cold	Y	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
Cold	Y	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	N		0	Y	15	25	10	17.5
None	N	N		0	Y	15	25	10	17.5
None	N	N		0	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
Cold	Y	Y		12	Y	15	25	10	17.5
Cold	Y	Y		12	Y	15	25	10	17.5
Cold	Y	Y		12	Y	15	25	10	17.5
Cold	Y	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
Cold	Y	Y		12	Y	15	25	10	17.5
None	N	N		0	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	N		0	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	N		0	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5

None	N	N	0	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
Cold	Y	Y	12	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5
None	N	N	0	Y	15	25	10	17.5
None	N	Y	12	Y	15	25	10	17.5

None	N	Y		12	Y	15	25	10	17.5
Cold	Y	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		12	Y	15	25	10	17.5
Cold	Y	Y		16	N	0	25	25	25
Cold	Y	Y		16	Y	10	25	15	21.66667
None	N	N		0	N	0	25	25	25
None	N	NA	NA		N	0	4	4	4
None	N	NA	NA		N	0	4	4	4
None	N	NA	NA		N	0	4	4	4
None	N	NA	NA		N	0	4	4	4
None	N	NA	NA		N	0	4	4	4
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	5	5	5
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	15	15	15
None	N	NA	NA		N	0	4	4	4
None	N	NA	NA		N	0	4	4	4
None	N	NA	NA		N	0	4	4	4
None	N	Y		12	N	0	10	10	10
Cold	Y	Y		12	N	0	5	5	5
Cold	Y	Y		12	Y	10	15	5	10
None	N	N		0	N	0	0	0	0
None	N	Y		12	Y	10	25	15	20
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	N	0	25	25	25
None	N	Y		12	Y	10	15	5	10
Cold	Y	Y		12	N	0	25	25	25
None	N	Y		12	N	0	20	20	20
None	N	Y		12	N	0	15	15	15
None	N	Y		12	N	0	5	5	5
Cold	Y	Y		12	N	0	15	15	15
None	N	Y		12	Y	10	30	20	25
Cold	Y	Y		12	Y	10	30	20	25
Cold	Y	Y		12	Y	10	25	15	20
Cold	Y	NA	NA		N	0	15	15	15
Cold	Y	NA	NA		N	0	10	10	10
Cold	Y	NA	NA		N	0	5	5	5
None	N	Y		12	Y	10	15	5	10
None	N	Y		12	Y	15	25	10	17.5
None	N	N		0	N	0	5	5	5
None	N	Y		12	Y	15	25	10	17.5
None	N	N		0	N	0	5	5	5
None	N	Y		12	Y	10	15	5	10
None	N	N		0	N	0	18.7	18.7	18.7
None	N	NA	NA		N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	5	5	5
None	N	N		0	N	0	10	10	10

None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	Y		14	Y	12	19	7	14
Cold	Y	Y		14	Y	12	19	7	14
None	N	Y		14	Y	12	19	7	14
Cold	Y	Y		14	Y	12	19	7	14
None	N	Y		12	N	0	15	15	15
None	N	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	40	40	40
Cold	Y	N		0	N	0	10	10	10
None	N	N		0	N	0	40	40	40
None	N	N		0	N	0	30	30	30
Cold	Y	N		0	Y	10	30	20	25
None	N	N		0	N	0	10	10	10
Cold	Y	N		0	N	0	15	15	15
None	N	N		0	Y	10	35	25	30
Cold	Y	N		0	N	0	25	25	25
Cold	Y	N		0	Y	10	35	25	30
None	N	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	30	30	30
Cold	Y	N		0	N	0	20	20	20
None	N	N		0	Y	10	30	20	25
None	N	N		0	N	0	25	25	25
None	N	Y		8	Y	10	30	20	23.33333
None	N	N		0	N	0	20	20	20
Cold	Y	N		0	N	0	24	24	24
Cold	Y	N		0	N	0	29	29	29
Cold	Y	N		0	N	0	27	27	27
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	8	8	8
Cold	Y	N		0	N	0	12	12	12
Cold	Y	N		0	N	0	21	21	21
Cold	Y	N		0	N	0	4	4	4
None	N	Y		16	N	0	25	25	25
W+C	Y	NA	NA		Y	17	20	3	11.5
None	N	N		0	N	0	23	23	23
Cold	Y	N		0	N	0	23	23	23
Cold	Y	Y		12	Y	10	26	16	21
None	N	Y		8	N	0	15	15	15
None	N	Y		8	N	0	20	20	20
None	N	Y		8	N	0	10	10	10
Cold	Y	N		0	Y	12	15	3	9
None	N	Y		8	N	0	30	30	30
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	5	5	5
None	N	Y		8	N	0	35	35	35
Cold	Y	Y		12	Y	7.6	18	10.4	14.2
Cold	Y	Y		12	Y	11.6	24	12.4	18.2
Cold	Y	Y		24	N	0	20	20	20
None	N	N		0	N	0	20	20	20
Cold	Y	N		0	N	0	30	30	30
None	N	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	25	25	25
Cold	Y	N		0	N	0	20	20	20
Cold	Y	N		0	N	0	20	20	20
Cold	Y	Y		24	N	0	20	20	20

Cold	Y	Y	24	N	0	30	30	30
Cold	Y	Y	24	N	0	15	15	15
Cold	Y	N	0	N	0	25	25	25
Cold	Y	N	0	N	0	20	20	20
Cold	Y	N	0	N	0	15	15	15
None	N	Y	24	N	0	20	20	20
Cold	Y	Y	24	N	0	20	20	20
None	N	N	0	N	0	20	20	20
None	N	Y	12	N	0	23	23	23
Cold	Y	Y	16	Y	8	28	20	25.33333
None	N	Y	12	N	0	25	25	25
None	N	Y	12	N	0	25	25	25
None	N	Y	12	N	0	25	25	25
None	N	Y	12	N	0	25	25	25
None	N	Y	12	N	0	25	25	25
None	N	Y	12	N	0	25	25	25
None	N	Y	12	N	0	25	25	25
None	N	Y	12	N	0	25	25	25
Cold	Y	NA	NA	N	0	21	21	21
Cold	Y	NA	NA	N	0	21	21	21
Cold	Y	NA	NA	N	0	21	21	21
Cold	Y	NA	NA	N	0	21	21	21
None	N	Y	12	N	0	25	25	25
Cold	Y	NA	NA	N	0	21	21	21
Cold	Y	NA	NA	N	0	21	21	21
W+C	Y	NA	NA	N	0	22	22	22
Warm	Y	N	0	N	0	23	23	23
Warm	Y	N	0	N	0	10	10	10
Warm	Y	N	0	Y	10	20	10	15
Warm	Y	Y	12	Y	9	15	6	10.5
Warm	Y	Y	12	N	0	23	23	23
Cold	Y	Y	12	Y	10	30	20	25
Cold	Y	N	0	Y	10	20	10	15
None	N	Y	12	Y	9	15	6	10.5
Warm	Y	N	0	Y	9	15	6	10.5
None	N	Y	12	Y	10	30	20	25
Cold	Y	N	0	N	0	10	10	10
Warm	Y	N	0	Y	10	30	20	25
Cold	Y	Y	12	N	0	10	10	10
None	N	N	0	Y	9	15	6	10.5
Cold	Y	N	0	Y	10	30	20	25
None	N	N	0	N	0	23	23	23
None	N	N	0	N	0	10	10	10
Warm	Y	Y	12	Y	10	30	20	25
None	N	Y	12	N	0	23	23	23
Warm	Y	Y	12	N	0	10	10	10
None	N	Y	12	Y	10	20	10	15
Cold	Y	Y	12	Y	10	20	10	15
Warm	Y	Y	12	Y	10	20	10	15
None	N	N	0	Y	10	30	20	25
Cold	Y	N	0	Y	9	15	6	10.5
None	N	N	0	Y	10	20	10	15
Cold	Y	Y	12	Y	9	15	6	10.5
Cold	Y	N	0	N	0	23	23	23
Cold	Y	Y	12	N	0	23	23	23
None	N	Y	12	N	0	10	10	10

None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	15	15	15
None	N	Y	8	N	0	15	15	15
Cold	Y	Y	8	N	0	15	15	15
None	N	Y	16	Y	8	24	16	21.33333
None	N	Y	16	Y	8	24	16	21.33333
None	N	Y	16	Y	8	24	16	21.33333
None	N	Y	16	Y	8	24	16	21.33333
None	N	Y	16	Y	8	24	16	21.33333
None	N	Y	16	Y	8	24	16	21.33333
None	N	Y	16	Y	2	21	19	20.33333
None	N	Y	16	Y	2	21	19	20.33333
None	N	Y	12	N	0	4	4	4
None	N	Y	12	N	0	20	20	20
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	10	10	10
None	N	Y	12	N	0	4	4	4
None	N	Y	12	N	0	20	20	20
None	N	Y	12	N	0	10	10	10
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	4	4	4
None	N	Y	12	N	0	20	20	20
None	N	Y	12	N	0	10	10	10
None	N	Y	12	Y	4	21	17	19
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	10	10	10
None	N	Y	12	N	0	20	20	20
None	N	Y	12	N	0	4	4	4
None	N	Y	24	N	0	17.5	17.5	17.5
None	N	N	0	N	0	17.5	17.5	17.5
None	N	N	0	N	0	17.5	17.5	17.5
None	N	Y	24	N	0	17.5	17.5	17.5
None	N	Y	8	N	0	15	15	15
None	N	Y	8	N	0	20	20	20
None	N	Y	8	N	0	20	20	20
None	N	Y	8	N	0	5	5	5
None	N	Y	8	N	0	20	20	20
None	N	Y	8	N	0	25	25	25
Cold	Y	N	0	N	0	29	29	29
Cold	Y	N	0	N	0	32	32	32
Cold	Y	N	0	N	0	2	2	2
Cold	Y	N	0	N	0	43	43	43
Cold	Y	N	0	N	0	5	5	5
Cold	Y	N	0	N	0	16	16	16
Cold	Y	N	0	N	0	22	22	22
None	N	Y	8	N	0	5	5	5
Cold	Y	N	0	N	0	26	26	26
Cold	Y	N	0	N	0	12	12	12
Cold	Y	N	0	N	0	26	26	26
W+C	Y	Y	10	Y	10	15	5	9.166667
W+C	Y	Y	10	Y	10	15	5	9.166667
W+C	Y	Y	10	Y	10	15	5	9.166667
None	N	Y	12	Y	10	30	20	25
W+C	Y	Y	12	Y	10	30	20	25
Cold	Y	Y	12	Y	10	30	20	25

None	N	Y		8	Y	10	30	20	23.33333
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	20	20	20
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		12	N	0	25	25	25
None	N	Y		16	N	0	25	25	25
None	N	Y		16	Y	10	25	15	21.66667
None	N	Y		8	N	0	15	15	15
Cold	Y	Y		8	N	0	15	15	15
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	N	0	15	15	15
Cold	Y	Y		8	N	0	15	15	15
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	5	5	5
Cold	Y	N		0	N	0	5	5	5
Cold	Y	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	5	5	5
Cold	Y	N		0	N	0	15	15	15
Cold	Y	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	15	15	15
None	N	N		0	N	0	28	28	28
None	N	N		0	N	0	28	28	28
None	N	N		0	N	0	20	20	20
None	N	Y		12	N	0	20	20	20
None	N	N		0	N	0	20	20	20
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15

Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	5	5	5
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	5	5	5
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	20	20	20
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
Cold	Y	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
W+C	Y	NA	NA		N	0	20	20	20
W+C	Y	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
Cold	Y	NA	NA		N	0	20	20	20
Cold	Y	NA	NA		N	0	20	20	20
W+C	Y	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
Cold	Y	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
W+C	Y	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
W+C	Y	NA	NA		N	0	20	20	20
Cold	Y	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	20	20	20
W+C	Y	NA	NA		N	0	20	20	20

	Warm	Y	Y		16	Y	10	30	20	26.66667
	Cold	Y	Y		16	Y	5	20	15	18.33333
	Warm	Y	Y		16	Y	5	20	15	18.33333
	None	N	Y		16	Y	5	20	15	18.33333
	None	N	NA	NA		N	0	20	20	20
	W+C	Y	NA	NA		N	0	20	20	20
	Cold	Y	Y		8	N	0	7.5	7.5	7.5
	Cold	Y	Y		8	N	0	20	20	20
	Cold	Y	Y		8	N	0	15	15	15
	Cold	Y	Y		8	N	0	30	30	30
	Cold	Y	Y		8	N	0	10	10	10
	Cold	Y	Y		8	N	0	25	25	25
	Cold	Y	Y		8	N	0	15	15	15
	Cold	Y	Y		8	N	0	30	30	30
	Cold	Y	Y		8	N	0	20	20	20
	Cold	Y	Y		8	N	0	7.5	7.5	7.5
	Cold	Y	Y		8	N	0	10	10	10
	Cold	Y	Y		8	N	0	25	25	25
	Cold	Y	Y		8	N	0	10	10	10
	Cold	Y	Y		8	N	0	20	20	20
	Cold	Y	Y		8	N	0	30	30	30
	Cold	Y	Y		8	N	0	25	25	25
	Cold	Y	Y		8	N	0	7.5	7.5	7.5
	Cold	Y	Y		8	N	0	15	15	15
	Cold	Y	Y		8	N	0	30	30	30
	Cold	Y	Y		8	N	0	25	25	25
	Cold	Y	Y		8	N	0	20	20	20
	Cold	Y	Y		8	N	0	10	10	10
	Cold	Y	Y		8	N	0	15	15	15
	Cold	Y	Y		8	N	0	7.5	7.5	7.5
	Cold	Y	Y		8	N	0	22	22	22
	None	N	Y		8	Y	10	32	22	25.33333
	None	N	Y		8	N	0	22	22	22
	Cold	Y	Y		8	Y	5	27	22	23.66667
	Cold	Y	Y		8	Y	15	37	22	27
	None	N	Y		8	Y	5	27	22	23.66667
	None	N	Y		8	Y	15	37	22	27
	Cold	Y	Y		8	Y	10	32	22	25.33333
	None	N	N		0	Y	10	30	20	25
	None	N	Y		8	Y	10	25	15	18.33333
	None	N	Y		8	Y	5	25	20	21.66667
	None	N	N		0	N	0	20	20	20
	None	N	N		0	Y	5	25	20	22.5
	None	N	Y		8	N	0	20	20	20
	None	N	N		0	Y	10	30	20	25
	None	N	N		0	N	0	20	20	20
	None	N	Y		8	Y	10	25	15	18.33333
	None	N	Y		8	Y	5	25	20	21.66667
	None	N	Y		8	N	0	20	20	20
	None	N	Y		8	Y	10	30	20	23.33333
	None	N	N		0	Y	10	25	15	20
	None	N	N		0	Y	5	25	20	22.5
	None	N	N		0	Y	10	25	15	20
	None	N	Y		8	Y	10	30	20	23.33333
	None	N	Y		16	N	0	25	25	25
	None	N	Y		15	N	0	20	20	20

None	N	Y		15	N	0	20	20	20
Warm	Y	NA	NA		N	0	3	3	3
None	N	Y		8	Y	10	30	20	23.33333
None	N	N		0	Y	10	25	15	20
None	N	Y		16	Y	10	25	15	21.66667
None	N	Y		16	N	0	15	15	15
None	N	Y		16	Y	10	25	15	21.66667
None	N	Y		16	N	0	25	25	25
None	N	Y		14	Y	6	24	18	21.5
None	N	Y		16	Y	10	30	20	26.66667
Warm	Y	N		0	N	0	4	4	4
None	N	N		0	N	0	4	4	4
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	40	40	40
None	N	N		0	N	0	5	5	5
None	N	N		0	N	0	35	35	35
None	N	N		0	N	0	30	30	30
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	20	20	20
None	N	Y		8	N	0	10	10	10
None	N	Y		8	N	0	30	30	30
None	N	Y		8	N	0	15	15	15
None	N	Y		8	N	0	35	35	35
None	N	Y		8	N	0	5	5	5
None	N	Y		8	N	0	20	20	20
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	5	5	5
None	N	Y		8	N	0	30	30	30
None	N	Y		8	N	0	35	35	35
None	N	Y		8	N	0	10	10	10
None	N	Y		8	N	0	15	15	15
None	N	Y		8	N	0	15	15	15
None	N	Y		8	N	0	5	5	5
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	10	10	10
None	N	Y		8	N	0	30	30	30
None	N	Y		8	N	0	35	35	35
None	N	Y		8	N	0	20	20	20
None	N	Y		8	N	0	5	5	5
None	N	Y		8	N	0	30	30	30
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	15	15	15
None	N	Y		8	N	0	35	35	35
None	N	Y		8	N	0	10	10	10
None	N	Y		8	N	0	20	20	20
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	N	0	20	20	20
None	N	Y		8	N	0	15	15	15
None	N	Y		8	N	0	10	10	10
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	5	5	5
None	N	Y		8	N	0	35	35	35
None	N	Y		8	N	0	30	30	30

None	N	Y		8	N	0	5	5	5
None	N	Y		8	N	0	30	30	30
None	N	Y		8	N	0	35	35	35
None	N	Y		8	N	0	15	15	15
None	N	Y		8	N	0	20	20	20
None	N	Y		8	N	0	10	10	10
None	N	Y		8	N	0	25	25	25
None	N	Y		13	Y	10	20	10	15.41667
None	N	Y		11	Y	10	15	5	9.583333
None	N	Y		11	Y	10	15	5	9.583333
None	N	Y		13	Y	10	20	10	15.41667
None	N	Y		13	Y	10	20	10	15.41667
None	N	Y		11	Y	10	15	5	9.583333
None	N	Y		11	Y	10	15	5	9.583333
None	N	Y		13	Y	10	20	10	15.41667
None	N	Y		13	Y	10	20	10	15.41667
None	N	Y		11	Y	10	15	5	9.583333
None	N	Y		12	Y	15	30	15	22.5
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	9	15	6	10.5
None	N	Y		12	N	0	5	5	5
None	N	Y		12	Y	4	21	17	19
None	N	Y		16	N	0	23	23	23
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	Y		12	Y	10	30	20	25
Cold	Y	N		0	Y	10	30	20	25
None	N	Y		12	Y	10	15	5	10
Cold	Y	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	15	5	10
None	N	Y		12	Y	10	20	10	15
Cold	Y	Y		12	Y	10	30	20	25
Cold	Y	Y		12	Y	10	25	15	20
None	N	Y		12	Y	10	25	15	20
None	N	Y		12	Y	10	25	15	20
Cold	Y	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	30	20	25
Cold	Y	Y		12	Y	10	25	15	20
Cold	Y	Y		12	Y	10	15	5	10
Cold	Y	Y		12	Y	10	35	25	30
Cold	Y	Y		12	Y	10	30	20	25
None	N	Y		12	Y	10	35	25	30
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	Y		12	Y	10	15	5	10
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	35	25	30
Cold	Y	Y		12	Y	10	35	25	30
None	N	N		0	Y	10	30	20	25
None	N	NA	NA		N	0	5	5	5
Warm	Y	NA	NA		N	0	5	5	5
Warm	Y	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	5	5	5
Cold	Y	Y		12	N	0	20	20	20
None	N	NA	NA		N	0	3	3	3
None	N	NA	NA		N	0	2	2	2

None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	3	3	3
None	N	NA	NA		N	0	3	3	3
None	N	Y		14	N	0	5	5	5
None	N	Y		14	Y	15	35	20	28.75
None	N	Y		14	Y	15	30	15	23.75
None	N	Y		14	Y	9	15	6	11.25
None	N	Y		14	Y	10	25	15	20.83333
None	N	Y		14	Y	10	20	10	15.83333
None	N	Y		12	Y	13	20	7	13.5
None	N	Y		12	Y	15	25	10	17.5
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	20	20	20
None	N	Y		16	N	0	10	10	10
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		12	Y	10	12	2	7
None	N	Y		12	Y	10	33	23	28
None	N	Y		12	Y	10	26	16	21
None	N	Y		12	Y	10	19	9	14
None	N	Y		12	Y	10	19	9	14
None	N	Y		12	Y	10	12	2	7
None	N	Y		12	Y	10	33	23	28
None	N	Y		12	Y	10	26	16	21
None	N	N		0	N	0	4	4	4
None	N	N		0	N	0	4	4	4
Cold	Y	Y		12	N	0	21	21	21
Cold	Y	Y		12	N	0	30	30	30
Cold	Y	Y		12	N	0	24	24	24
Cold	Y	Y		12	N	0	36	36	36
Cold	Y	Y		12	N	0	6	6	6
Cold	Y	Y		12	N	0	9	9	9
Cold	Y	Y		12	N	0	18	18	18
Cold	Y	Y		12	N	0	38	38	38
Cold	Y	Y		12	N	0	6	6	6
Cold	Y	Y		12	N	0	38	38	38
Cold	Y	Y		12	N	0	3	3	3
Cold	Y	N		0	Y	10	15	5	10
Cold	Y	Y		12	N	0	9	9	9
Cold	Y	Y		12	N	0	12	12	12
Cold	Y	N		0	N	0	25	25	25
Cold	Y	Y		12	N	0	3	3	3
Cold	Y	Y		12	N	0	12	12	12
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	24	24	24
Cold	Y	Y		12	N	0	40	40	40
Cold	Y	N		0	Y	10	15	5	10
Cold	Y	Y		12	N	0	18	18	18
Cold	Y	Y		12	N	0	21	21	21
Cold	Y	Y		12	N	0	36	36	36
Cold	Y	Y		12	N	0	40	40	40
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	27	27	27
Cold	Y	Y		12	N	0	27	27	27
Cold	Y	Y		12	N	0	30	30	30
Cold	Y	N		0	N	0	25	25	25
Cold	Y	Y		12	N	0	33	33	33

	Cold	Y	Y		12	N	0	33	33	33
	None	N	Y		8	Y	10	30	20	23.33333
	Cold	Y	Y		8	Y	10	30	20	23.33333
	None	N	Y		8	Y	10	30	20	23.33333
	Cold	Y	Y		8	Y	10	30	20	23.33333
	Cold	Y	Y		8	Y	10	30	20	23.33333
	Cold	Y	Y		8	Y	10	30	20	23.33333
	Cold	Y	Y		8	Y	10	30	20	23.33333
	None	N	Y		8	Y	10	30	20	23.33333
	None	N	Y		8	Y	10	30	20	23.33333
	None	N	Y		8	Y	10	30	20	23.33333
	Cold	Y	Y		8	Y	10	30	20	23.33333
	None	N	Y		8	Y	10	30	20	23.33333
	None	N	Y		8	Y	10	30	20	23.33333
	None	N	Y		12	Y	14	29	15	22
	Cold	Y	Y		12	Y	14	29	15	22
	None	N	Y		12	Y	12	29	17	23
	Cold	Y	Y		12	Y	12	29	17	23
	None	N	NA	NA		N	0	23.8	23.8	23.8
	None	N	NA	NA		N	0	33.3	33.3	33.3
	None	N	NA	NA		N	0	33.3	33.3	33.3
	None	N	NA	NA		N	0	18.3	18.3	18.3
	None	N	NA	NA		N	0	23.8	23.8	23.8
	None	N	NA	NA		N	0	16.6	16.6	16.6
	None	N	NA	NA		N	0	29.4	29.4	29.4
	None	N	NA	NA		N	0	16.6	16.6	16.6
	None	N	NA	NA		N	0	20.5	20.5	20.5
	None	N	NA	NA		N	0	20.5	20.5	20.5
	None	N	NA	NA		N	0	25.5	25.5	25.5
	None	N	NA	NA		N	0	27.7	27.7	27.7
	None	N	NA	NA		N	0	31.6	31.6	31.6
	None	N	NA	NA		N	0	25.5	25.5	25.5
	None	N	NA	NA		N	0	22.2	22.2	22.2
	None	N	NA	NA		N	0	22.2	22.2	22.2
	None	N	NA	NA		N	0	27.7	27.7	27.7
	None	N	NA	NA		N	0	29.4	29.4	29.4
	None	N	NA	NA		N	0	18.3	18.3	18.3
	None	N	NA	NA		N	0	31.6	31.6	31.6
	None	N	Y		8	Y	5	15	10	11.66667
	None	N	Y		8	Y	10	30	20	23.33333
	None	N	Y		8	Y	5	15	10	11.66667
	None	N	Y		8	Y	10	30	20	23.33333
	Cold	Y	Y		12	N	0	20	20	20
	None	N	Y		12	N	0	20	20	20
	None	N	Y		14	Y	9	25	16	21.25
	None	N	Y		8	Y	10	30	20	23.33333
	None	N	Y		16	N	0	23	23	23
	Cold	Y	Y		16	N	0	23	23	23
	None	N	Y		16	Y	10	30	20	26.66667
	None	N	Y		16	N	0	25	25	25
	None	N	N		0	N	0	25	25	25
	None	N	N		0	Y	10	30	20	25
	None	N	N		0	N	0	30	30	30
	None	N	Y		16	N	0	30	30	30
	None	N	N		0	N	0	20	20	20
	None	N	Y		16	N	0	20	20	20

None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	15	5	8.333333
Cold	Y	Y	8	Y	10	15	5	8.333333
Cold	Y	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	3	3	3
None	N	Y	8	Y	33	35	2	13
None	N	Y	8	Y	20	20	0	6.666667
None	N	Y	8	Y	30	40	10	20
None	N	Y	8	Y	3	5	2	3
None	N	Y	8	Y	10	10	0	3.333333
None	N	Y	8	Y	30	35	5	15
None	N	Y	8	Y	5	25	20	21.66667
None	N	Y	8	N	0	0	0	0
None	N	Y	8	N	0	35	35	35
None	N	Y	8	Y	40	40	0	13.33333
None	N	Y	8	Y	35	35	0	11.66667
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	25	15	18.33333
None	N	Y	8	Y	18	20	2	8
None	N	Y	8	Y	10	35	25	28.33333
None	N	Y	8	Y	15	30	15	20
None	N	Y	8	Y	25	25	0	8.333333
None	N	Y	8	N	0	20	20	20
None	N	Y	8	N	0	40	40	40
None	N	Y	8	Y	15	15	0	5
None	N	Y	8	Y	5	35	30	31.66667
None	N	Y	8	Y	20	40	20	26.66667
None	N	Y	8	N	0	25	25	25
None	N	Y	8	Y	5	15	10	11.66667
None	N	Y	8	Y	5	10	5	6.666667
None	N	Y	8	Y	5	30	25	26.66667
None	N	Y	8	Y	20	35	15	21.66667
None	N	Y	8	Y	38	40	2	14.66667
None	N	Y	8	Y	25	40	15	23.33333
None	N	Y	8	Y	15	20	5	10
None	N	Y	8	N	0	2	2	2
None	N	Y	8	Y	35	40	5	16.66667
None	N	Y	8	Y	10	15	5	8.333333
None	N	Y	8	N	0	15	15	15
None	N	Y	8	Y	15	40	25	30
None	N	Y	8	Y	8	10	2	4.666667
None	N	Y	8	Y	25	35	10	18.33333
None	N	Y	8	Y	10	40	30	33.33333
None	N	Y	8	Y	28	30	2	11.33333
None	N	Y	8	Y	13	15	2	6.333333
None	N	Y	8	N	0	30	30	30
None	N	Y	8	Y	23	25	2	9.666667
None	N	Y	8	Y	15	25	10	15
None	N	Y	8	Y	30	30	0	10
None	N	Y	8	Y	25	30	5	13.33333
None	N	Y	8	Y	20	30	10	16.66667
None	N	Y	8	Y	5	40	35	36.66667
None	N	Y	8	Y	10	20	10	13.33333

None	N	Y		8	Y	5	5	0	1.666667
None	N	Y		8	Y	20	25	5	11.66667
None	N	Y		8	N	0	5	5	5
None	N	Y		8	N	0	10	10	10
None	N	Y		8	Y	2	2	0	########
None	N	Y		8	Y	15	35	20	25
None	N	Y		8	Y	5	20	15	16.66667
Cold	Y	Y		8	Y	5	25	20	21.66667
None	N	Y		15	N	0	20	20	20
None	N	Y		14	Y	4	21	17	19.33333
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	25	25	25
Cold	Y	Y		16	N	0	25	25	25
None	N	Y		16	N	0	15	15	15
None	N	Y		14	Y	6	24	18	21.5
None	N	Y		14	Y	6	24	18	21.5
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	NA	NA		N	0	10	10	10
None	N	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	Y		12	N	0	21	21	21
None	N	Y		12	N	0	12	12	12
None	N	Y		12	N	0	18	18	18
None	N	Y		12	N	0	24	24	24
None	N	Y		12	N	0	27	27	27
None	N	Y		12	N	0	3	3	3
None	N	Y		12	N	0	30	30	30
None	N	Y		12	N	0	9	9	9
None	N	Y		12	N	0	33	33	33
None	N	Y		12	N	0	6	6	6
None	N	Y		12	N	0	15	15	15
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		12	N	0	15	15	15
None	N	Y		12	N	0	12	12	12
None	N	Y		12	N	0	21	21	21
None	N	Y		12	N	0	24	24	24
None	N	Y		12	N	0	33	33	33
None	N	Y		12	N	0	27	27	27
None	N	Y		12	N	0	30	30	30
None	N	Y		12	N	0	6	6	6
None	N	Y		12	N	0	3	3	3

None	N	Y	12	N	0	9	9	9
None	N	Y	12	N	0	18	18	18
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	16	N	0	21	21	21
None	N	Y	16	N	0	21	21	21
None	N	Y	10	N	0	24	24	24
None	N	N	0	N	0	8	8	8
None	N	N	0	N	0	17	17	17
None	N	N	0	N	0	32	32	32
None	N	N	0	N	0	14	14	14
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	26	26	26
None	N	N	0	N	0	29	29	29
None	N	N	0	N	0	11	11	11
None	N	N	0	N	0	2	2	2
None	N	N	0	N	0	5	5	5
None	N	N	0	N	0	23	23	23
None	N	N	0	N	0	5	5	5
None	N	Y	12	Y	9	15	6	10.5
None	N	Y	12	Y	15	30	15	22.5
None	N	N	0	N	0	5	5	5
None	N	Y	12	Y	9	15	6	10.5
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	Y	15	30	15	22.5
None	N	Y	12	Y	10	20	10	15
None	N	Y	15	N	0	20	20	20
None	N	N	0	N	0	20	20	20
None	N	Y	15	N	0	20	20	20
None	N	N	0	N	0	18	18	18
None	N	Y	24	N	0	25	25	25
None	N	Y	24	N	0	35	35	35
None	N	N	0	N	0	28	28	28
None	N	Y	24	N	0	28	28	28
None	N	N	0	N	0	35	35	35
None	N	Y	24	N	0	14	14	14
None	N	Y	24	N	0	22	22	22
None	N	N	0	N	0	22	22	22
None	N	Y	24	N	0	18	18	18
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	32	32	32
None	N	N	0	N	0	14	14	14
None	N	Y	24	N	0	32	32	32
None	N	N	0	N	0	18	18	18
None	N	Y	24	N	0	18	18	18
None	N	Y	24	N	0	14	14	14
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	35	35	35
None	N	N	0	N	0	22	22	22
None	N	Y	24	N	0	32	32	32
None	N	N	0	N	0	14	14	14
None	N	Y	24	N	0	22	22	22
None	N	N	0	N	0	32	32	32
None	N	Y	24	N	0	25	25	25
None	N	Y	24	N	0	35	35	35
None	N	Y	24	N	0	28	28	28
None	N	N	0	N	0	28	28	28

None	N	N		0	N	0	20	20	20
None	N	Y		16	Y	10	25	15	21.66667
None	N	Y		16	Y	10	25	15	21.66667
None	N	Y		16	N	0	25	25	25
None	N	N		0	N	0	10	10	10
None	N	N		0	Y	10	25	15	20
None	N	Y		16	Y	10	25	15	21.66667
None	N	N		0	N	0	15	15	15
None	N	Y		16	N	0	10	10	10
None	N	N		0	N	0	25	25	25
None	N	Y		16	N	0	20	20	20
None	N	Y		16	Y	10	25	15	21.66667
None	N	Y		16	N	0	15	15	15
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		16	N	0	25	25	25
None	N	Y		16	N	0	15	15	15
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	20	20	20
None	N	Y		16	Y	10	25	15	21.66667
None	N	Y		16	N	0	10	10	10
None	N	N		0	N	0	10	10	10
None	N	N		0	Y	10	25	15	20
None	N	Y		16	Y	10	25	15	21.66667
None	N	Y		16	N	0	20	20	20
None	N	N		0	N	0	15	15	15
None	N	Y		16	N	0	30	30	30
None	N	N		0	Y	14	30	16	23
None	N	Y		16	N	0	16	16	16
None	N	Y		24	N	0	30	30	30
None	N	Y		16	Y	14	30	16	25.33333
None	N	N		0	N	0	16	16	16
None	N	Y		24	N	0	16	16	16
None	N	N		0	N	0	30	30	30
None	N	Y		24	Y	14	30	16	23
None	N	NA	NA		N	0	4	4	4
None	N	NA	NA		N	0	4	4	4
None	N	Y		14	N	0	28.5	28.5	28.5
None	N	Y		18	Y	4	22	18	21
None	N	N		0	N	0	24	24	24
None	N	N		0	N	0	24	24	24
Cold	Y	Y		12	N	0	24	24	24
None	N	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	40	40	40
Cold	Y	N		0	N	0	15	15	15
None	N	N		0	N	0	5	5	5
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	30	30	30
Cold	Y	N		0	N	0	30	30	30
None	N	N		0	N	0	35	35	35
Cold	Y	N		0	N	0	10	10	10
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	25	25	25
Cold	Y	N		0	N	0	5	5	5
Cold	Y	N		0	N	0	20	20	20
Cold	Y	N		0	N	0	35	35	35
None	N	N		0	N	0	40	40	40

Cold	Y	N	0	N	0	25	25	25
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	16	Y	10	30	20	26.66667
Cold	Y	Y	16	Y	10	30	20	26.66667
None	N	Y	16	Y	10	30	20	26.66667
Cold	Y	Y	16	Y	10	30	20	26.66667
None	N	Y	16	Y	10	30	20	26.66667
Cold	Y	Y	16	Y	10	30	20	26.66667
Cold	Y	Y	16	Y	10	30	20	26.66667
None	N	Y	16	Y	10	30	20	26.66667
None	N	Y	12	Y	4	28	24	26
None	N	Y	12	Y	9	15	6	10.5
C+W	Y	Y	12	Y	9	15	6	10.5
W+C	Y	Y	12	Y	9	15	6	10.5
None	N	Y	12	Y	9	15	6	10.5
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
W+C	Y	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	12	Y	10	20	10	15
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	16	N	0	25	25	25
None	N	Y	12	N	0	25	25	25
W+C	Y	N	0	Y	9	15	6	10.5
W+C	Y	N	0	Y	15	30	15	22.5
None	N	Y	12	Y	15	30	15	22.5
None	N	Y	12	Y	15	35	20	27.5
W+C	Y	N	0	Y	10	25	15	20
None	N	N	0	Y	10	25	15	20
None	N	Y	12	Y	9	15	6	10.5
None	N	Y	12	Y	10	20	10	15
None	N	N	0	Y	15	35	20	27.5
W+C	Y	Y	12	Y	15	30	15	22.5
W+C	Y	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	25	15	20
W+C	Y	Y	12	Y	15	35	20	27.5
None	N	N	0	Y	15	30	15	22.5
None	N	N	0	Y	9	15	6	10.5
W+C	Y	Y	12	Y	9	15	6	10.5
W+C	Y	N	0	Y	10	20	10	15
W+C	Y	Y	12	Y	10	25	15	20
W+C	Y	N	0	Y	15	35	20	27.5
None	N	N	0	Y	10	20	10	15
None	N	N	0	Y	15	35	20	27.5
W+C	Y	Y	12	Y	10	25	15	20
W+C	Y	Y	12	Y	15	35	20	27.5
W+C	Y	Y	12	Y	10	20	10	15
W+C	Y	N	0	Y	9	15	6	10.5
None	N	N	0	Y	15	30	15	22.5
W+C	Y	N	0	Y	15	35	20	27.5
None	N	Y	12	Y	10	25	15	20
W+C	Y	N	0	Y	10	25	15	20
None	N	N	0	Y	10	25	15	20
None	N	N	0	Y	9	15	6	10.5
None	N	Y	12	Y	9	15	6	10.5
W+C	Y	N	0	Y	15	30	15	22.5
None	N	Y	12	Y	15	35	20	27.5

W+C	Y	N		0	Y	10	20	10	15
None	N	Y		12	Y	15	30	15	22.5
W+C	Y	Y		12	Y	9	15	6	10.5
None	N	Y		12	Y	10	20	10	15
None	N	N		0	Y	10	20	10	15
W+C	Y	Y		12	Y	15	30	15	22.5
None	N	Y		0.1	N	0	26	26	26
None	N	Y		0.1	N	0	6	6	6
None	N	Y		0.1	N	0	28	28	28
None	N	Y		0.1	N	0	16	16	16
None	N	Y		0.1	N	0	14	14	14
None	N	Y		0.1	N	0	10	10	10
None	N	Y		0.1	N	0	20	20	20
None	N	Y		0.1	N	0	18	18	18
None	N	Y		12	N	0	18	18	18
None	N	Y		12	N	0	24	24	24
Cold	Y	Y		12	N	0	12	12	12
Cold	Y	Y		12	N	0	24	24	24
Cold	Y	Y		12	N	0	18	18	18
None	N	Y		12	N	0	12	12	12
Cold	Y	Y		12	Y	12	24	12	18
None	N	Y		12	Y	12	24	12	18
None	N	Y		24	N	0	10	10	10
Cold	Y	Y		24	N	0	13	13	13
Cold	Y	Y		24	N	0	16	16	16
None	N	Y		24	N	0	16	16	16
None	N	Y		24	N	0	13	13	13
None	N	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	10	10	10
Cold	Y	Y		24	N	0	20	20	20
None	N	Y		24	N	0	10	10	10
Cold	Y	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	10	10	10
None	N	Y		24	N	0	16	16	16
None	N	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	13	13	13
Cold	Y	Y		24	N	0	16	16	16
None	N	Y		24	N	0	13	13	13
None	N	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	16	16	16
None	N	Y		24	N	0	13	13	13
None	N	Y		24	N	0	16	16	16
None	N	Y		24	N	0	10	10	10
Cold	Y	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	13	13	13
Cold	Y	Y		24	N	0	10	10	10
Cold	Y	NA	NA		Y	10	15	5	10
C+W	Y	NA	NA		Y	10	15	5	10
Cold	Y	NA	NA		Y	10	15	5	10
C+W	Y	NA	NA		Y	10	15	5	10
C+W	Y	NA	NA		Y	10	15	5	10
Cold	Y	NA	NA		Y	10	15	5	10
C+W	Y	NA	NA		Y	10	15	5	10
Cold	Y	NA	NA		Y	10	15	5	10
None	N	Y		12	N	0	20	20	20
None	N	Y		12	N	0	20	20	20

Cold	Y	NA	NA		N	0	20	20	20
Cold	Y	NA	NA		N	0	20	20	20
None	N	N		0	N	0	21	21	21
None	N	Y		24	N	0	12	12	12
None	N	N		0	N	0	12	12	12
Cold	Y	Y		24	N	0	21	21	21
None	N	Y		24	N	0	21	21	21
Cold	Y	N		0	N	0	21	21	21
Cold	Y	Y		24	N	0	12	12	12
Cold	Y	N		0	N	0	12	12	12
None	N	N		0	N	0	12	12	12
Cold	Y	N		0	N	0	12	12	12
None	N	Y		24	N	0	21	21	21
None	N	N		0	N	0	21	21	21
Cold	Y	Y		24	N	0	12	12	12
Cold	Y	Y		24	N	0	21	21	21
Cold	Y	N		0	N	0	21	21	21
None	N	Y		24	N	0	12	12	12
None	N	Y		16	Y	5	25	20	23.33333
None	N	Y		14	Y	5	18	13	15.91667
None	N	Y		14	Y	5	18	13	15.91667
Cold	Y	Y		12	Y	5	25	20	22.5
Cold	Y	Y		12	Y	5	25	20	22.5
Cold	Y	Y		12	Y	5	25	20	22.5
None	N	Y		0.1	N	0	10	10	10
None	N	NA	NA		N	0	20	20	20
Cold	Y	Y		12	Y	22	25	3	14
None	N	Y		0.1	N	0	5	5	5
None	N	NA	NA		N	0	20	20	20
None	N	Y		0.1	N	0	25	25	25
W+C	Y	Y		12	Y	22	25	3	14
None	N	Y		0.1	N	0	20	20	20
None	N	Y		0.1	N	0	15	15	15
None	N	NA	NA		N	0	20	20	20
Cold	Y	Y		12	Y	22	25	3	14
None	N	Y		14	Y	5	25	20	22.91667
None	N	Y		14	Y	5	15	10	12.91667
Cold	Y	Y		14	Y	5	25	20	22.91667
None	N	Y		14	Y	5	20	15	17.91667
None	N	Y		14	N	0	25	25	25
None	N	Y		14	Y	10	35	25	30.83333
None	N	Y		10	N	0	21	21	21
None	N	Y		12	N	0	20	20	20
None	N	Y		12	N	0	20	20	20
None	N	Y		12	N	0	20	20	20
None	N	Y		12	Y	10	20	10	15
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	Y		8	N	0	23	23	23
Cold	Y	N		0	Y	10	30	20	25
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	N	0	23	23	23
Cold	Y	N		0	N	0	23	23	23
Cold	Y	N		0	Y	10	30	20	25
None	N	Y		8	N	0	23	23	23
None	N	N		0	N	0	23	23	23

Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	N		0	Y	10	30	20	25
None	N	N		0	N	0	23	23	23
Cold	Y	Y		8	N	0	23	23	23
None	N	N		0	Y	10	30	20	25
Cold	Y	N		0	N	0	23	23	23
None	N	N		0	Y	15	18.5	3.5	11
None	N	Y		14	Y	15	18.5	3.5	12.25
None	N	N		0	Y	15	18.5	3.5	11
None	N	Y		14	Y	15	18.5	3.5	12.25
None	N	Y		0.1	N	0	20	20	20
Cold	Y	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
Cold	Y	Y		0.1	N	0	20	20	20
None	N	N		0	Y	12	28	16	22
None	N	Y		18	N	0	12	12	12
Cold	Y	Y		18	N	0	12	12	12
Cold	Y	N		0	N	0	20	20	20
None	N	N		0	N	0	25	25	25
Cold	Y	N		0	N	0	15	15	15
None	N	N		0	N	0	30	30	30
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	10	10	10
Cold	Y	N		0	N	0	30	30	30
Cold	Y	N		0	N	0	10	10	10
Cold	Y	N		0	N	0	25	25	25
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	30	30	30
None	N	N		0	N	0	5	5	5
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		12	Y	2	18	16	17
None	N	Y		8	N	0	22	22	22
None	N	N		0	Y	-1	8	9	8.5
None	N	N		0	Y	-1	14	15	14.5
None	N	Y		8	N	0	8	8	8
None	N	Y		8	N	0	20	20	20
None	N	N		0	Y	-1	22	23	22.5
None	N	N		0	Y	-1	6	7	6.5
None	N	Y		8	N	0	14	14	14
None	N	Y		8	N	0	4	4	4
None	N	N		0	Y	-1	26	27	26.5
None	N	NA	NA		N	0	6	6	6
None	N	Y		12	Y	10	21	11	16
None	N	Y		12	N	0	21	21	21
None	N	N		0	Y	-1	10	11	10.5
None	N	Y		12	Y	10	26	16	21
None	N	Y		8	N	0	16	16	16
None	N	NA	NA		Y	10	26	16	21
None	N	NA	NA		N	0	26	26	26
None	N	Y		8	N	0	18	18	18
None	N	N		0	Y	-11	18	29	23.5
None	N	N		0	Y	-1	4	5	4.5
None	N	N		0	Y	-1	20	21	20.5
None	N	NA	NA		N	0	21	21	21
None	N	NA	NA		N	0	31	31	31

None	N	NA	NA	N	0	11	11	11
None	N	Y	8	N	0	12	12	12
None	N	Y	8	N	0	2	2	2
None	N	N	0	Y	-1	2	3	2.5
None	N	N	0	Y	-1	12	13	12.5
None	N	N	0	Y	-1	24	25	24.5
None	N	Y	12	N	0	16	16	16
None	N	Y	8	N	0	10	10	10
None	N	N	0	Y	-1	16	17	16.5
None	N	Y	12	Y	14	33	19	26
None	N	Y	8	N	0	26	26	26
None	N	Y	8	N	0	24	24	24
None	N	NA	NA	N	0	16	16	16
None	N	Y	12	N	0	26	26	26
None	N	Y	8	N	0	6	6	6
None	N	NA	NA	Y	10	21	11	16
Cold	Y	Y	16	N	0	10	10	10
Cold	Y	Y	16	N	0	30	30	30
Cold	Y	N	0	N	0	30	30	30
Cold	Y	Y	16	N	0	25	25	25
Cold	Y	Y	16	N	0	15	15	15
Cold	Y	N	0	N	0	15	15	15
Cold	Y	Y	16	N	0	15	15	15
Cold	Y	N	0	N	0	10	10	10
Cold	Y	N	0	N	0	10	10	10
Cold	Y	N	0	N	0	25	25	25
Cold	Y	N	0	N	0	30	30	30
Cold	Y	Y	16	N	0	30	30	30
Cold	Y	N	0	N	0	15	15	15
Cold	Y	N	0	N	0	25	25	25
Cold	Y	Y	16	N	0	10	10	10
Cold	Y	Y	16	N	0	25	25	25
None	N	Y	12	Y	5	20	15	17.5
None	N	N	0	Y	5	20	15	17.5
None	N	NA	NA	N	0	20	20	20
Cold	Y	NA	NA	N	0	20	20	20
None	N	NA	NA	N	0	5	5	5
None	N	NA	NA	N	0	20	20	20
None	N	NA	NA	N	0	5	5	5
None	N	Y	24	Y	10	20	10	15
None	N	Y	24	Y	10	20	10	15
None	N	Y	12	N	0	15	15	15
None	N	Y	24	Y	10	20	10	15
None	N	Y	12	N	0	15	15	15
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	15	15	15
None	N	Y	12	N	0	15	15	15
None	N	Y	24	Y	10	20	10	15
None	N	Y	24	Y	10	20	10	15
None	N	Y	24	N	0	15	15	15
None	N	Y	24	N	0	15	15	15
None	N	Y	24	N	0	15	15	15
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	15	15	15

None	N	N	0	N	0	15	15	15
None	N	Y	12	N	0	15	15	15
None	N	Y	24	N	0	15	15	15
None	N	Y	24	N	0	15	15	15
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	15	15	15
None	N	Y	24	N	0	15	15	15
None	N	Y	24	N	0	15	15	15
None	N	N	0	N	0	15	15	15
None	N	Y	24	Y	10	20	10	15
None	N	Y	24	Y	10	20	10	15
None	N	Y	24	N	0	15	15	15
None	N	Y	24	Y	10	20	10	15
None	N	N	0	N	0	15	15	15
None	N	Y	12	N	0	15	15	15
None	N	Y	24	N	0	15	15	15
None	N	Y	24	Y	10	20	10	15
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	25	25	25
Cold	Y	Y	12	N	0	25	25	25
Cold	Y	Y	12	N	0	15	15	15
Cold	Y	Y	12	N	0	25	25	25
Cold	Y	Y	12	N	0	15	15	15
Cold	Y	Y	16	Y	15	25	10	20
None	N	Y	8	N	0	6	6	6
None	N	Y	8	N	0	29	29	29
None	N	Y	8	N	0	8	8	8
None	N	Y	8	Y	10	17	7	10.33333
None	N	Y	8	N	0	13	13	13
None	N	Y	8	N	0	27	27	27
None	N	Y	12	Y	10	21	11	16
None	N	N	0	Y	10	21	11	16
None	N	N	0	Y	10	21	11	16
None	N	Y	12	Y	10	21	11	16
None	N	Y	12	N	0	16	16	16
Cold	Y	Y	14	Y	9	25	16	21.25
None	N	Y	14	Y	9	25	16	21.25
Cold	Y	Y	14	Y	9	25	16	21.25
None	N	Y	14	N	0	22.5	22.5	22.5
None	N	N	0	Y	10	26	16	21
None	N	N	0	N	0	15	15	15
None	N	N	0	Y	10	20	10	15
None	N	Y	8	N	0	15	15	15
None	N	N	0	N	0	15	15	15
None	N	Y	8	N	0	10.4	10.4	10.4
None	N	Y	8	Y	10	26	16	19.33333
None	N	Y	8	N	0	15	15	15
None	N	Y	8	N	0	8.6	8.6	8.6
None	N	Y	8	Y	10	20	10	13.33333
None	N	Y	8	N	0	24.8	24.8	24.8
None	N	Y	8	N	0	19.4	19.4	19.4
None	N	Y	8	N	0	26.6	26.6	26.6
None	N	Y	8	N	0	21.2	21.2	21.2
None	N	Y	8	N	0	15.8	15.8	15.8

None	N	Y		8	N	0	23	23	23
None	N	Y		8	N	0	12.2	12.2	12.2
None	N	Y		8	Y	10	20	10	13.33333
None	N	Y		8	N	0	30.2	30.2	30.2
None	N	Y		8	N	0	5	5	5
None	N	Y		8	N	0	28.4	28.4	28.4
None	N	Y		8	N	0	14	14	14
None	N	Y		8	N	0	17.6	17.6	17.6
None	N	Y		8	Y	10	20	10	13.33333
None	N	Y		8	N	0	6.8	6.8	6.8
None	N	N		0	Y	10	25	15	20
Cold	Y	Y		12	Y	10	35	25	30
None	N	Y		12	N	0	25	25	25
None	N	Y		12	Y	15	35	20	27.5
None	N	N		0	Y	10	35	25	30
Cold	Y	Y		12	N	0	20	20	20
Cold	Y	Y		12	N	0	35	35	35
Cold	Y	Y		12	Y	10	15	5	10
None	N	Y		12	N	0	15	15	15
Cold	Y	Y		12	Y	10	25	15	20
None	N	Y		12	N	0	20	20	20
Cold	Y	Y		12	N	0	15	15	15
None	N	Y		12	Y	10	25	15	20
Cold	Y	Y		12	N	0	10	10	10
Cold	Y	Y		12	N	0	25	25	25
None	N	N		0	N	0	20	20	20
None	N	Y		12	Y	10	20	10	15
Cold	Y	Y		12	N	0	30	30	30
None	N	N		0	Y	10	20	10	15
None	N	N		0	N	0	35	35	35
Cold	Y	Y		12	Y	10	20	10	15
None	N	N		0	N	0	30	30	30
None	N	Y		12	N	0	35	35	35
None	N	N		0	N	0	25	25	25
None	N	N		0	Y	10	30	20	25
Cold	Y	Y		12	Y	10	30	20	25
None	N	Y		12	Y	10	30	20	25
None	N	Y		12	N	0	30	30	30
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	30	30	30
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	5	5	5
None	N	N		0	N	0	35	35	35
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	20	20	20
None	N	NA	NA		N	0	3	3	3
None	N	NA	NA		N	0	3	3	3
None	N	Y		0.1	Y	10	20	10	15
None	N	Y		0.1	Y	10	20	10	15
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		Y	5	30	25	27.5
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		Y	5	20	15	17.5
None	N	NA	NA		Y	5	15	10	12.5

None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		Y	5	25	20	22.5
None	N	Y		16	Y	10	30	20	26.66667
Cold	Y	Y		16	Y	10	30	20	26.66667
Cold	Y	Y		16	Y	10	30	20	26.66667
None	N	Y		16	Y	10	30	20	26.66667
Cold	Y	Y		16	Y	10	30	20	26.66667
None	N	Y		16	Y	10	30	20	26.66667
None	N	NA	NA		Y	10	15	5	10
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		14	N	0	22.5	22.5	22.5
None	N	NA	NA		N	0	20	20	20
None	N	Y		24	N	0	18	18	18
None	N	Y		24	N	0	25	25	25
Cold	Y	N		0	N	0	25	25	25
None	N	Y		24	N	0	18	18	18
Cold	Y	N		0	N	0	18	18	18
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	5	5	5
Cold	Y	N		0	N	0	20	20	20
Cold	Y	Y		14	N	0	15	15	15
Cold	Y	Y		14	N	0	20	20	20
Cold	Y	N		0	Y	10	20	10	15
Cold	Y	Y		14	Y	10	20	10	15.83333
Cold	Y	N		0	Y	15	30	15	22.5
Cold	Y	Y		14	Y	9	15	6	11.25
Cold	Y	Y		14	N	0	10	10	10
Cold	Y	Y		14	Y	15	30	15	23.75
Cold	Y	N		0	Y	9	15	6	10.5
Cold	Y	Y		14	N	0	5	5	5
Cold	Y	N		0	N	0	10	10	10
None	N	Y		16	Y	2	18	16	17.33333
None	N	NA	NA		N	0	21	21	21
None	N	NA	NA		Y	10	21	11	16
None	N	NA	NA		N	0	26	26	26
None	N	NA	NA		N	0	16	16	16
None	N	NA	NA		N	0	11	11	11
None	N	NA	NA		N	0	31	31	31
None	N	NA	NA		N	0	6	6	6
None	N	NA	NA		Y	10	26	16	21
None	N	NA	NA		N	0	31	31	31
None	N	NA	NA		N	0	26	26	26
None	N	NA	NA		N	0	16	16	16
None	N	NA	NA		N	0	11	11	11
None	N	NA	NA		Y	10	21	11	16
None	N	NA	NA		N	0	21	21	21
None	N	NA	NA		N	0	6	6	6
None	N	NA	NA		Y	10	26	16	21
None	N	Y		0.1	N	0	10	10	10
Cold	Y	Y		0.1	Y	20	30	10	20
None	N	Y		0.1	N	0	30	30	30

None	N	Y	0.1	Y	20	30	10	20
None	N	Y	0.1	Y	15	25	10	17.5
Cold	Y	Y	0.1	N	0	15	15	15
Cold	Y	Y	0.1	N	0	25	25	25
Cold	Y	Y	0.1	N	0	10	10	10
Cold	Y	Y	0.1	N	0	30	30	30
Cold	Y	Y	0.1	Y	10	30	20	25
None	N	Y	0.1	Y	10	30	20	25
Cold	Y	Y	0.1	N	0	20	20	20
None	N	Y	0.1	N	0	20	20	20
Cold	Y	Y	0.1	Y	15	25	10	17.5
None	N	Y	0.1	N	0	15	15	15
None	N	Y	0.1	N	0	25	25	25
None	N	Y	24	N	0	25	25	25
None	N	N	0	N	0	25	25	25
Cold	Y	N	0	N	0	25	25	25
Cold	Y	Y	24	N	0	25	25	25
None	N	Y	14	N	0	22.5	22.5	22.5
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	25	25	25
None	N	NA	NA	N	0	25	25	25
None	N	NA	NA	Y	10	30	20	25
None	N	NA	NA	N	0	25	25	25
None	N	NA	NA	Y	10	30	20	25
None	N	NA	NA	Y	10	30	20	25
Cold	Y	N	0	N	0	20	20	20
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	10	10	10
None	N	Y	24	N	0	10	10	10
None	N	N	0	N	0	10	10	10
None	N	Y	24	N	0	20	20	20
None	N	Y	24	N	0	30	30	30
None	N	N	0	N	0	30	30	30
None	N	N	0	N	0	20	20	20
None	N	Y	24	N	0	30	30	30
None	N	Y	24	N	0	10	10	10
None	N	Y	24	N	0	20	20	20
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	30	30	30
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	15	15	15
None	N	N	0	Y	20	25	5	15
None	N	Y	0.1	N	0	30	30	30
None	N	Y	0.1	N	0	30	30	30
None	N	Y	0.1	N	0	15	15	15
None	N	N	0	Y	20	25	5	15
None	N	Y	0.1	N	0	20	20	20
None	N	N	0	N	0	30	30	30
None	N	Y	0.1	N	0	25	25	25
None	N	N	0	N	0	20	20	20
None	N	Y	0.1	N	0	20	20	20
None	N	Y	0.1	Y	20	25	5	15
None	N	N	0	N	0	25	25	25
None	N	Y	0.1	Y	20	25	5	15
None	N	N	0	N	0	15	15	15
None	N	Y	0.1	N	0	25	25	25

None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	30	30	30
None	N	Y	0.1	N	0	15	15	15
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	0.1	N	0	30	30	30
None	N	Y	0.1	N	0	20	20	20
Cold	Y	N	0	N	0	18.3	18.3	18.3
None	N	N	0	N	0	20	20	20
None	N	Y	0.1	N	0	25	25	25
Cold	Y	N	0	N	0	29.4	29.4	29.4
None	N	N	0	N	0	15	15	15
Cold	Y	N	0	N	0	23.9	23.9	23.9
None	N	Y	0.1	N	0	15	15	15
Cold	Y	N	0	N	0	12.8	12.8	12.8
None	N	N	0	Y	10	25	15	20
None	N	N	0	N	0	25	25	25
None	N	Y	0.1	Y	10	25	15	20
None	N	N	0	N	0	30	30	30
None	N	Y	16	Y	10	20	10	16.66667
None	N	Y	16	Y	10	20	10	16.66667
Cold	Y	Y	16	Y	10	20	10	16.66667
Cold	Y	Y	16	Y	10	20	10	16.66667
Cold	Y	Y	16	Y	10	20	10	16.66667
None	N	Y	16	Y	10	20	10	16.66667
None	N	Y	14	N	0	22.5	22.5	22.5
None	N	Y	14	N	0	25	25	25
None	N	Y	24	N	0	25	25	25
Cold	Y	Y	16	N	0	22	22	22
Cold	Y	Y	16	N	0	22	22	22
None	N	Y	16	Y	8	22	14	19.33333
Cold	Y	Y	16	Y	8	22	14	19.33333
None	N	N	0	Y	8	22	14	18
Cold	Y	N	0	Y	8	22	14	18
None	N	N	0	N	0	23	23	23
None	N	N	0	N	0	23	23	23
W+C	Y	N	0	N	0	23	23	23
W+C	Y	Y	8	Y	10	30	20	23.33333
W+C	Y	N	0	Y	10	30	20	25
W+C	Y	N	0	N	0	23	23	23
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	N	0	Y	10	30	20	25
None	N	N	0	Y	10	30	20	25
None	N	Y	8	N	0	23	23	23
W+C	Y	Y	8	Y	10	30	20	23.33333
None	N	Y	8	N	0	23	23	23
W+C	Y	Y	8	N	0	23	23	23
W+C	Y	N	0	Y	10	30	20	25
W+C	Y	Y	8	N	0	23	23	23
None	N	Y	15	Y	10	32.8	22.8	29.05
None	N	Y	15	Y	10	37.8	27.8	34.05
None	N	Y	24	N	0	20	20	20
None	N	Y	24	N	0	30	30	30
None	N	Y	24	N	0	10	10	10
None	N	Y	12	Y	6	24	18	21
None	N	N	0	Y	6	24	18	21

None	N	N		0	Y	6	24	18	21
None	N	Y		12	Y	6	24	18	21
None	N	Y		12	Y	2	22	20	21
None	N	Y		12	Y	2	22	20	21
None	N	Y		12	N	0	20	20	20
None	N	Y		12	Y	2	22	20	21
None	N	Y		12	Y	2	22	20	21
Cold	Y	Y		8	Y	10	25	15	18.33333
Warm	Y	Y		8	N	0	15	15	15
W+C	Y	Y		8	Y	10	30	20	23.33333
Warm	Y	Y		8	Y	10	30	20	23.33333
W+C	Y	Y		8	N	0	15	15	15
None	N	Y		10	N	0	24	24	24
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	N	0	20	20	20
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		12	Y	6	28	22	25
None	N	Y		8	Y	5	25	20	21.66667
Cold	Y	Y		8	Y	5	25	20	21.66667
None	N	Y		12	Y	6	28	22	25
Cold	Y	NA	NA		N	0	13	13	13
Cold	Y	NA	NA		N	0	13	13	13
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		Y	9.3	23.4	14.1	18.75
None	N	NA	NA		Y	8	15.9	7.9	11.9
Cold	Y	Y		12	Y	10	30	20	25
None	N	Y		12	Y	20	30	10	20
None	N	Y		12	N	0	20	20	20
None	N	Y		12	N	0	25	25	25
None	N	Y		12	Y	10	25	15	20
None	N	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	25	25	25
Cold	Y	Y		12	N	0	30	30	30
Cold	Y	Y		12	N	0	20	20	20
Cold	Y	Y		12	Y	20	30	10	20
None	N	Y		12	Y	10	30	20	25
None	N	Y		12	N	0	30	30	30
Cold	Y	Y		12	Y	10	25	15	20
None	N	N		0	N	0	16	16	16
None	N	Y		12	Y	10	22	12	17
Cold	Y	Y		12	N	0	16	16	16
Cold	Y	Y		12	Y	10	22	12	17

None	N	Y	12	N	0	16	16	16
None	N	Y	12	Y	10	22	12	17
Cold	Y	Y	12	N	0	16	16	16
Cold	Y	Y	12	N	0	16	16	16
None	N	N	0	N	0	16	16	16
Cold	Y	N	0	Y	10	22	12	17
Cold	Y	N	0	N	0	16	16	16
Cold	Y	N	0	N	0	16	16	16
None	N	Y	12	N	0	16	16	16
Cold	Y	N	0	Y	10	22	12	17
None	N	N	0	Y	10	22	12	17
Cold	Y	N	0	Y	10	22	12	17
Cold	Y	N	0	N	0	16	16	16
None	N	N	0	Y	10	22	12	17
None	N	N	0	N	0	16	16	16
None	N	Y	12	N	0	16	16	16
None	N	Y	12	Y	10	22	12	17
Cold	Y	Y	12	Y	10	22	12	17
Cold	Y	Y	12	Y	10	22	12	17
None	N	N	0	Y	10	22	12	17
None	N	N	0	Y	10	25	15	20
None	N	N	0	N	0	10	10	10
None	N	N	0	N	0	15	15	15
None	N	Y	12	Y	10	25	15	20
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	5	5	5
None	N	Y	8	Y	7	27	20	22.33333
None	N	Y	24	N	0	30	30	30
None	N	Y	24	N	0	20	20	20
None	N	N	0	N	0	5	5	5
Cold	Y	Y	24	N	0	15	15	15
Cold	Y	Y	24	N	0	5	5	5
None	N	N	0	N	0	20	20	20
None	N	Y	24	N	0	15	15	15
None	N	Y	24	N	0	10	10	10
Cold	Y	Y	24	N	0	25	25	25
None	N	N	0	N	0	25	25	25
None	N	Y	24	N	0	5	5	5
Cold	Y	Y	24	N	0	10	10	10
Cold	Y	Y	24	N	0	20	20	20
None	N	Y	24	N	0	25	25	25
None	N	N	0	N	0	10	10	10
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	30	30	30
Cold	Y	Y	24	N	0	30	30	30
Cold	Y	Y	12	Y	9	15	6	10.5
Cold	Y	Y	12	Y	9	15	6	10.5
Cold	Y	Y	12	N	0	22	22	22
None	N	Y	8	Y	5	25	20	21.66667
Cold	Y	Y	8	Y	5	25	20	21.66667
Cold	Y	Y	12	N	0	22	22	22
Cold	Y	Y	12	N	0	22	22	22
Cold	Y	Y	12	N	0	22	22	22
None	N	Y	12	Y	10	30	20	25
None	N	Y	12	Y	25	35	10	22.5
None	N	Y	12	N	0	25	25	25

Cold	Y	Y		12	Y	10	30	20	25
None	N	Y		12	Y	10	30	20	25
None	N	Y		12	Y	10	25	15	20
None	N	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
Cold	Y	Y		8	Y	5	25	20	21.66667
None	N	Y		8	Y	5	25	20	21.66667
None	N	Y		24	N	0	20	20	20
None	N	Y		15	Y	8	25	17	22
None	N	Y		15	Y	8	25	17	22
None	N	Y		15	Y	8	25	17	22
None	N	Y		8	N	0	15	15	15
Cold	Y	Y		8	N	0	15	15	15
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	N	0	15	15	15
None	N	Y		8	N	0	15	15	15
None	N	Y		12	Y	10	30	20	25
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	15	30	15	22.5
Cold	Y	Y		12	Y	10	25	15	20
None	N	Y		12	Y	10	25	15	20
None	N	Y		12	N	0	5	5	5
None	N	Y		12	Y	10	25	15	20
None	N	Y		12	Y	9	15	6	10.5
None	N	NA	NA		N	0	20	20	20
None	N	Y		12	Y	10	20	10	15
Cold	Y	Y		12	Y	10	30	20	25
None	N	N		0	N	0	25	25	25
Cold	Y	Y		12	N	0	25	25	25
Cold	Y	Y		12	N	0	5	5	5
Warm	Y	Y		12	N	0	5	5	5
Warm	Y	Y		12	N	0	10	10	10
None	N	Y		12	N	0	10	10	10
None	N	Y		12	Y	15	25	10	17.5
Cold	Y	Y		12	N	0	20	20	20
None	N	N		0	N	0	15	15	15
Warm	Y	Y		12	N	0	15	15	15
None	N	Y		12	N	0	25	25	25
Warm	Y	Y		12	N	0	25	25	25
Cold	Y	Y		12	N	0	15	15	15
Warm	Y	Y		12	N	0	20	20	20
None	N	Y		12	N	0	15	15	15
Cold	Y	Y		12	Y	15	25	10	17.5
None	N	Y		12	N	0	5	5	5
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	5	5	5
None	N	N		0	N	0	20	20	20
None	N	Y		12	N	0	20	20	20
None	N	N		0	Y	15	25	10	17.5
Cold	Y	Y		12	N	0	10	10	10

	Warm	Y	Y	12	Y	15	25	10	17.5
	Cold	Y	Y	12	Y	10	30	20	25
	Cold	Y	Y	12	Y	10	30	20	25
	Cold	Y	N	0	N	0	35	35	35
	None	N	N	0	N	0	35	35	35
	None	N	N	0	N	0	10	10	10
	Cold	Y	N	0	N	0	30	30	30
	None	N	N	0	N	0	30	30	30
	Cold	Y	N	0	N	0	15	15	15
	None	N	N	0	N	0	40	40	40
	None	N	N	0	N	0	30	30	30
	None	N	N	0	N	0	30	30	30
	Cold	Y	N	0	N	0	30	30	30
	None	N	N	0	N	0	10	10	10
	None	N	N	0	N	0	25	25	25
	Cold	Y	N	0	N	0	15	15	15
	None	N	N	0	N	0	10	10	10
	Cold	Y	N	0	N	0	25	25	25
	Cold	Y	N	0	N	0	15	15	15
	None	N	N	0	N	0	25	25	25
	None	N	Y	8	Y	10	30	20	23.33333
	None	N	N	0	N	0	20	20	20
	None	N	N	0	N	0	15	15	15
	None	N	N	0	N	0	20	20	20
	Cold	Y	N	0	N	0	10	10	10
	Cold	Y	N	0	N	0	20	20	20
	Cold	Y	N	0	N	0	35	35	35
	Cold	Y	N	0	N	0	10	10	10
	Cold	Y	N	0	N	0	25	25	25
	None	N	N	0	N	0	35	35	35
	Cold	Y	N	0	N	0	30	30	30
	None	N	N	0	N	0	20	20	20
	None	N	N	0	N	0	15	15	15
	None	N	N	0	N	0	15	15	15
	Cold	Y	N	0	N	0	35	35	35
	Cold	Y	N	0	N	0	10	10	10
	None	N	N	0	N	0	25	25	25
	Cold	Y	N	0	N	0	20	20	20
	Cold	Y	N	0	N	0	20	20	20
	Cold	Y	N	0	N	0	25	25	25
	W+C	Y	Y	8	Y	10	25	15	18.33333
	None	N	N	0	Y	15	35	20	27.5
	None	N	N	0	N	0	20	20	20
	None	N	Y	12	N	0	15	15	15
	Cold	Y	Y	12	N	0	15	15	15
	None	N	Y	12	Y	10	25	15	20
	None	N	Y	12	Y	10	20	10	15
	Warm	Y	N	0	Y	10	20	10	15
	Warm	Y	Y	12	Y	15	30	15	22.5
	None	N	Y	12	Y	15	30	15	22.5
	Warm	Y	N	0	Y	15	35	20	27.5
	Cold	Y	N	0	N	0	35	35	35
	Warm	Y	N	0	Y	15	30	15	22.5
	None	N	N	0	Y	15	30	15	22.5
	None	N	N	0	N	0	15	15	15
	None	N	Y	12	Y	9	15	6	10.5

Warm	Y	Y	12	Y	15	35	20	27.5
None	N	N	0	N	0	25	25	25
None	N	Y	12	Y	9	15	6	10.5
None	N	N	0	Y	9	15	6	10.5
Warm	Y	Y	12	Y	10	20	10	15
None	N	Y	12	N	0	20	20	20
Cold	Y	Y	12	N	0	30	30	30
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	15	30	15	22.5
Warm	Y	Y	12	Y	9	15	6	10.5
Warm	Y	Y	12	Y	10	25	15	20
Warm	Y	N	0	Y	9	15	6	10.5
Cold	Y	N	0	N	0	25	25	25
Cold	Y	Y	12	N	0	35	35	35
Cold	Y	Y	12	Y	15	35	20	27.5
Cold	Y	Y	12	Y	10	20	10	15
None	N	N	0	N	0	30	30	30
None	N	Y	12	N	0	5	5	5
None	N	Y	12	N	0	25	25	25
Cold	Y	Y	12	N	0	20	20	20
Cold	Y	Y	12	Y	10	25	15	20
Cold	Y	N	0	N	0	20	20	20
None	N	Y	12	N	0	30	30	30
None	N	N	0	Y	10	25	15	20
Warm	Y	N	0	Y	10	25	15	20
Cold	Y	N	0	N	0	30	30	30
None	N	Y	12	Y	15	30	15	22.5
None	N	N	0	Y	10	20	10	15
Cold	Y	N	0	N	0	15	15	15
Cold	Y	Y	12	Y	9	15	6	10.5
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	15	35	20	27.5
None	N	Y	12	Y	10	25	15	20
Cold	Y	Y	12	Y	15	30	15	22.5
None	N	Y	12	Y	9	15	6	10.5
None	N	Y	12	N	0	35	35	35
None	N	N	0	N	0	35	35	35
Cold	Y	Y	12	N	0	25	25	25
None	N	Y	12	Y	15	35	20	27.5
Cold	Y	Y	12	Y	9	15	6	10.5
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	30	20	25
Cold	Y	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	25	15	20
Cold	Y	Y	12	Y	10	30	20	25
Cold	Y	Y	12	Y	10	25	15	20
None	N	Y	12	Y	9	15	6	10.5
None	N	Y	12	Y	10	30	20	25
None	N	Y	12	Y	10	35	25	30
None	N	Y	12	Y	10	30	20	25
Cold	Y	Y	12	Y	10	35	25	30
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	Y	10	15	5	10
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	10	0	5

None	N	Y		12	N	0	20	20	20
Cold	Y	NA	NA		Y	5	15	10	12.5
Cold	Y	NA	NA		Y	10	20	10	15
None	N	NA	NA		Y	5	15	10	12.5
None	N	NA	NA		Y	10	20	10	15
Cold	Y	NA	NA		Y	5	20	15	17.5
None	N	NA	NA		Y	5	20	15	17.5
Cold	Y	NA	NA		Y	10	25	15	20
None	N	NA	NA		Y	10	25	15	20
None	N	Y		14	Y	5	20	15	17.91667
None	N	Y		14	Y	4	5	1	3.333333
None	N	Y		14	Y	9	15	6	11.25
None	N	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	25	15	20.83333
None	N	Y		14	N	0	1	1	1
None	N	N		0	N	0	19	19	19
None	N	N		0	N	0	19	19	19
None	N	Y		12	N	0	15	15	15
None	N	N		0	N	0	35	35	35
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	30	30	30
None	N	Y		12	N	0	20	20	20
None	N	Y		12	N	0	35	35	35
None	N	Y		12	N	0	30	30	30
None	N	Y		12	N	0	25	25	25
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	30	30	30
None	N	Y		12	Y	10	30	20	25
Cold	Y	N		0	Y	10	40	30	35
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	35	35	35
Cold	Y	Y		12	N	0	30	30	30
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	Y		12	Y	10	25	15	20
Cold	Y	N		0	Y	10	25	15	20
None	N	N		0	N	0	25	25	25
None	N	Y		12	N	0	25	25	25
Cold	Y	N		0	N	0	35	35	35
None	N	Y		12	N	0	35	35	35
None	N	N		0	Y	10	35	25	30
None	N	Y		12	N	0	20	20	20
None	N	N		0	Y	10	40	30	35
Cold	Y	Y		12	Y	10	35	25	30
None	N	Y		12	Y	10	35	25	30
Cold	Y	Y		12	Y	10	30	20	25
Cold	Y	N		0	N	0	20	20	20
Cold	Y	Y		12	N	0	35	35	35
Cold	Y	N		0	N	0	30	30	30
None	N	Y		12	Y	10	40	30	35
Cold	Y	Y		12	N	0	25	25	25
Cold	Y	Y		12	Y	10	40	30	35
None	N	Y		12	N	0	30	30	30
None	N	N		0	Y	10	25	15	20
Cold	Y	N		0	N	0	25	25	25
Cold	Y	N		0	Y	10	35	25	30

None	N	Y	12	Y	10	25	15	20
None	N	N	0	Y	10	30	20	25
Cold	Y	Y	12	N	0	20	20	20
Cold	Y	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	20	10	15
None	N	N	0	Y	10	15	5	10
Cold	Y	Y	12	Y	10	25	15	20
None	N	N	0	Y	10	15	5	10
Cold	Y	N	0	Y	10	25	15	20
None	N	Y	12	Y	10	20	10	15
None	N	N	0	Y	10	20	10	15
None	N	Y	12	Y	10	15	5	10
Cold	Y	Y	12	Y	10	20	10	15
Cold	Y	N	0	Y	10	20	10	15
Cold	Y	N	0	Y	10	25	15	20
None	N	Y	12	Y	10	25	15	20
Cold	Y	N	0	Y	10	15	5	10
Cold	Y	N	0	Y	10	15	5	10
Cold	Y	Y	12	Y	10	25	15	20
Cold	Y	N	0	Y	10	20	10	15
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	Y	10	15	5	10
Cold	Y	Y	12	Y	10	15	5	10
None	N	N	0	Y	10	20	10	15
None	N	N	0	Y	10	25	15	20
None	N	N	0	Y	10	25	15	20
Cold	Y	Y	12	Y	10	15	5	10
Cold	Y	N	0	Y	10	25	15	20
None	N	N	0	Y	10	15	5	10
None	N	Y	12	Y	10	15	5	10
Cold	Y	N	0	Y	10	15	5	10
Cold	Y	N	0	Y	10	20	10	15
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	25	15	20
Cold	Y	Y	12	Y	10	15	5	10
None	N	N	0	Y	10	20	10	15
Cold	Y	Y	12	Y	10	25	15	20
Cold	Y	Y	12	Y	10	20	10	15
None	N	N	0	Y	10	25	15	20
None	N	N	0	Y	10	15	5	10
Cold	Y	N	0	Y	10	25	15	20
Cold	Y	N	0	Y	10	15	5	10
Cold	Y	Y	12	Y	10	20	10	15
None	N	N	0	Y	10	20	10	15
None	N	Y	12	Y	10	25	15	20
Cold	Y	Y	12	Y	10	25	15	20
Cold	Y	N	0	Y	10	20	10	15
None	N	N	0	Y	10	25	15	20
Cold	Y	Y	12	Y	10	15	5	10
None	N	Y	12	Y	10	15	5	10
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	15	5	10
Cold	Y	N	0	Y	10	25	15	20
Cold	Y	N	0	Y	10	15	5	10
Cold	Y	Y	12	Y	10	15	5	10
Cold	Y	N	0	Y	10	20	10	15

None	N	N	0	Y	10	20	10	15
None	N	Y	12	Y	10	20	10	15
None	N	N	0	Y	10	25	15	20
None	N	Y	12	Y	10	25	15	20
Cold	Y	Y	12	Y	10	25	15	20
None	N	N	0	Y	10	15	5	10
Cold	Y	Y	12	Y	10	20	10	15
None	N	N	0	N	0	20	20	20
Cold	Y	Y	8	N	0	15	15	15
None	N	Y	8	N	0	15	15	15
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	8	N	0	20	20	20
None	N	N	0	N	0	16.5	16.5	16.5
None	N	N	0	Y	10	19	9	14
None	N	Y	16	Y	10	19	9	15.66667
Cold	Y	Y	16	Y	10	19	9	15.66667
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	15	15	15
Cold	Y	N	0	N	0	15	15	15
Cold	Y	N	0	N	0	25	25	25
None	N	Y	16	N	0	15	15	15
None	N	N	0	N	0	25	25	25
None	N	Y	16	N	0	25	25	25
Cold	Y	Y	16	N	0	25	25	25
Cold	Y	N	0	N	0	22.5	22.5	22.5
Cold	Y	Y	16	N	0	15	15	15
Cold	Y	Y	16	N	0	22.5	22.5	22.5
None	N	Y	16	N	0	22.5	22.5	22.5
None	N	N	0	N	0	22.5	22.5	22.5
Cold	Y	N	0	N	0	20	20	20
Cold	Y	N	0	N	0	20	20	20
Cold	Y	N	0	N	0	20	20	20
Cold	Y	N	0	N	0	20	20	20
Cold	Y	N	0	N	0	20	20	20
Cold	Y	N	0	N	0	20	20	20
None	N	Y	16	Y	10	25	15	21.66667
None	N	Y	16	Y	10	25	15	21.66667
None	N	Y	24	N	0	10	10	10
None	N	N	0	N	0	18	18	18
None	N	N	0	N	0	14	14	14
None	N	Y	24	N	0	22	22	22
None	N	N	0	N	0	22	22	22
None	N	Y	24	N	0	18	18	18
None	N	N	0	N	0	10	10	10
None	N	Y	24	N	0	14	14	14
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	7.5	15	7.5	11.25
None	N	Y	12	Y	5	10	5	7.5
None	N	Y	12	Y	10	25	15	20
Cold	Y	Y	24	N	0	17	17	17
None	N	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	8	N	0	20	20	20

None	N	Y	16	Y	10	30	20	26.66667
Cold	Y	Y	16	Y	10	30	20	26.66667
None	N	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	8	N	0	20	20	20
Cold	Y	Y	8	N	0	20	20	20
None	N	Y	8	Y	10	30	20	23.33333
None	N	N	0	N	0	25	25	25
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	18	Y	6	24	18	22.5
None	N	N	0	N	0	10	10	10
Warm	Y	Y	12	N	0	25	25	25
None	N	Y	12	Y	10	15	5	10
Warm	Y	Y	12	N	0	15	15	15
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	N	0	15	15	15
None	N	Y	12	N	0	20	20	20
None	N	Y	12	Y	10	30	20	25
None	N	N	0	Y	15	35	20	27.5
Cold	Y	N	0	Y	15	35	20	27.5
None	N	N	0	Y	10	25	15	20
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	Y	15	30	15	22.5
Cold	Y	N	0	Y	10	25	15	20
None	N	N	0	Y	9	15	6	10.5
Cold	Y	N	0	Y	10	20	10	15
Cold	Y	Y	12	Y	10	25	15	20
None	N	N	0	Y	15	30	15	22.5
Cold	Y	Y	12	Y	15	30	15	22.5
Cold	Y	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	9	15	6	10.5
None	N	Y	12	Y	15	35	20	27.5
Cold	Y	N	0	Y	9	15	6	10.5
Cold	Y	Y	12	Y	15	35	20	27.5
None	N	N	0	Y	10	20	10	15
Cold	Y	N	0	Y	15	30	15	22.5
Cold	Y	Y	12	Y	12	22	10	16
Cold	Y	N	0	N	0	10	10	10
Cold	Y	Y	12	N	0	7	7	7
Cold	Y	N	0	Y	12	22	10	16
Cold	Y	Y	12	N	0	10	10	10
Cold	Y	Y	12	N	0	15	15	15
Cold	Y	N	0	N	0	25	25	25
Cold	Y	Y	12	Y	12	22	10	16
Cold	Y	N	0	N	0	15	15	15
Cold	Y	Y	12	N	0	15	15	15

Cold	Y	N		0	N	0	7	7	7
Cold	Y	Y		12	N	0	25	25	25
None	N	Y		14	Y	14	18	4	12.16667
None	N	Y		14	Y	14	18	4	12.16667
None	N	Y		12	Y	10	25	15	20
None	N	Y		12	Y	10	15	5	10
None	N	Y		12	Y	10	20	10	15
None	N	Y		12	Y	10	30	20	25
Cold	Y	N		0	N	0	5	5	5
None	N	Y		24	N	0	10	10	10
Cold	Y	Y		24	N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	35	35	35
Cold	Y	N		0	N	0	25	25	25
Cold	Y	N		0	N	0	35	35	35
None	N	Y		24	N	0	25	25	25
Cold	Y	N		0	N	0	10	10	10
Cold	Y	Y		24	N	0	35	35	35
Cold	Y	Y		24	N	0	25	25	25
None	N	Y		24	N	0	20	20	20
None	N	N		0	N	0	10	10	10
None	N	Y		24	N	0	5	5	5
Cold	Y	Y		24	N	0	5	5	5
None	N	Y		24	N	0	35	35	35
Cold	Y	Y		24	N	0	10	10	10
None	N	N		0	N	0	25	25	25
Cold	Y	N		0	N	0	20	20	20
None	N	N		0	N	0	5	5	5
Cold	Y	Y		24	N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	Y		24	N	0	25	25	25
None	N	Y		24	N	0	35	35	35
Cold	Y	Y		24	N	0	35	35	35
None	N	Y		24	N	0	20	20	20
Cold	Y	N		0	N	0	10	10	10
Cold	Y	Y		24	N	0	10	10	10
Cold	Y	N		0	N	0	35	35	35
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	35	35	35
Cold	Y	Y		24	N	0	5	5	5
None	N	Y		24	N	0	5	5	5
Cold	Y	Y		24	N	0	25	25	25
Cold	Y	N		0	N	0	5	5	5
None	N	N		0	N	0	25	25	25
Cold	Y	N		0	N	0	20	20	20
None	N	Y		24	N	0	10	10	10
Cold	Y	N		0	N	0	25	25	25
None	N	N		0	N	0	5	5	5
None	N	Y		24	N	0	22	22	22
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	5	5	5
Cold	Y	NA	NA		Y	10	25	15	20
Cold	Y	NA	NA		Y	10	25	15	20
None	N	NA	NA		N	0	5	5	5
None	N	Y		17	N	0	20	20	20
None	N	N		0	N	0	10	10	10

None	N	Y	17	N	0	20	20	20
None	N	Y	17	N	0	20	20	20
None	N	Y	17	N	0	20	20	20
None	N	Y	18	Y	23	29	6	23.25
None	N	Y	17	Y	19	23	4	17.45833
None	N	Y	17	Y	19	23	4	17.45833
None	N	Y	16	Y	17	18	1	12.33333
None	N	Y	18	Y	23	29	6	23.25
None	N	Y	16	Y	17	18	1	12.33333
None	N	Y	16	Y	17	18	1	12.33333
None	N	Y	17	Y	19	23	4	17.45833
None	N	Y	18	Y	23	29	6	23.25
None	N	Y	18	Y	23	29	6	23.25
None	N	Y	17	Y	19	23	4	17.45833
None	N	Y	16	Y	17	18	1	12.33333
None	N	Y	16	Y	17	18	1	12.33333
None	N	Y	16	Y	17	18	1	12.33333
None	N	Y	18	Y	23	29	6	23.25
None	N	Y	17	Y	19	23	4	17.45833
None	N	Y	17	Y	19	23	4	17.45833
None	N	Y	18	Y	23	29	6	23.25
Warm	Y	Y	16	Y	5	20	15	18.33333
None	N	Y	17	Y	19	23	4	17.45833
None	N	Y	16	Y	17	18	1	12.33333
None	N	Y	16	Y	17	18	1	12.33333
None	N	Y	18	Y	23	29	6	23.25
None	N	Y	17	Y	19	23	4	17.45833
None	N	Y	16	Y	5	20	15	18.33333
None	N	Y	18	Y	23	29	6	23.25
None	N	Y	11	Y	6	24	18	20.75
None	N	N	0	N	0	25	25	25
Cold	Y	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	12	N	0	18	18	18
None	N	Y	12	Y	10	12.5	2.5	7.5
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	27.5	17.5	22.5
None	N	Y	12	N	0	21	21	21
None	N	Y	12	N	0	24	24	24
None	N	Y	12	N	0	12	12	12
None	N	Y	12	Y	10	17.5	7.5	12.5
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	N	0	27	27	27
None	N	Y	12	Y	10	15	5	10
None	N	Y	12	Y	10	30	20	25
None	N	Y	12	Y	10	22.5	12.5	17.5
None	N	Y	12	N	0	9	9	9
None	N	Y	12	N	0	6	6	6
None	N	Y	12	N	0	15	15	15
Cold	Y	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333

None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	10	30	20	23.33333
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	30	20	25
None	N	Y	12	Y	10	15	5	10
None	N	Y	12	Y	10	15	5	10
None	N	Y	12	Y	10	25	15	20
None	N	Y	12	Y	10	30	20	25
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	10	30	20	25
None	N	Y	12	Y	10	15	5	10
None	N	Y	12	Y	10	25	15	20
None	N	N	0	N	0	25	25	25
None	N	Y	24	N	0	25	25	25
None	N	Y	16	N	0	20	20	20
None	N	Y	16	N	0	10	10	10
None	N	Y	16	N	0	15	15	15
None	N	Y	16	N	0	5	5	5
None	N	Y	16	N	0	25	25	25
Cold	Y	NA	NA	N	0	15	15	15
None	N	N	0	N	0	20	20	20
None	N	Y	0.1	N	0	25	25	25
None	N	Y	0.1	N	0	5	5	5
None	N	N	0	N	0	30	30	30
None	N	Y	0.1	N	0	20	20	20
None	N	N	0	N	0	15	15	15
None	N	Y	0.1	N	0	15	15	15
None	N	N	0	N	0	10	10	10
None	N	Y	0.1	N	0	10	10	10
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	5	5	5
None	N	Y	0.1	N	0	30	30	30
Cold	Y	Y	15	N	0	20	20	20
Cold	Y	Y	15	N	0	20	20	20
None	N	Y	12	Y	9	15	6	10.5
None	N	Y	12	N	0	5	5	5
None	N	Y	12	Y	10	20	10	15
None	N	Y	12	Y	4	5	1	3
Cold	Y	Y	12	N	0	7.8	7.8	7.8
Cold	Y	Y	12	N	0	30	30	30
Cold	Y	Y	12	N	0	5	5	5
Cold	Y	Y	12	N	0	21.7	21.7	21.7
Cold	Y	Y	12	N	0	27.2	27.2	27.2
Cold	Y	Y	12	N	0	18.9	18.9	18.9
Cold	Y	Y	12	N	0	16.1	16.1	16.1
Cold	Y	Y	12	N	0	24.4	24.4	24.4
Cold	Y	Y	12	N	0	13.3	13.3	13.3
Cold	Y	Y	12	N	0	10.6	10.6	10.6
None	N	N	0	Y	10	20	10	15
None	N	Y	8	Y	10	20	10	13.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	N	0	Y	20	30	10	20
None	N	N	0	Y	10	10	0	5

None	N	Y		8	Y	10	10	0	3.333333
None	N	Y		8	Y	20	30	10	16.66667
None	N	N		0	Y	10	30	20	25
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	10	10	10
None	N	N		0	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	N		0	N	0	20	20	20
Cold	Y	Y		16	N	0	28	28	28
None	N	Y		12	N	0	20	20	20
Cold	Y	Y		12	Y	5	15	10	12.5
Cold	Y	Y		12	Y	5	35	30	32.5
Cold	Y	Y		12	Y	5	25	20	22.5
Cold	Y	Y		12	Y	5	20	15	17.5
None	N	Y		12	N	0	20	20	20
Cold	Y	Y		12	Y	10	15	5	10
Cold	Y	Y		12	Y	10	25	15	20
None	N	Y		12	N	0	20	20	20
None	N	Y		16	N	0	22.5	22.5	22.5
None	N	Y		16	N	0	12.5	12.5	12.5
None	N	Y		16	N	0	25	25	25
None	N	Y		16	N	0	11	11	11
Cold	Y	Y		16	N	0	25	25	25
None	N	Y		16	N	0	10	10	10
None	N	Y		16	N	0	20	20	20
None	N	Y		16	N	0	17.5	17.5	17.5
Cold	Y	Y		16	N	0	20	20	20
Cold	Y	Y		16	N	0	12.5	12.5	12.5
Cold	Y	Y		16	N	0	10	10	10
Cold	Y	Y		16	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	12.5	12.5	12.5
None	N	Y		16	N	0	25	25	25
Cold	Y	Y		16	N	0	12.5	12.5	12.5
None	N	Y		16	N	0	15	15	15
None	N	Y		16	N	0	20	20	20
None	N	Y		16	N	0	17.5	17.5	17.5
None	N	Y		16	N	0	10	10	10
Cold	Y	Y		16	N	0	10	10	10
None	N	Y		16	N	0	22.5	22.5	22.5
Cold	Y	Y		16	N	0	20	20	20
Cold	Y	Y		16	N	0	15	15	15
None	N	Y		16	N	0	11	11	11
Cold	Y	Y		16	N	0	25	25	25
None	N	Y		16	N	0	17.5	17.5	17.5
None	N	Y		16	N	0	11	11	11
Cold	Y	Y		16	N	0	20	20	20
None	N	Y		16	N	0	10	10	10
Cold	Y	Y		16	N	0	12.5	12.5	12.5
None	N	Y		16	N	0	20	20	20
Cold	Y	Y		16	N	0	15	15	15
Cold	Y	Y		16	N	0	25	25	25
None	N	Y		16	N	0	12.5	12.5	12.5
None	N	Y		16	N	0	25	25	25

Cold	Y	Y	16	N	0	10	10	10
None	N	Y	16	N	0	15	15	15
None	N	Y	16	N	0	22.5	22.5	22.5
None	N	N	0	N	0	35	35	35
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	35	35	35
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	35	35	35
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	35	35	35
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	15	15	15
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	35	35	35
None	N	N	0	N	0	25	25	25
None	N	N	0	N	0	35	35	35
None	N	N	0	N	0	15	15	15
None	N	Y	18	N	0	26	26	26
None	N	Y	18	N	0	23	23	23
None	N	Y	18	N	0	30	30	30
None	N	Y	12	N	0	20	20	20
Cold	Y	Y	12	Y	10	20	10	15
Cold	Y	Y	12	Y	10	25	15	20
None	N	Y	12	N	0	20	20	20
Cold	Y	Y	12	Y	10	15	5	10
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	20	20	20
None	N	NA	NA	N	0	20	20	20
Cold	Y	N	0	N	0	26	26	26
None	N	N	0	N	0	20	20	20
None	N	N	0	N	0	26	26	26
Cold	Y	N	0	N	0	20	20	20
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	12	Y	10	15	5	10
Cold	Y	Y	12	Y	10	20	10	15
Cold	Y	Y	12	Y	10	25	15	20
None	N	Y	12	N	0	20	20	20
None	N	Y	12	N	0	20	20	20
None	N	Y	8	Y	10	30	20	23.33333
Cold	Y	Y	8	Y	15	25	10	15
None	N	N	0	N	0	25	25	25
None	N	Y	12	Y	10	30	20	25
None	N	Y	12	Y	10	30	20	25
None	N	Y	12	Y	10	30	20	25

Cold	Y	N		0	Y	10	22	12	17
Cold	Y	Y		24	Y	10	30	20	25
None	N	N		0	Y	10	30	20	25
None	N	Y		24	Y	10	15	5	10
None	N	Y		24	Y	10	30	20	25
Cold	Y	Y		12	Y	10	15	5	10
Cold	Y	Y		24	Y	10	22	12	17
Cold	Y	Y		12	Y	10	22	12	17
Cold	Y	Y		24	Y	10	15	5	10
None	N	N		0	Y	10	15	5	10
None	N	Y		12	Y	10	22	12	17
None	N	Y		24	Y	10	22	12	17
Cold	Y	N		0	Y	10	15	5	10
None	N	N		0	Y	10	22	12	17
Cold	Y	N		0	Y	10	30	20	25
None	N	Y		8	N	0	15	15	15
None	N	Y		8	N	0	35	35	35
None	N	Y		8	N	0	25	25	25
None	N	Y		8	N	0	10	10	10
None	N	Y		8	N	0	20	20	20
None	N	N		0	N	0	5	5	5
None	N	Y		8	Y	6	14	8	10
None	N	N		0	Y	6	14	8	11
None	N	N		0	N	0	35	35	35
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	15	15	15
None	N	Y		8	N	0	30	30	30
None	N	N		0	N	0	8	8	8
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	30	30	30
None	N	Y		8	N	0	8	8	8
None	N	N		0	N	0	20	20	20
None	N	Y		8	N	0	5	5	5
None	N	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	25	25	25
Cold	Y	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	10	10	10
Cold	Y	Y		24	N	0	15	15	15
Cold	Y	Y		24	N	0	10	10	10
Cold	Y	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	15	15	15
Cold	Y	Y		24	N	0	25	25	25
Cold	Y	NA	NA		N	0	20	20	20
Cold	Y	NA	NA		N	0	20	20	20
None	N	Y		12	N	0	15	15	15
None	N	N		0	N	0	1	1	1
None	N	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	15	15	15
None	N	Y		12	N	0	1	1	1
Cold	Y	Y		12	N	0	15	15	15
None	N	Y		16	N	0	15	15	15
None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
None	N	N		0	N	0	20	20	20
None	N	Y		8	Y	10	30	20	23.33333

None	N	Y		8	Y	10	30	20	23.33333
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	Y		24	N	0	25	25	25
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	23	23	23
Cold	Y	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	14	14	14
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	11	11	11
None	N	N		0	N	0	26	26	26
None	N	N		0	N	0	17	17	17
Cold	Y	N		0	N	0	15	15	15
Cold	Y	N		0	N	0	30	30	30
Cold	Y	N		0	N	0	30	30	30
Cold	Y	N		0	N	0	15	15	15
None	N	Y		24	N	0	25	25	25
None	N	Y		24	N	0	25	25	25
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	25	25	25
None	N	Y		24	N	0	20	20	20
None	N	Y		24	N	0	25	25	25
None	N	Y		24	N	0	30	30	30
None	N	Y		24	N	0	30	30	30
None	N	N		0	N	0	20	20	20
None	N	Y		24	N	0	10	10	10
None	N	Y		24	N	0	15	15	15
None	N	N		0	N	0	20	20	20
None	N	Y		8	N	0	20	20	20
None	N	N		0	N	0	25	25	25
None	N	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
Cold	Y	Y		8	Y	10	30	20	23.33333
None	N	N		0	N	0	25	25	25
None	N	Y		8	N	0	25	25	25
None	N	N		0	N	0	4	4	4
None	N	Y		8	Y	21	25	4	11
None	N	N		0	Y	21	25	4	14.5
None	N	Y		0.1	N	0	4	4	4
None	N	Y		8	Y	10	30	20	23.33333
None	N	N		0	N	0	20	20	20
None	N	Y		0.1	N	0	20	20	20
None	N	Y		12	Y	4	21.5	17.5	19.5
None	N	Y		12	Y	4	21.5	17.5	19.5
None	N	Y		12	Y	4	21.5	17.5	19.5
None	N	Y		12	Y	4	21.5	17.5	19.5
Cold	Y	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	NA	NA		N	0	16	16	16
None	N	NA	NA		N	0	38	38	38

None	N	NA	NA	N	0	22	22	22
None	N	NA	NA	N	0	26	26	26
None	N	NA	NA	N	0	12	12	12
None	N	NA	NA	N	0	24	24	24
None	N	NA	NA	N	0	30	30	30
None	N	NA	NA	N	0	14	14	14
None	N	NA	NA	N	0	28	28	28
None	N	NA	NA	N	0	34	34	34
None	N	NA	NA	N	0	36	36	36
None	N	NA	NA	N	0	10	10	10
None	N	NA	NA	N	0	8	8	8
None	N	NA	NA	N	0	32	32	32
None	N	NA	NA	N	0	20	20	20
None	N	NA	NA	N	0	18	18	18
None	N	NA	NA	N	0	6	6	6
Cold	Y	Y		8 Y	5	15	10	11.66667
Cold	Y	Y		8 Y	10	30	20	23.33333
Cold	Y	Y		8 Y	5	15	10	11.66667
Cold	Y	Y		8 Y	10	30	20	23.33333
Cold	Y	Y		8 Y	5	15	10	11.66667
Cold	Y	Y		8 Y	10	30	20	23.33333
Cold	Y	Y		8 Y	5	15	10	11.66667
Cold	Y	Y		8 Y	10	30	20	23.33333
Cold	Y	Y		8 Y	10	30	20	23.33333
Cold	Y	Y		8 Y	5	15	10	11.66667
None	N	N		0 Y	10	25	15	20
None	N	N		0 Y	10	30	20	25
None	N	N		0 Y	10	15	5	10
None	N	Y		8 Y	10	30	20	23.33333
None	N	Y		8 Y	10	25	15	18.33333
None	N	Y		8 Y	10	20	10	13.33333
None	N	N		0 Y	10	20	10	15
None	N	Y		8 Y	10	15	5	8.333333
Cold	Y	NA	NA	N	0	25	25	25
None	N	NA	NA	N	0	25	25	25
None	N	Y		24 N	0	18	18	18
None	N	N		0 N	0	18	18	18
None	N	Y		24 N	0	14	14	14
None	N	Y		24 N	0	18	18	18
None	N	Y		24 N	0	24	24	24
None	N	Y		24 N	0	30	30	30
None	N	Y		24 N	0	35	35	35
None	N	Y		24 N	0	24	24	24
None	N	Y		24 N	0	18	18	18
None	N	Y		24 N	0	18	18	18
None	N	Y		24 N	0	30	30	30
None	N	Y		24 N	0	35	35	35
None	N	N		0 N	0	18	18	18
None	N	Y		24 N	0	14	14	14
Warm	Y	Y		12 Y	15	30	15	22.5
Warm	Y	Y		12 N	0	5	5	5
Warm	Y	Y		12 Y	10	20	10	15
Warm	Y	Y		12 Y	10	20	10	15
None	N	Y		12 Y	10	20	10	15
Warm	Y	Y		12 Y	9	15	6	10.5
Warm	Y	Y		12 Y	10	25	15	20

	Warm	Y	Y	12	Y	15	35	20	27.5
	None	N	Y	8	Y	10	30	20	23.33333
	Cold	Y	Y	8	Y	10	30	20	23.33333
	Cold	Y	Y	24	N	0	20	20	20
	Cold	Y	Y	24	N	0	18	18	18
	None	N	Y	24	N	0	25	25	25
	None	N	Y	24	N	0	18	18	18
	None	N	Y	24	N	0	20	20	20
	Cold	Y	Y	24	N	0	25	25	25
	None	N	Y	24	N	0	20	20	20
	None	N	Y	24	N	0	18	18	18
	Cold	Y	Y	24	N	0	20	20	20
	Cold	Y	Y	24	N	0	18	18	18
	Cold	Y	Y	24	N	0	25	25	25
	None	N	Y	8	Y	10	30	20	23.33333
	None	N	Y	24	N	0	25	25	25
	Cold	Y	Y	8	Y	10	30	20	23.33333
	Warm	Y	NA	NA	N	0	4	4	4
	None	N	Y	16	N	0	24	24	24
	None	N	Y	16	N	0	24	24	24
	None	N	Y	16	Y	14	24	10	19.33333
	None	N	Y	16	Y	14	24	10	19.33333
	None	N	Y	16	Y	22	24	2	16.66667
	None	N	Y	16	Y	14	24	10	19.33333
	Cold	Y	Y	16	Y	22	24	2	16.66667
	Cold	Y	N	0	Y	22	24	2	13
	Cold	Y	N	0	Y	22	24	2	13
	None	N	Y	16	N	0	24	24	24
	None	N	N	0	N	0	24	24	24
	None	N	N	0	Y	22	24	2	13
	None	N	N	0	N	0	24	24	24
	None	N	Y	16	Y	22	24	2	16.66667
	None	N	N	0	Y	22	24	2	13
	Cold	Y	Y	16	Y	22	24	2	16.66667
	None	N	N	0	N	0	24	24	24
	None	N	N	0	Y	22	24	2	13
	Cold	Y	Y	16	Y	22	24	2	16.66667
	None	N	Y	16	Y	22	24	2	16.66667
	Cold	Y	N	0	Y	22	24	2	13
	None	N	N	0	N	0	5	5	5
	None	N	N	0	N	0	15	15	15
	None	N	N	0	N	0	10	10	10
	None	N	N	0	N	0	25	25	25
	None	N	N	0	N	0	30	30	30
	None	N	N	0	N	0	20	20	20
	None	N	N	0	N	0	15	15	15
	None	N	N	0	N	0	10	10	10
	None	N	N	0	N	0	20	20	20
	None	N	N	0	N	0	30	30	30
	None	N	N	0	N	0	25	25	25
	None	N	N	0	N	0	5	5	5
	None	N	N	0	N	0	20	20	20
	None	N	N	0	N	0	25	25	25
	None	N	N	0	N	0	10	10	10
	None	N	N	0	N	0	5	5	5
	None	N	N	0	N	0	30	30	30

None	N	N		0	N	0	15	15	15
Cold	Y	Y		12	N	0	23	23	23
Cold	Y	N		0	N	0	23	23	23
None	N	Y		12	N	0	23	23	23
Cold	Y	N		0	N	0	23	23	23
Cold	Y	Y		12	N	0	23	23	23
None	N	Y		12	N	0	23	23	23
None	N	N		0	N	0	5	5	5
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	10	10	10
None	N	N		0	N	0	30	30	30
None	N	Y		8	Y	10	30	20	23.33333
None	N	N		0	Y	10	30	20	25
None	N	Y		16	N	0	16	16	16
None	N	NA	NA		N	0	9	9	9
None	N	NA	NA		N	0	14	14	14
None	N	NA	NA		N	0	26	26	26
None	N	NA	NA		N	0	22	22	22
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	24	24	24
None	N	NA	NA		N	0	28	28	28
None	N	NA	NA		N	0	30	30	30
None	N	NA	NA		N	0	12	12	12
None	N	NA	NA		N	0	7	7	7
None	N	NA	NA		N	0	32	32	32
None	N	NA	NA		N	0	16	16	16
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	18	18	18
None	N	Y		24	N	0	22	22	22
None	N	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	20	20	20
Cold	Y	Y		24	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
None	N	Y		8	Y	20	30	10	16.66667
None	N	NA	NA		Y	10	25	15	20
Cold	Y	Y		14	Y	10	20	10	15.83333
None	N	Y		14	Y	10	15	5	10.83333
None	N	N		0	Y	10	15	5	10
None	N	N		0	Y	10	30	20	25
None	N	Y		14	Y	10	20	10	15.83333
Cold	Y	N		0	Y	10	30	20	25
Cold	Y	N		0	Y	10	15	5	10
Cold	Y	N		0	Y	10	20	10	15
None	N	N		0	Y	10	20	10	15
None	N	Y		14	Y	10	30	20	25.83333
Cold	Y	Y		14	Y	10	15	5	10.83333
Cold	Y	Y		14	Y	10	30	20	25.83333
None	N	NA	NA		N	0	25	25	25
Cold	Y	Y		14	Y	12	22	10	17
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	15	15	15
Warm	Y	NA	NA		Y	10	20	10	15
None	N	NA	NA		N	0	20	20	20

	Warm	Y	NA	NA	N	0	20	20	20
	None	N	NA	NA	N	0	10	10	10
	None	N	NA	NA	Y	10	20	10	15
	Warm	Y	NA	NA	N	0	15	15	15
	Warm	Y	NA	NA	N	0	10	10	10
	None	N	N	0	N	0	25	25	25
	None	N	Y	0.1	N	0	25	25	25
	None	N	N	0	N	0	25	25	25
	None	N	N	0	N	0	25	25	25
	None	N	Y	0.1	N	0	25	25	25
	None	N	Y	16	Y	10	22	12	18.66667
	None	N	N	0	Y	10	22	12	17
	None	N	N	0	Y	4	22	18	20
	None	N	Y	16	Y	1	22	21	21.66667
	None	N	Y	16	Y	9	22	13	19
	None	N	N	0	Y	7	22	15	18.5
	None	N	Y	16	Y	9	22	13	19
	None	N	Y	16	Y	5	22	17	20.33333
	None	N	Y	16	Y	5	22	17	20.33333
	None	N	Y	16	Y	1	22	21	21.66667
	None	N	N	0	Y	1	22	21	21.5
	None	N	Y	16	N	0	22	22	22
	None	N	N	0	Y	12	22	10	16
	None	N	Y	16	Y	3	22	19	21
	None	N	N	0	Y	3	22	19	20.5
	None	N	N	0	Y	1	22	21	21.5
	None	N	N	0	Y	5	22	17	19.5
	None	N	Y	16	Y	7	22	15	19.66667
	None	N	N	0	Y	2	22	20	21
	None	N	Y	16	Y	5	22	17	20.33333
	None	N	N	0	Y	8	22	14	18
	None	N	Y	16	Y	3	22	19	21
	None	N	N	0	Y	10	22	12	17
	None	N	N	0	Y	10	22	12	17
	None	N	Y	16	Y	4	22	18	20.66667
	None	N	N	0	N	0	22	22	22
	None	N	Y	16	Y	1	22	21	21.66667
	None	N	Y	16	Y	4	22	18	20.66667
	None	N	Y	16	Y	8	22	14	19.33333
	None	N	Y	16	Y	2	22	20	21.33333
	None	N	N	0	Y	6	22	16	19
	None	N	Y	16	N	0	22	22	22
	None	N	Y	16	Y	10	22	12	18.66667
	None	N	N	0	Y	2	22	20	21
	None	N	Y	16	Y	9	22	13	19
	None	N	N	0	Y	6	22	16	19
	None	N	N	0	Y	3	22	19	20.5
	None	N	Y	16	Y	8	22	14	19.33333
	None	N	N	0	Y	9	22	13	17.5
	None	N	Y	16	Y	6	22	16	20
	None	N	Y	16	Y	4	22	18	20.66667
	None	N	Y	16	Y	2	22	20	21.33333
	None	N	N	0	Y	8	22	14	18
	None	N	N	0	Y	8	22	14	18
	None	N	Y	16	N	0	22	22	22
	None	N	Y	16	Y	5	22	17	20.33333

None	N	Y	16	Y	9	22	13	19
None	N	N	0	Y	7	22	15	18.5
None	N	Y	16	Y	12	22	10	18
None	N	Y	16	Y	10	22	12	18.66667
None	N	Y	16	Y	2	22	20	21.33333
None	N	Y	16	Y	6	22	16	20
None	N	N	0	Y	6	22	16	19
None	N	N	0	Y	5	22	17	19.5
None	N	Y	16	Y	12	22	10	18
None	N	N	0	Y	1	22	21	21.5
None	N	N	0	Y	2	22	20	21
None	N	N	0	Y	2	22	20	21
None	N	Y	16	Y	10	22	12	18.66667
None	N	Y	16	Y	1	22	21	21.66667
None	N	Y	16	Y	6	22	16	20
None	N	N	0	Y	4	22	18	20
None	N	Y	16	Y	7	22	15	19.66667
None	N	Y	16	Y	7	22	15	19.66667
None	N	Y	16	Y	12	22	10	18
None	N	Y	16	Y	10	22	12	18.66667
None	N	Y	16	Y	4	22	18	20.66667
None	N	N	0	Y	3	22	19	20.5
None	N	Y	16	Y	9	22	13	19
None	N	N	0	Y	6	22	16	19
None	N	N	0	Y	5	22	17	19.5
None	N	Y	16	Y	7	22	15	19.66667
None	N	Y	16	N	0	22	22	22
None	N	N	0	Y	4	22	18	20
None	N	Y	16	Y	8	22	14	19.33333
None	N	N	0	Y	1	22	21	21.5
None	N	N	0	Y	12	22	10	16
None	N	N	0	Y	10	22	12	17
None	N	N	0	Y	4	22	18	20
None	N	N	0	Y	7	22	15	18.5
None	N	Y	16	Y	6	22	16	20
None	N	N	0	Y	9	22	13	17.5
None	N	Y	16	Y	2	22	20	21.33333
None	N	N	0	Y	8	22	14	18
None	N	N	0	Y	9	22	13	17.5
None	N	Y	16	N	0	22	22	22
None	N	N	0	Y	9	22	13	17.5
None	N	N	0	Y	2	22	20	21
None	N	Y	16	Y	3	22	19	21
None	N	Y	16	Y	6	22	16	20
None	N	N	0	Y	6	22	16	19
None	N	Y	16	Y	1	22	21	21.66667
None	N	Y	16	Y	3	22	19	21
None	N	Y	16	Y	8	22	14	19.33333
None	N	N	0	Y	12	22	10	16
None	N	N	0	Y	5	22	17	19.5
None	N	N	0	Y	10	22	12	17
None	N	N	0	Y	7	22	15	18.5
None	N	Y	16	Y	8	22	14	19.33333
None	N	N	0	Y	3	22	19	20.5
None	N	Y	16	Y	3	22	19	21
None	N	N	0	Y	4	22	18	20

None	N	Y		16	Y	5	22	17	20.33333
None	N	N		0	Y	3	22	19	20.5
None	N	N		0	Y	8	22	14	18
None	N	N		0	Y	7	22	15	18.5
None	N	N		0	N	0	22	22	22
None	N	Y		16	Y	7	22	15	19.66667
None	N	Y		16	Y	12	22	10	18
None	N	N		0	Y	1	22	21	21.5
None	N	Y		16	Y	2	22	20	21.33333
None	N	Y		16	Y	12	22	10	18
None	N	Y		16	Y	4	22	18	20.66667
None	N	N		0	Y	9	22	13	17.5
None	N	N		0	Y	5	22	17	19.5
None	N	N		0	Y	12	22	10	16
None	N	N		0	Y	12	22	10	16
None	N	N		0	N	0	22	22	22
None	N	N		0	N	0	22	22	22
None	N	N		0	N	0	22	22	22
Cold	Y	N		0	Y	7	22	15	18.5
Cold	Y	N		0	Y	7	22	15	18.5
Cold	Y	N		0	Y	7	22	15	18.5
Cold	Y	N		0	Y	7	22	15	18.5
None	N	Y		8	Y	5	21	16	17.66667
None	N	Y		8	Y	5	24	19	20.66667
None	N	Y		8	Y	5	33	28	29.66667
None	N	Y		8	Y	5	15	10	11.66667
None	N	Y		8	Y	5	18	13	14.66667
None	N	Y		8	Y	5	27	22	23.66667
None	N	Y		8	Y	5	36	31	32.66667
None	N	Y		8	Y	5	30	25	26.66667
Cold	Y	Y		14	N	0	15	15	15
None	N	N		0	Y	5	20	15	17.5
None	N	Y		14	Y	5	20	15	17.91667
None	N	Y		14	Y	17	25	8	17.91667
Cold	Y	Y		14	Y	12	22	10	17
None	N	Y		12	Y	10	20	10	15
Cold	Y	NA	NA		N	0	21	21	21
Cold	Y	Y		24	N	0	17	17	17
Cold	Y	N		0	N	0	29	29	29
Cold	Y	Y		24	N	0	20	20	20
Cold	Y	N		0	N	0	20	20	20
None	N	Y		24	N	0	20	20	20
Cold	Y	N		0	N	0	11	11	11
None	N	N		0	N	0	29	29	29
Cold	Y	Y		24	N	0	11	11	11
None	N	Y		24	N	0	14	14	14
Cold	Y	Y		24	N	0	23	23	23
Cold	Y	Y		24	N	0	29	29	29
Cold	Y	N		0	N	0	14	14	14
None	N	N		0	N	0	26	26	26
Cold	Y	Y		24	N	0	14	14	14
None	N	N		0	N	0	17	17	17
None	N	N		0	N	0	23	23	23
None	N	Y		24	N	0	17	17	17
None	N	Y		24	N	0	26	26	26
None	N	N		0	N	0	14	14	14

Cold	Y	N	0	N	0	26	26	26
None	N	Y	24	N	0	29	29	29
Cold	Y	N	0	N	0	23	23	23
Cold	Y	Y	24	N	0	26	26	26
Cold	Y	N	0	N	0	17	17	17
None	N	Y	24	N	0	11	11	11
None	N	N	0	N	0	29	29	29
Cold	Y	Y	24	N	0	29	29	29
Cold	Y	N	0	N	0	17	17	17
Cold	Y	N	0	N	0	20	20	20
Cold	Y	N	0	N	0	17	17	17
None	N	N	0	N	0	14	14	14
Cold	Y	Y	24	N	0	20	20	20
None	N	N	0	N	0	20	20	20
None	N	Y	24	N	0	26	26	26
Cold	Y	N	0	N	0	11	11	11
None	N	Y	24	N	0	26	26	26
None	N	Y	24	N	0	23	23	23
None	N	N	0	N	0	29	29	29
Cold	Y	Y	24	N	0	26	26	26
Cold	Y	Y	24	N	0	26	26	26
None	N	N	0	N	0	11	11	11
Cold	Y	N	0	N	0	23	23	23
None	N	N	0	N	0	26	26	26
Cold	Y	Y	24	N	0	23	23	23
None	N	Y	24	N	0	17	17	17
Cold	Y	Y	24	N	0	17	17	17
None	N	Y	24	N	0	17	17	17
Cold	Y	Y	24	N	0	14	14	14
Cold	Y	N	0	N	0	26	26	26
None	N	N	0	N	0	29	29	29
Cold	Y	Y	24	N	0	20	20	20
None	N	Y	24	N	0	14	14	14
Cold	Y	Y	24	N	0	20	20	20
None	N	Y	24	N	0	14	14	14
None	N	Y	24	N	0	23	23	23
Cold	Y	Y	24	N	0	11	11	11
Cold	Y	N	0	N	0	17	17	17
Cold	Y	Y	24	N	0	29	29	29
None	N	N	0	N	0	17	17	17
Cold	Y	Y	24	N	0	29	29	29
Cold	Y	Y	24	N	0	11	11	11
None	N	N	0	N	0	20	20	20
Cold	Y	Y	24	N	0	14	14	14
Cold	Y	N	0	N	0	29	29	29
Cold	Y	N	0	N	0	14	14	14
Cold	Y	N	0	N	0	23	23	23
Cold	Y	Y	24	N	0	14	14	14
Cold	Y	N	0	N	0	29	29	29
Cold	Y	N	0	N	0	11	11	11
None	N	N	0	N	0	14	14	14
Cold	Y	N	0	N	0	20	20	20
None	N	Y	24	N	0	20	20	20
None	N	Y	24	N	0	11	11	11
None	N	N	0	N	0	17	17	17
Cold	Y	Y	24	N	0	26	26	26

None	N	Y	24	N	0	26	26	26
None	N	N	0	N	0	14	14	14
None	N	N	0	N	0	23	23	23
Cold	Y	N	0	N	0	26	26	26
None	N	N	0	N	0	23	23	23
Cold	Y	Y	24	N	0	23	23	23
Cold	Y	N	0	N	0	26	26	26
None	N	Y	24	N	0	20	20	20
None	N	Y	24	N	0	17	17	17
Cold	Y	N	0	N	0	23	23	23
Cold	Y	N	0	N	0	14	14	14
Cold	Y	Y	24	N	0	17	17	17
Cold	Y	N	0	N	0	11	11	11
None	N	N	0	N	0	20	20	20
None	N	Y	24	N	0	14	14	14
None	N	N	0	N	0	11	11	11
Cold	Y	N	0	N	0	14	14	14
None	N	N	0	N	0	23	23	23
Cold	Y	Y	24	N	0	11	11	11
None	N	Y	24	N	0	23	23	23
None	N	Y	24	N	0	11	11	11
Cold	Y	Y	24	N	0	23	23	23
Cold	Y	N	0	N	0	20	20	20
None	N	N	0	N	0	26	26	26
None	N	Y	24	N	0	29	29	29
Cold	Y	Y	24	N	0	17	17	17
Cold	Y	N	0	N	0	29	29	29
None	N	N	0	N	0	11	11	11
None	N	Y	24	N	0	20	20	20
None	N	Y	24	N	0	29	29	29
None	N	N	0	N	0	26	26	26
None	N	Y	24	N	0	29	29	29
None	N	N	0	N	0	17	17	17
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	10	25	15	18.33333
Cold	Y	Y	12	N	0	15	15	15
Cold	Y	Y	12	N	0	12.5	12.5	12.5
None	N	Y	12	N	0	5	5	5
Cold	Y	Y	12	N	0	10	10	10
None	N	Y	12	N	0	15	15	15
Cold	Y	Y	12	N	0	5	5	5
None	N	Y	12	N	0	10	10	10
Cold	Y	Y	12	N	0	7.5	7.5	7.5
None	N	Y	12	N	0	7.5	7.5	7.5
Cold	Y	Y	12	N	0	2.5	2.5	2.5
None	N	Y	12	N	0	2.5	2.5	2.5
None	N	Y	12	N	0	12.5	12.5	12.5
Cold	Y	Y	12	N	0	10	10	10
Cold	Y	Y	12	N	0	2.5	2.5	2.5
None	N	Y	12	N	0	15	15	15
Cold	Y	Y	12	N	0	5	5	5
Cold	Y	Y	12	N	0	12.5	12.5	12.5
Cold	Y	Y	12	N	0	7.5	7.5	7.5
None	N	Y	12	N	0	10	10	10
None	N	Y	12	N	0	12.5	12.5	12.5
Cold	Y	Y	12	N	0	15	15	15

None	N	Y		12	N	0	7.5	7.5	7.5
None	N	Y		12	N	0	5	5	5
None	N	Y		12	N	0	2.5	2.5	2.5
Cold	Y	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	10	10	10
None	N	Y		12	N	0	7.5	7.5	7.5
None	N	Y		12	N	0	5	5	5
None	N	Y		12	N	0	15	15	15
None	N	Y		12	N	0	2.5	2.5	2.5
None	N	Y		12	N	0	12.5	12.5	12.5
Cold	Y	Y		12	N	0	2.5	2.5	2.5
Cold	Y	Y		12	N	0	5	5	5
Cold	Y	Y		12	N	0	7.5	7.5	7.5
None	N	Y		12	N	0	10	10	10
Cold	Y	Y		12	N	0	12.5	12.5	12.5
Cold	Y	Y		12	N	0	10	10	10
None	N	Y		12	N	0	7.5	7.5	7.5
Cold	Y	Y		12	N	0	7.5	7.5	7.5
Cold	Y	Y		12	N	0	12.5	12.5	12.5
None	N	Y		12	N	0	5	5	5
Cold	Y	Y		12	N	0	15	15	15
None	N	Y		12	N	0	2.5	2.5	2.5
None	N	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	5	5	5
None	N	Y		12	N	0	12.5	12.5	12.5
Cold	Y	Y		12	N	0	2.5	2.5	2.5
None	N	Y		12	N	0	10	10	10
Cold	Y	Y		12	N	0	5	5	5
Cold	Y	Y		12	N	0	15	15	15
None	N	Y		12	N	0	10	10	10
Cold	Y	Y		12	N	0	2.5	2.5	2.5
None	N	Y		12	N	0	15	15	15
Cold	Y	Y		12	N	0	7.5	7.5	7.5
None	N	Y		12	N	0	2.5	2.5	2.5
None	N	Y		12	N	0	12.5	12.5	12.5
None	N	Y		12	N	0	5	5	5
Cold	Y	Y		12	N	0	12.5	12.5	12.5
None	N	Y		12	N	0	7.5	7.5	7.5
Cold	Y	Y		12	N	0	10	10	10
Cold	Y	Y		14	Y	12	22	10	17
Cold	Y	NA	NA		Y	10	40	30	33.33333
None	N	NA	NA		Y	20	30	10	16.66667
None	N	NA	NA		Y	35	35	0	11.66667
Cold	Y	NA	NA		Y	25	25	0	8.333333
Cold	Y	NA	NA		N	0	25	25	25
None	N	NA	NA		Y	28	30	2	11.33333
None	N	NA	NA		Y	35	40	5	16.66667
Cold	Y	NA	NA		Y	15	20	5	10
Cold	Y	NA	NA		Y	5	20	15	16.66667
None	N	NA	NA		Y	10	40	30	33.33333
Cold	Y	NA	NA		Y	15	35	20	25
None	N	NA	NA		Y	5	5	0	1.666667
Cold	Y	NA	NA		Y	10	35	25	28.33333
Cold	Y	NA	NA		Y	5	35	30	31.66667
Cold	Y	NA	NA		Y	20	25	5	11.66667
None	N	NA	NA		Y	20	40	20	26.66667

1									
2									
3	Cold	Y	NA	NA	Y	33	35	2	13
4	None	N	NA	NA	N	0	2	2	2
5	None	N	NA	NA	N	0	0	0	0
6	Cold	Y	NA	NA	Y	25	40	15	23.33333
7	None	N	NA	NA	Y	33	35	2	13
8	Cold	Y	NA	NA	Y	3	5	2	3
9	Cold	Y	NA	NA	Y	5	10	5	6.666667
10	Cold	Y	NA	NA	N	0	0	0	0
11	None	N	NA	NA	N	0	40	40	40
12	None	N	NA	NA	Y	15	20	5	10
13	None	N	NA	NA	Y	25	30	5	13.33333
14	Cold	Y	NA	NA	N	0	30	30	30
15	None	N	NA	NA	Y	10	10	0	3.333333
16	Cold	Y	NA	NA	Y	40	40	0	13.33333
17	None	N	NA	NA	Y	23	25	2	9.666667
18	Cold	Y	NA	NA	Y	5	15	10	11.66667
19	Cold	Y	NA	NA	N	0	40	40	40
20	Cold	Y	NA	NA	Y	38	40	2	14.66667
21	None	N	NA	NA	Y	25	35	10	18.33333
22	Cold	Y	NA	NA	Y	2	2	0	########
23	Cold	Y	NA	NA	Y	30	30	0	10
24	None	N	NA	NA	Y	5	15	10	11.66667
25	Cold	Y	NA	NA	Y	13	15	2	6.333333
26	None	N	NA	NA	N	0	5	5	5
27	None	N	NA	NA	Y	20	20	0	6.666667
28	None	N	NA	NA	Y	38	40	2	14.66667
29	None	N	NA	NA	Y	20	35	15	21.66667
30	Cold	Y	NA	NA	Y	15	15	0	5
31	Cold	Y	NA	NA	Y	10	20	10	13.33333
32	None	N	NA	NA	Y	10	15	5	8.333333
33	None	N	NA	NA	Y	18	20	2	8
34	None	N	NA	NA	Y	10	35	25	28.33333
35	Cold	Y	NA	NA	N	0	35	35	35
36	None	N	NA	NA	N	0	25	25	25
37	None	N	NA	NA	Y	15	40	25	30
38	Cold	Y	NA	NA	Y	20	40	20	26.66667
39	Cold	Y	NA	NA	N	0	15	15	15
40	Cold	Y	NA	NA	Y	23	25	2	9.666667
41	Cold	Y	NA	NA	Y	20	30	10	16.66667
42	Cold	Y	NA	NA	Y	5	40	35	36.66667
43	Cold	Y	NA	NA	Y	25	30	5	13.33333
44	Cold	Y	NA	NA	Y	35	40	5	16.66667
45	Cold	Y	NA	NA	Y	30	35	5	15
46	Cold	Y	NA	NA	Y	15	40	25	30
47	Cold	Y	NA	NA	Y	35	35	0	11.66667
48	None	N	NA	NA	Y	13	15	2	6.333333
49	Cold	Y	NA	NA	N	0	20	20	20
50	None	N	NA	NA	N	0	15	15	15
51	None	N	NA	NA	Y	10	30	20	23.33333
52	None	N	NA	NA	Y	8	10	2	4.666667
53	None	N	NA	NA	Y	5	30	25	26.66667
54	None	N	NA	NA	N	0	35	35	35
55	Cold	Y	NA	NA	Y	10	25	15	18.33333
56	Cold	Y	NA	NA	N	0	5	5	5
57	None	N	NA	NA	Y	15	15	0	5
58	None	N	NA	NA	Y	2	2	0	########
59									
60									

None	N	NA	NA	Y	30	40	10	20
None	N	NA	NA	Y	5	20	15	16.66667
None	N	NA	NA	Y	10	25	15	18.33333
Cold	Y	NA	NA	N	0	10	10	10
None	N	NA	NA	Y	5	10	5	6.666667
None	N	NA	NA	Y	25	40	15	23.33333
None	N	NA	NA	Y	5	35	30	31.66667
Cold	Y	NA	NA	Y	10	10	0	3.333333
None	N	NA	NA	N	0	30	30	30
Cold	Y	NA	NA	Y	10	15	5	8.333333
None	N	NA	NA	Y	10	20	10	13.33333
Cold	Y	NA	NA	Y	28	30	2	11.33333
None	N	NA	NA	Y	20	25	5	11.66667
Cold	Y	NA	NA	Y	15	30	15	20
Cold	Y	NA	NA	Y	20	35	15	21.66667
None	N	NA	NA	N	0	10	10	10
Cold	Y	NA	NA	Y	5	25	20	21.66667
None	N	NA	NA	Y	30	35	5	15
None	N	NA	NA	Y	15	30	15	20
None	N	NA	NA	Y	5	40	35	36.66667
None	N	NA	NA	Y	25	25	0	8.333333
Cold	Y	NA	NA	Y	5	5	0	1.666667
Cold	Y	NA	NA	Y	30	40	10	20
Cold	Y	NA	NA	Y	20	20	0	6.666667
None	N	NA	NA	Y	15	25	10	15
Cold	Y	NA	NA	Y	8	10	2	4.666667
Cold	Y	NA	NA	N	0	2	2	2
None	N	NA	NA	N	0	20	20	20
None	N	NA	NA	Y	40	40	0	13.33333
Cold	Y	NA	NA	Y	5	30	25	26.66667
None	N	NA	NA	Y	5	25	20	21.66667
Cold	Y	NA	NA	Y	10	30	20	23.33333
Cold	Y	NA	NA	Y	18	20	2	8
None	N	NA	NA	Y	15	35	20	25
Cold	Y	NA	NA	Y	25	35	10	18.33333
None	N	NA	NA	Y	30	30	0	10
Cold	Y	NA	NA	Y	15	25	10	15
None	N	NA	NA	Y	3	5	2	3
None	N	Y	24	N	0	24	24	24
Cold	Y	Y	24	N	0	24	24	24
Cold	Y	Y	24	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
None	N	Y	24	N	0	20	20	20
Cold	Y	N	0	N	0	20	20	20
None	N	N	0	N	0	20	20	20
Cold	Y	N	0	N	0	20	20	20
None	N	Y	24	N	0	20	20	20
None	N	N	0	N	0	20	20	20
Cold	Y	N	0	Y	5	29	24	26.5
Cold	Y	Y	14	Y	5	29	24	26.91667
Cold	Y	N	0	Y	5	18	13	15.5
Cold	Y	N	0	Y	5	29	24	26.5
Cold	Y	Y	14	Y	5	18	13	15.91667
Cold	Y	Y	14	Y	5	18	13	15.91667
Cold	Y	Y	14	Y	5	29	24	26.91667
Cold	Y	N	0	Y	5	18	13	15.5

None	N	NA	NA	Y	16	10	-6	########
None	N	NA	NA	Y	8	10	2	4.666667
None	N	NA	NA	Y	14	10	-4	########
None	N	NA	NA	Y	10	40	30	33.33333
None	N	NA	NA	Y	6	2	-4	-2
None	N	NA	NA	Y	13	15	2	6.333333
None	N	NA	NA	Y	15	30	15	20
None	N	NA	NA	Y	29	25	-4	5.666667
None	N	NA	NA	N	0	0	0	0
None	N	NA	NA	N	0	35	35	35
None	N	NA	NA	Y	5	40	35	36.66667
None	N	NA	NA	Y	15	35	20	25
None	N	NA	NA	Y	33	35	2	13
None	N	NA	NA	Y	40	40	0	13.33333
None	N	NA	NA	Y	25	30	5	13.33333
None	N	NA	NA	N	0	15	15	15
None	N	NA	NA	Y	36	30	-6	6
None	N	NA	NA	Y	5	35	30	31.66667
None	N	NA	NA	Y	12	10	-2	2
None	N	NA	NA	Y	21	15	-6	1
None	N	NA	NA	Y	5	15	10	11.66667
None	N	NA	NA	Y	25	35	10	18.33333
None	N	NA	NA	Y	4	0	-4	-2.66667
None	N	NA	NA	Y	35	40	5	16.66667
None	N	NA	NA	Y	18	20	2	8
None	N	NA	NA	Y	30	35	5	15
None	N	NA	NA	Y	5	10	5	6.666667
None	N	NA	NA	Y	25	25	0	8.333333
None	N	NA	NA	Y	26	20	-6	2.666667
None	N	NA	NA	Y	5	25	20	21.66667
None	N	NA	NA	Y	23	25	2	9.666667
None	N	NA	NA	Y	6	0	-6	-4
None	N	NA	NA	Y	37	35	-2	10.33333
None	N	NA	NA	Y	20	35	15	21.66667
None	N	NA	NA	Y	10	25	15	18.33333
None	N	NA	NA	Y	3	5	2	3
None	N	NA	NA	N	0	20	20	20
None	N	NA	NA	Y	27	25	-2	7
None	N	NA	NA	Y	15	25	10	15
None	N	NA	NA	Y	8	2	-6	-3.33333
None	N	NA	NA	Y	10	10	0	3.333333
None	N	NA	NA	N	0	2	2	2
None	N	NA	NA	Y	5	5	0	1.666667
None	N	NA	NA	Y	4	2	-2	########
None	N	NA	NA	Y	2	2	0	########
None	N	NA	NA	Y	5	30	25	26.66667
None	N	NA	NA	Y	7	5	-2	########
None	N	NA	NA	Y	10	35	25	28.33333
None	N	NA	NA	Y	31	25	-6	4.333333
None	N	NA	NA	Y	20	25	5	11.66667
None	N	NA	NA	Y	20	20	0	6.666667
None	N	NA	NA	Y	20	30	10	16.66667
None	N	NA	NA	Y	5	20	15	16.66667
None	N	NA	NA	Y	15	40	25	30
None	N	NA	NA	Y	41	35	-6	7.666667
None	N	NA	NA	Y	25	40	15	23.33333

None	N	NA	NA	Y	24	20	-4	4
None	N	NA	NA	N	0	10	10	10
None	N	NA	NA	Y	10	30	20	23.33333
None	N	NA	NA	N	0	5	5	5
None	N	NA	NA	Y	46	40	-6	9.333333
None	N	NA	NA	Y	42	40	-2	12
None	N	NA	NA	Y	30	30	0	10
None	N	NA	NA	Y	15	15	0	5
None	N	NA	NA	Y	9	5	-4	-1
None	N	NA	NA	Y	38	40	2	14.66667
None	N	NA	NA	Y	34	30	-4	7.333333
None	N	NA	NA	N	0	20	20	20
None	N	NA	NA	Y	5	15	10	11.66667
None	N	NA	NA	Y	25	25	0	8.333333
None	N	NA	NA	Y	10	10	0	3.333333
None	N	NA	NA	N	0	5	5	5
None	N	NA	NA	N	0	10	10	10
None	N	NA	NA	Y	15	20	5	10
None	N	NA	NA	Y	10	15	5	8.333333
None	N	NA	NA	Y	11	5	-6	-2.33333
None	N	NA	NA	Y	22	20	-2	5.333333
None	N	NA	NA	Y	35	35	0	11.66667
None	N	NA	NA	Y	30	40	10	20
None	N	NA	NA	Y	10	20	10	13.33333
None	N	NA	NA	Y	7	5	-2	########
None	N	NA	NA	Y	18	20	2	8
None	N	NA	NA	Y	15	40	25	30
None	N	NA	NA	N	0	30	30	30
None	N	NA	NA	Y	6	0	-6	-4
None	N	NA	NA	Y	20	20	0	6.666667
None	N	NA	NA	N	0	2	2	2
None	N	NA	NA	Y	29	25	-4	5.666667
None	N	NA	NA	Y	15	25	10	15
None	N	NA	NA	Y	26	20	-6	2.666667
None	N	NA	NA	Y	20	40	20	26.66667
None	N	NA	NA	Y	30	40	10	20
None	N	NA	NA	N	0	30	30	30
None	N	NA	NA	Y	11	5	-6	-2.33333
None	N	NA	NA	Y	44	40	-4	10.66667
None	N	NA	NA	Y	10	20	10	13.33333
None	N	NA	NA	Y	17	15	-2	3.666667
None	N	NA	NA	Y	39	35	-4	9
None	N	NA	NA	Y	19	15	-4	2.333333
None	N	NA	NA	Y	20	30	10	16.66667
None	N	NA	NA	Y	25	30	5	13.33333
None	N	NA	NA	Y	25	40	15	23.33333
None	N	NA	NA	Y	5	30	25	26.66667
None	N	NA	NA	Y	14	10	-4	#########
None	N	NA	NA	Y	10	15	5	8.333333
None	N	NA	NA	Y	20	25	5	11.66667
None	N	NA	NA	Y	36	30	-6	6
None	N	NA	NA	Y	15	15	0	5
None	N	NA	NA	Y	19	15	-4	2.333333
None	N	NA	NA	Y	5	25	20	21.66667
None	N	NA	NA	Y	2	0	-2	-1.33333
None	N	NA	NA	Y	28	30	2	11.33333

None	N	NA	NA	Y	8	2	-6	-3.33333
None	N	NA	NA	Y	42	40	-2	12
None	N	NA	NA	Y	27	25	-2	7
None	N	NA	NA	Y	22	20	-2	5.333333
None	N	NA	NA	Y	8	10	2	4.666667
None	N	NA	NA	N	0	40	40	40
None	N	NA	NA	Y	10	25	15	18.33333
None	N	NA	NA	Y	6	2	-4	-2
None	N	NA	NA	Y	21	15	-6	1
None	N	NA	NA	N	0	25	25	25
None	N	NA	NA	Y	4	2	-2	########
None	N	NA	NA	Y	9	5	-4	-1
None	N	NA	NA	Y	28	30	2	11.33333
None	N	NA	NA	Y	10	30	20	23.33333
None	N	NA	NA	Y	16	10	-6	########
None	N	NA	NA	Y	23	25	2	9.666667
None	N	NA	NA	Y	5	5	0	1.666667
None	N	NA	NA	Y	13	15	2	6.333333
None	N	NA	NA	Y	24	20	-4	4
None	N	NA	NA	Y	15	30	15	20
None	N	NA	NA	N	0	15	15	15
None	N	NA	NA	Y	44	40	-4	10.66667
None	N	NA	NA	Y	35	40	5	16.66667
None	N	NA	NA	Y	4	0	-4	-2.66667
None	N	NA	NA	Y	3	5	2	3
None	N	NA	NA	Y	32	30	-2	8.666667
None	N	NA	NA	Y	5	20	15	16.66667
None	N	NA	NA	Y	40	40	0	13.33333
None	N	NA	NA	N	0	40	40	40
None	N	NA	NA	Y	2	2	0	########
None	N	NA	NA	Y	10	40	30	33.33333
None	N	NA	NA	Y	38	40	2	14.66667
None	N	NA	NA	Y	2	0	-2	-1.33333
None	N	NA	NA	Y	15	20	5	10
None	N	NA	NA	Y	46	40	-6	9.333333
None	N	NA	NA	N	0	25	25	25
None	N	NA	NA	Y	12	10	-2	2
None	N	NA	NA	Y	5	10	5	6.666667
None	N	NA	NA	Y	17	15	-2	3.666667
None	N	NA	NA	Y	20	40	20	26.66667
None	N	NA	NA	Y	30	30	0	10
None	N	NA	NA	Y	32	30	-2	8.666667
None	N	NA	NA	N	0	0	0	0
None	N	NA	NA	Y	31	25	-6	4.333333
None	N	NA	NA	Y	34	30	-4	7.333333
None	N	Y	8	N	0	15	15	15
None	N	N	0	Y	10	25	15	20
None	N	Y	8	N	0	25	25	25
None	N	Y	8	N	0	15	15	15
None	N	Y	8	Y	10	25	15	18.33333
None	N	N	0	Y	10	25	15	20
None	N	Y	8	Y	10	25	15	18.33333
None	N	Y	8	N	0	25	25	25
Cold	Y	Y	12	N	0	21	21	21
None	N	N	0	Y	9	16	7	11.5
None	N	Y	12	Y	8	24	16	20

Cold	Y	N	0	Y	5	29	24	26.5
None	N	N	0	Y	5	29	24	26.5
None	N	N	0	Y	20	30	10	20
None	N	Y	12	N	0	21	21	21
Cold	Y	N	0	Y	8	24	16	20
None	N	N	0	Y	20	30	10	20
Cold	Y	Y	12	Y	9	16	7	11.5
Cold	Y	N	0	Y	9	16	7	11.5
None	N	Y	12	Y	9	16	7	11.5
None	N	Y	12	N	0	21	21	21
Cold	Y	Y	12	Y	8	24	16	20
None	N	Y	12	Y	5	29	24	26.5
None	N	N	0	Y	20	30	10	20
None	N	N	0	Y	8	24	16	20
None	N	N	0	Y	20	30	10	20
Cold	Y	Y	12	Y	5	29	24	26.5
None	N	Y	12	N	0	21	21	21
None	N	N	0	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
Cold	Y	Y	14	Y	12	22	10	17
None	N	Y	24	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	N	0	N	0	24	24	24
None	N	Y	24	N	0	24	24	24
Cold	Y	Y	8	Y	10	20	10	13.33333
None	N	Y	8	N	0	10	10	10
None	N	Y	8	N	0	20	20	20
None	N	Y	8	Y	10	20	10	13.33333
None	N	Y	8	Y	10	20	10	13.33333
None	N	Y	8	N	0	30	30	30
None	N	Y	8	Y	28	30	2	11.33333
None	N	Y	8	Y	18	20	2	8
None	N	Y	8	Y	10	30	20	23.33333
None	N	Y	8	Y	8	10	2	4.666667
None	N	Y	8	Y	20	30	10	16.66667
Cold	Y	Y	14	Y	12	22	10	17
None	N	Y	8	Y	8	27	19	21.66667
None	N	Y	12	N	0	25	25	25

None	N	Y		12	N	0	25	25	25
None	N	Y		12	N	0	25	25	25
None	N	Y		12	N	0	25	25	25
Cold	Y	Y		8	Y	10	25	15	18.33333
Cold	Y	Y		12	Y	8	23	15	19
None	N	N		0	N	0	15	15	15
None	N	Y		24	Y	18	27	9	18
None	N	Y		24	N	0	27	27	27
None	N	Y		24	N	0	21	21	21
None	N	N		0	N	0	27	27	27
None	N	Y		24	N	0	9	9	9
None	N	Y		24	N	0	15	15	15
None	N	Y		24	Y	12	21	9	15
Cold	Y	Y		16	Y	3	21	18	20
None	N	Y		16	Y	3	21	18	20
Cold	Y	NA	NA		N	0	10	10	10
Cold	Y	NA	NA		N	0	25	25	25
Cold	Y	NA	NA		N	0	15	15	15
Cold	Y	NA	NA		N	0	20	20	20
Cold	Y	NA	NA		N	0	5	5	5
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	20	20	20
Cold	Y	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	25	25	25
Cold	Y	NA	NA		N	0	25	25	25
None	N	Y		0.1	N	0	15	15	15
None	N	Y		0.1	N	0	38	38	38
None	N	Y		0.1	N	0	27	27	27
Cold	Y	Y		24	Y	8	24	16	20
None	N	Y		24	Y	8	24	16	20
None	N	Y		0.1	N	0	32	32	32
None	N	Y		24	Y	11	38	27	32.5
Cold	Y	N		0	Y	11	38	27	32.5
None	N	N		0	Y	8	24	16	20
None	N	N		0	Y	11	38	27	32.5
Cold	Y	Y		24	Y	11	38	27	32.5
Cold	Y	N		0	Y	8	24	16	20
None	N	Y		0.1	N	0	21	21	21
Cold	Y	Y		14	Y	12	22	10	17
None	N	N		0	N	0	30	30	30
None	N	Y		9	Y	25	25	0	9.375
None	N	N		0	Y	10	20	10	15
None	N	N		0	Y	20	20	0	10
None	N	Y		9	Y	5	15	10	11.875
None	N	Y		9	N	0	30	30	30
None	N	Y		9	Y	15	15	0	5.625
None	N	N		0	Y	15	25	10	17.5
None	N	N		0	Y	20	30	10	20
None	N	N		0	Y	10	30	20	25
None	N	N		0	Y	5	30	25	27.5
None	N	Y		9	N	0	15	15	15
None	N	Y		9	Y	20	30	10	17.5
None	N	N		0	Y	5	15	10	12.5
None	N	N		0	Y	15	30	15	22.5
None	N	Y		9	N	0	20	20	20

None	N	N		0	N	0	25	25	25
None	N	N		0	N	0	5	5	5
None	N	Y		9	Y	5	25	20	21.875
None	N	Y		9	Y	10	25	15	18.75
None	N	Y		9	N	0	10	10	10
None	N	Y		9	N	0	5	5	5
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	10	10	10
None	N	N		0	Y	25	25	0	12.5
None	N	N		0	Y	5	20	15	17.5
None	N	N		0	N	0	20	20	20
None	N	Y		9	Y	10	30	20	23.75
None	N	Y		9	Y	15	25	10	15.625
None	N	N		0	Y	15	15	0	7.5
None	N	Y		9	Y	15	30	15	20.625
None	N	Y		9	N	0	25	25	25
None	N	Y		9	Y	5	20	15	16.875
None	N	Y		9	Y	20	20	0	7.5
None	N	Y		9	Y	10	20	10	13.75
None	N	N		0	Y	5	25	20	22.5
None	N	N		0	Y	10	25	15	20
None	N	Y		9	Y	5	30	25	26.875
None	N	Y		10	Y	11	27	16	20.58333
None	N	N		0	Y	8	10	2	6
None	N	N		0	N	0	2	2	2
None	N	Y		10	N	0	18	18	18
None	N	Y		10	N	0	2	2	2
None	N	N		0	Y	11	27	16	21.5
None	N	N		0	Y	12	16	4	10
None	N	N		0	N	0	18	18	18
None	N	Y		10	Y	8	10	2	5.333333
None	N	Y		10	Y	12	16	4	9
None	N	N		0	N	0	25	25	25
None	N	Y		0.1	N	0	25	25	25
None	N	NA	NA		Y	5	26	21	23.5
None	N	NA	NA		Y	5	26	21	23.5
None	N	NA	NA		Y	5	26	21	23.5
Cold	Y	N		0	N	0	17	17	17
None	N	Y		16	N	0	12	12	12
Cold	Y	Y		16	N	0	17	17	17
Cold	Y	N		0	N	0	22	22	22
None	N	N		0	N	0	17	17	17
None	N	Y		16	N	0	27	27	27
Cold	Y	Y		16	N	0	27	27	27
None	N	N		0	N	0	22	22	22
Cold	Y	N		0	N	0	27	27	27
None	N	N		0	N	0	12	12	12
Cold	Y	Y		16	N	0	22	22	22
None	N	Y		16	N	0	17	17	17
None	N	N		0	N	0	27	27	27
None	N	Y		16	N	0	22	22	22
Cold	Y	Y		16	N	0	12	12	12
Cold	Y	N		0	N	0	12	12	12
None	N	Y		20	N	0	15	15	15
None	N	N		0	Y	12	27	15	21
None	N	N		0	Y	12	27	15	21

None	N	Y		24	Y	12	27	15	21
None	N	Y		24	Y	12	27	15	21
None	N	N		0	Y	12	27	15	21
None	N	Y		24	Y	12	27	15	21
Cold	Y	Y		12	N	0	24	24	24
None	N	Y		12	N	0	24	24	24
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	10	10	10
Cold	Y	Y		14	Y	12	22	10	17
None	N	NA	NA		N	0	19	19	19
None	N	NA	NA		N	0	36	36	36
None	N	NA	NA		N	0	33	33	33
None	N	NA	NA		N	0	24	24	24
None	N	NA	NA		N	0	41	41	41
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	27	27	27
None	N	NA	NA		N	0	24	24	24
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	27	27	27
None	N	NA	NA		N	0	19	19	19
None	N	NA	NA		N	0	33	33	33
None	N	NA	NA		N	0	41	41	41
None	N	NA	NA		N	0	36	36	36
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	27	27	27
None	N	NA	NA		N	0	36	36	36
None	N	NA	NA		N	0	33	33	33
None	N	NA	NA		N	0	24	24	24
None	N	NA	NA		N	0	41	41	41
None	N	NA	NA		N	0	19	19	19
None	N	NA	NA		N	0	41	41	41
None	N	NA	NA		N	0	36	36	36
None	N	NA	NA		N	0	24	24	24
None	N	NA	NA		N	0	27	27	27
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	33	33	33
None	N	NA	NA		N	0	19	19	19
None	N	NA	NA		N	0	27	27	27

None	N	NA	NA	N	0	15	15	15
None	N	NA	NA	N	0	19	19	19
None	N	NA	NA	N	0	24	24	24
None	N	NA	NA	N	0	27	27	27
None	N	NA	NA	N	0	15	15	15
None	N	NA	NA	N	0	24	24	24
None	N	NA	NA	N	0	19	19	19
Cold	Y	NA	NA	Y	17	32	15	23.5
None	N	NA	NA	N	0	20	20	20
None	N	NA	NA	Y	17	32	15	23.5
None	N	NA	NA	N	0	25	25	25
None	N	NA	NA	N	0	25	25	25
None	N	NA	NA	N	0	15	15	15
None	N	NA	NA	Y	17	32	15	23.5
None	N	NA	NA	N	0	25	25	25
None	N	NA	NA	N	0	32	32	32
Cold	Y	NA	NA	N	0	15	15	15
Cold	Y	NA	NA	N	0	32	32	32
None	N	NA	NA	N	0	32	32	32
Cold	Y	NA	NA	N	0	25	25	25
None	N	NA	NA	N	0	32	32	32
None	N	NA	NA	N	0	20	20	20
None	N	NA	NA	N	0	15	15	15
None	N	NA	NA	N	0	20	20	20
Cold	Y	NA	NA	N	0	20	20	20
None	N	NA	NA	Y	17	32	15	23.5
None	N	NA	NA	N	0	15	15	15
None	N	NA	NA	N	0	10	10	10
None	N	NA	NA	N	0	0	0	0
None	N	NA	NA	N	0	5	5	5
None	N	NA	NA	N	0	15	15	15
None	N	Y	12	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	Y	12	Y	5	25	20	22.5
None	N	N	0	Y	5	25	20	22.5

None	N	Y		12	Y	5	25	20	22.5
None	N	Y		24	N	0	30	30	30
None	N	Y		24	N	0	30	30	30
None	N	Y		24	N	0	25	25	25
None	N	Y		24	N	0	25	25	25
Cold	Y	Y		14	Y	12	22	10	17
None	N	Y		8	Y	4	32	28	29.33333
None	N	N		0	Y	4	32	28	30
None	N	N		0	Y	4	32	28	30
None	N	Y		8	Y	4	32	28	29.33333
None	N	N		0	Y	4	32	28	30
None	N	Y		8	Y	4	32	28	29.33333
None	N	Y		8	Y	4	32	28	29.33333
None	N	N		0	Y	4	32	28	30
Cold	Y	NA	NA		Y	8	25	17	21
None	N	NA	NA		Y	5	27	22	24.5
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	30	30	30
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	20	20	20
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	15	15	15
None	N	Y		24	N	0	25	25	25
None	N	N		0	N	0	30	30	30
None	N	N		0	N	0	25	25	25
None	N	Y		24	N	0	20	20	20
None	N	Y		24	N	0	30	30	30
None	N	Y		24	N	0	15	15	15
None	N	N		0	N	0	20	20	20
None	N	Y		24	N	0	15	15	15
None	N	N		0	N	0	15	15	15
None	N	Y		24	N	0	25	25	25
None	N	N		0	N	0	25	25	25
None	N	Y		24	N	0	20	20	20
None	N	Y		24	N	0	30	30	30
None	N	N		0	N	0	30	30	30
Cold	Y	NA	NA		N	0	25	25	25
Cold	Y	NA	NA		N	0	20	20	20
Cold	Y	NA	NA		N	0	20	20	20
Cold	Y	NA	NA		N	0	15	15	15
Cold	Y	NA	NA		N	0	15	15	15
Cold	Y	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	25	25	25
Cold	Y	Y		24	N	0	25	25	25
None	N	Y		24	N	0	25	25	25
None	N	Y		10	Y	12	30	18	23
None	N	NA	NA		N	0	24	24	24
None	N	NA	NA		N	0	24	24	24
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	15	15	15
None	N	N		0	N	0	10	10	10

None	N	N		0	N	0	25	25	25
Cold	Y	N		0	N	0	5	5	5
None	N	N		0	N	0	30	30	30
None	N	N		0	N	0	20	20	20
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	5	5	5
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	25	25	25
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	10	10	10
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	25	25	25
None	N	Y		16	N	0	25	25	25
None	N	Y		14	Y	8	23	15	19.66667
None	N	Y		14	Y	8	23	15	19.66667
None	N	Y		16	N	0	25	25	25
None	N	Y		14	Y	8	23	15	19.66667
None	N	Y		16	N	0	25	25	25
None	N	Y		16	N	0	25	25	25
None	N	Y		16	N	0	25	25	25
None	N	Y		14	Y	10	25	15	20.83333
None	N	Y		12	N	0	25	25	25
None	N	N		0	N	0	30	30	30
None	N	N		0	N	0	15	15	15
None	N	N		0	N	0	25	25	25
None	N	Y		24	N	0	15	15	15
None	N	Y		24	N	0	30	30	30
None	N	Y		16	N	0	25	25	25
None	N	N		0	N	0	20	20	20
None	N	Y		24	N	0	25	25	25
None	N	Y		24	N	0	20	20	20
None	N	NA	NA		N	0	24	24	24
None	N	NA	NA		N	0	24	24	24
None	N	NA	NA		N	0	24	24	24
None	N	NA	NA		N	0	24	24	24
None	N	Y		12	N	0	21	21	21
None	N	Y		10	Y	-4	21	25	23.33333
None	N	Y		12	N	0	21	21	21
Cold	Y	Y		12	Y	10	20	10	15
Cold	Y	Y		12	Y	10	20	10	15
None	N	NA	NA		N	0	5	5	5
None	N	NA	NA		N	0	10	10	10
None	N	Y		12	N	0	20	20	20
None	N	NA	NA		N	0	30	30	30
None	N	NA	NA		N	0	15	15	15
None	N	NA	NA		N	0	35	35	35
None	N	NA	NA		N	0	20	20	20
None	N	NA	NA		N	0	25	25	25
None	N	Y		12	N	0	25	25	25

Temperatu	Length.exp	Germinated	Germinable
25	31	220	400
25	31	300	400
25	21	189	300
25	21	141	300
25	28	196	400
25	28	388	400
25	28	132	400
25	28	320	400
5	105	96	100
15	105	8	100
20	105	42	100
15	105	44	100
25	105	88	100
5	105	98	100
10	105	90	100
15	105	81	100
25	105	81	100
15	105	73	100
25	105	88	100
10	105	92	100
20	105	92	100
25	105	87	100
20	28	5	50
0	62	13	50
20	28	38	50
20	28	50	50
0	62	21	50
20	28	2	50
20	28	49	50
20	28	42	50
20	28	34	50
20	28	38	50
20	14	212	400
25	14	120	400
30	14	52	400
35	14	0	400
10	14	240	400
15	14	256	400
5	14	0	400
20	14	288	400
25	14	216	400
35	14	0	400
15	14	288	400
10	14	220	400
5	14	0	400
30	14	112	400
20	15	9	90
20	15	9	90
5	917	250	250
20	14	144	150
20	15	89	90
25	30	164	200
25	30	176	200
5	917	250	250
20	14	250	250

5	917	250	250
5	917	250	250
5	917	238	250
25	15	276	400
5	917	250	250
5	917	225	250
5	917	238	250
5	90	156	400
0	90	180	400
15	90	8	400
5	917	240	250
5	90	56	400
10	90	12	400
0	90	180	400
10	90	44	400
5	90	160	400
0	90	172	400
5	917	250	250
20	14	19	60
20	14	8	60
20	14	28	60
20	14	18	60
25	22	90	200
20	30	8	25
20	30	9	25
25	30	185	250
20	30	0	250
20	30	21	100
20	30	4	100
20	30	0	250
25	30	2	250
20	30	0	250
25	30	24	25
20	30	6	25
20	30	0	250
20	30	2	250
20	30	18	25
25	30	16	25
25	30	65	100
20	30	19	25
20	30	175	250
20	30	5	25
20	30	21	100
20	30	172	250
20	30	38	50
25	30	41	50
20	30	16	50
25	30	152	250
20	30	34	50
20	30	0	250
20	30	0	250
20	30	752	800
5	32	10	30
10	32	20	30
20	32	29	30
20	28	105	200

20	28	64	200
20	28	145	200
20	28	148	200
20	28	170	200
20	28	195	200
20	28	164	200
20	28	189	200
20	28	193	200
20	30	760	800
20	28	193	200
20	28	107	200
20	28	180	200
20	28	119	200
20	28	180	200
20	28	178	200
5	90	344	400
5	90	356	400
10	90	20	400
15	90	12	400
10	90	140	400
0	90	368	400
0	90	372	400
0	90	360	400
5	90	268	400
20	42	558	900
10	90	20	400
15	42	486	900
20	42	513	900
25	42	522	900
25	42	405	900
0	90	312	400
30	42	117	900
10	90	36	400
0	90	324	400
25	42	252	900
15	42	612	900
5	90	160	400
5	90	256	400
20	42	513	900
20	42	612	900
20	42	369	900
15	90	8	400
25	42	369	900
25	42	180	900
5	90	44	400
0	90	280	400
15	42	315	900
10	42	234	900
15	90	12	400
0	90	380	400
0	90	344	400
5	90	384	400
0	90	364	400
5	90	384	400
10	90	40	400
5	90	360	400

10		90	232	400
0		90	320	400
5		90	336	400
0		90	344	400
5		90	332	400
10		90	36	400
5		90	336	400
0		90	324	400
15		90	28	400
10		90	264	400
20		30	752	800
5		90	160	400
0		90	120	400
10		90	88	400
0		90	160	400
0		90	312	400
10		90	96	400
5		90	152	400
15		90	12	400
5		90	184	400
5		90	360	400
15		90	8	400
0		90	388	400
5		90	360	400
0		90	380	400
5		90	368	400
10		90	76	400
10		90	0	400
0		90	368	400
20		27	48	75
25		31	5	60
25		31	31	60
25		31	30	60
25		31	2	60
25		31	27	60
25		31	1	60
20		180	43	150
25		30	66	75
15		30	49	75
30		30	29	75
20		30	53	75
20		30	760	800
20		100	47	200
20		100	0	200
20		100	184	200
20		100	0	200
20		100	0	200
20		100	4	200
20	NA		102	150
20	NA		21	150
15		42	150	200
20		100	136	150
10		42	160	200
20		100	150	150
20		100	150	150
20		14	180	200

20	42	162	200
20	100	150	150
5	42	0	200
20	14	190	200
30	42	0	200
20	100	106	150
10	42	140	200
15	45	22	120
25	42	154	200
25	10	148	150
25	10	150	150
15	100	64	150
15	100	112	150
15	100	0	150
15	100	57	150
15	100	113	150
15	100	123	150
15	100	122	150
15	100	139	150
20	14	60	75
20	14	64	75
10	22	23	50
20	22	3	50
20	72	430	500
20	30	768	800
20	72	330	500
20	63	2	100
25	21	280	400
25	35	145	200
25	35	61	200
20	56	0	120
20	56	69	120
25	42	168	250
25	30	162	200
25	30	130	200
25	30	118	200
20	20	102	120
25	30	170	200
20	21	174	300
15	21	8	100
10	21	0	100
35	21	3	100
10	21	3	100
35	21	50	100
30	21	75	100
25	21	61	100
15	21	1	100
15	21	0	100
15	21	38	100
30	21	97	100
25	21	95	100
20	21	88	100
20	21	9	100
10	21	10	100
15	21	0	100
10	21	0	100

25	21	92	100
20	21	10	100
25	21	50	100
35	21	37	100
20	21	74	100
35	21	5	100
30	21	71	100
15	21	27	100
15	21	60	100
15	21	5	100
30	21	97	100
15	231	0	400
5	231	96	400
25	231	20	400
20	231	156	400
5	231	324	400
25	231	0	400
10	231	16	400
15	231	272	400
10	231	384	400
20	231	0	400
10	21	0	100
20	21	10	100
15	21	10	100
30	21	99	100
15	21	1	100
35	21	75	100
25	21	40	100
15	21	48	100
10	21	5	100
30	21	87	100
35	21	5	100
20	21	83	100
25	21	97	100
15	21	0	100
20	21	69	100
30	21	81	100
15	21	35	100
30	21	49	100
10	21	1	100
35	21	0	100
15	21	1	100
25	21	23	100
15	21	0	100
15	21	8	100
25	21	90	100
35	21	0	100
10	21	0	100
20	21	4	100
35	21	0	100
15	21	30	100
35	21	20	100
20	21	8	100
30	21	65	100
15	21	65	100
10	21	1	100

25	21	43	100
10	21	0	100
25	21	90	100
20	21	83	100
15	21	0	100
15	21	1	100
30	21	86	100
15	140	200	200
35	140	150	200
20	140	200	200
25	140	160	200
30	140	150	200
5	140	182	200
10	140	200	200
25	140	180	200
10	140	188	200
15	140	192	200
20	140	188	200
30	140	180	200
5	140	188	200
35	140	176	200
15	45	112	120
25	45	112	120
25	45	112	120
20	45	112	120
25	28	247	400
25	28	303	400
25	28	337	400
25	21	16	400
25	28	157	400
25	28	366	400
25	28	312	400
25	28	29	400
25	28	357	400
25	28	373	400
25	28	74	400
25	28	314	400
25	28	102	400
15	30	106	150
25	28	26	400
25	28	390	400
25	28	163	400
25	28	368	400
25	28	367	400
25	28	366	400
25	28	348	400
25	28	32	400
25	28	321	400
25	28	366	400
25	28	390	400
25	30	30	150
25	28	380	400
5	21	0	400
25	28	375	400
25	28	173	400
25	28	371	400

25		28	347	400
25		28	145	400
25		28	219	400
20		28	180	200
25		28	126	400
25		28	222	400
20		28	180	200
25		28	373	400
25		28	99	400
25		21	368	400
15		30	68	150
15		30	70	150
25		28	314	400
25		28	66	400
25		28	384	400
20		28	180	200
25		28	116	400
25		28	296	400
25		28	361	400
20		28	180	200
25		28	157	400
25		28	324	400
25		28	148	400
15		30	94	150
25		28	245	400
25		137	37	45
25		137	17	45
25		137	8	45
25		137	9	45
25		137	36	45
25		137	32	45
25		16	43	150
25		16	45	200
15		21	116	125
25		21	79	125
15		60	150	150
20		60	144	150
5		60	135	150
15		60	72	150
25		60	144	150
10		60	140	150
30		365	78	200
20		365	2	200
25		365	78	200
20		365	5	200
5		365	2	200
20		365	2	200
15		365	2	200
10		365	2	200
20		365	193	200
25		365	74	200
10		365	2	200
15		365	2	200
15	NA		0	100
15	NA		0	100
15	NA		10	100

15	NA		0	100
15	NA		0	100
15	NA		0	100
15	NA		0	100
15	NA		0	100
15		30	1068	1200
20		30	0	550
10		30	726	1100
20		30	1001	1100
20		30	1045	1100
10		30	682	1100
25		123	10	50
15		42	0	75
15		42	75	75
15		42	72	75
15		42	14	75
15		42	0	75
15		42	19	75
15		42	0	75
15		42	42	75
15		42	0	75
15		42	1	75
15		42	29	75
15		42	25	75
15		42	68	75
15		42	0	75
15		42	0	75
15		42	72	75
15		42	2	75
15		42	0	75
15		42	0	75
15		42	3	75
15		42	24	75
15		42	38	75
15		42	0	75
15		42	32	75
15		42	7	75
15		42	0	75
15		42	0	75
15		42	0	75
15		42	0	75
15		42	67	75
15		42	2	75
15		42	2	75
15		42	0	75
15		42	0	75
15		42	2	75
15		42	62	75
15		42	0	75
15		42	72	75
15		42	0	75
15		42	10	75
15		42	2	75
15		42	3	75
15		42	0	75
15		42	38	75

15	42	0	75
15	42	0	75
15	42	0	75
15	42	5	75
15	42	0	75
15	42	65	75
15	42	29	75
15	42	1	75
15	42	0	75
15	42	61	75
15	42	0	75
15	42	44	75
15	42	40	75
15	42	3	75
15	42	16	75
15	42	37	75
15	42	10	75
15	42	3	75
15	42	0	75
15	42	58	75
15	42	35	75
15	42	0	75
15	42	61	75
15	42	70	75
15	42	59	75
15	42	8	75
15	42	22	75
15	42	0	75
15	42	0	75
15	42	0	75
15	42	1	75
15	42	0	75
15	42	0	75
15	42	0	75
15	42	0	75
15	42	40	75
15	42	11	75
15	42	14	75
15	42	14	75
15	42	0	75
25	45	100	100
25	45	72	100
25	45	92	100
15	42	43	75
15	42	26	75
15	42	7	75
15	42	0	75
15	42	2	75
15	42	0	75
15	42	2	75
15	42	0	75
15	42	29	75
15	42	0	75
15	42	11	75
15	42	72	75
15	42	32	75

15	42	38	75	
15	42	0	75	
15	42	0	75	
15	42	0	75	
15	42	0	75	
15	42	2	75	
15	42	44	75	
15	42	70	75	
15	42	2	75	
15	42	37	75	
15	42	0	75	
15	42	40	75	
15	42	17	75	
15	42	0	75	
15	42	0	75	
15	42	0	75	
15	42	68	75	
15	42	1	75	
15	42	0	75	
15	42	0	75	
15	42	0	75	
15	42	6	75	
15	42	38	75	
15	42	2	75	
15	42	0	75	
15	42	135	150	
15	56	128	150	
20	NA	90	100	
15	56	135	150	
15	42	142	150	
15	60	50	100	
15	60	0	100	
15	60	75	100	
25	60	80	100	
25	60	0	100	
20	28	90	100	
20	98	0	150	
20	98	4	150	
20	98	6	150	
20	98	20	150	
20	98	34	150	
20	98	38	150	
25	36	66	100	
20	9	31	56	
20	9	47	56	
20	60	4	40	
10	196	2	100	
15	196	88	100	
15	28	30	100	
10	28	80	100	
5	28	4	100	
15	196	85	100	
5	28	8	100	
15	28	33	100	
10	196	4	100	
15	28	13	100	

15	196	40	100
15	28	50	100
15	28	30	100
5	28	0	100
10	28	59	100
10	28	73	100
5	196	0	100
10	28	95	100
15	196	63	100
5	28	0	100
15	28	56	100
5	196	0	100
15	28	20	100
15	28	30	100
20	63	0	120
20	63	118	120
20	63	101	120
20	63	0	120
20	63	0	120
20	63	54	120
20	300	115	120
25	300	12	120
5	300	0	120
10	300	38	120
15	300	91	120
15	300	109	120
25	300	48	120
10	56	198	250
15	56	198	250
15	56	182	250
10	56	182	250
10	56	100	250
15	56	100	250
15	56	2	250
10	56	2	250
25	21	279	300
25	21	282	300
25	21	288	300
25	21	285	300
25	21	288	300
25	60	95	250
25	60	140	250
25	60	155	250
25	60	138	250
25	60	125	250
25	60	125	250
25	60	112	250
25	60	142	250
25	21	288	300
25	21	276	300
25	21	282	300
25	21	291	300
25	21	279	300
20	63	98	150
10	20	248	450
25	20	450	450

10		20	243	450
25		20	450	450
10		20	292	450
25		20	450	450
20		14	116	200
25		60	95	250
25		60	55	250
20		14	158	200
15		30	41	100
20		30	30	100
20		30	81	100
15		30	77	100
15		30	73	100
20		30	70	100
15		30	68	100
20		30	60	100
10		90	112	200
20		90	32	200
15		90	158	200
10		90	82	200
15		90	150	200
20		90	14	200
10		28	135	150
10		28	0	150
10		28	136	150
10		28	0	150
10		28	0	150
10		28	119	150
25		60	55	250
25		60	30	250
25		60	12	250
25		60	65	250
10		28	0	150
10		28	94	150
10		28	0	150
10		28	111	150
10		28	0	150
10		28	118	150
10		28	0	150
10		28	38	150
20		28	47	50
20		28	44	50
20		28	50	50
15		126	21	160
15		126	351	400
15		126	34	400
15		126	283	400
15		56	0	1
20		60	195	300
20		60	234	300
5	NA		59	60
25		20	39	150
10		28	40	100
5		28	0	100
15		28	45	100
20		28	10	100

20		28	11	100
5		28	0	100
10		28	89	100
25		28	0	100
15		28	100	100
25		28	0	100
15		28	7	100
15		28	100	100
25		60	100	250
25		60	25	250
5		700	0	50
20		700	40	50
0		700	0	50
15		700	22	50
10		700	0	50
25		700	2	50
10	NA		108	120
25		28	264	300
25		28	285	300
25		28	291	300
25		28	258	300
25		28	276	300
25		28	243	300
25		28	237	300
25		28	276	300
25		28	294	300
25		28	288	300
25		20	155	200
20		35	100	150
25		35	110	150
25		35	147	150
20		35	141	150
25		35	112	150
30		35	148	150
25		35	111	150
30		35	141	150
20		28	200	200
10		28	200	200
15		28	200	200
5		28	184	200
20		28	81	96
20		28	61	96
20		21	36	72
20		21	17	72
20		21	35	72
25	NA		18	150
25	NA		0	150
20		48	70	100
20		48	40	100
20		48	40	100
20		48	80	100
20		48	85	100
20		48	49	100
20		48	30	100
20		48	77	100
20		48	30	100

20	48	72	100
20	48	40	100
20	48	80	100
20	28	75	96
20	28	59	96
5	210	254	400
5	210	346	400
5	210	296	400
5	210	344	400
5	210	355	400
5	210	355	400
25	52	0	125
10	52	116	125
15	52	125	125
15	52	125	125
25	52	0	125
20	52	119	125
10	52	112	125
20	52	38	125
15	120	106	150
20	20	93	100
20	50	53	150
15	50	92	150
10	50	106	150
20	50	119	150
10	50	137	150
25	50	16	150
10	50	122	150
5	50	134	150
20	28	79	96
20	28	60	96
10	50	60	150
10	50	103	150
15	50	75	150
25	50	18	150
20	50	57	150
20	50	83	150
10	50	86	150
5	50	97	150
10	50	63	150
25	50	10	150
15	50	56	150
10	50	83	150
20	50	81	150
20	50	33	150
10	50	90	150
5	50	92	150
20	84	15	26
5	84	0	26
10	84	0	26
15	84	0	26
20	84	1	26
20	84	105	150
15	84	0	150
5	84	0	150
10	84	0	150

20	84	2	150	
15	84	8	50	
10	84	2	50	
5	84	0	50	
20	84	44	50	
25	84	36	50	
10	14	22	150	
30	14	0	150	
20	14	0	150	
10	14	30	150	
15	14	27	150	
15	14	15	150	
10	14	14	150	
25	14	7	150	
20	14	36	150	
10	14	0	150	
20	14	75	150	
25	14	76	150	
10	14	1	150	
25	14	4	150	
10	14	0	150	
15	14	24	150	
20	14	2	150	
10	14	0	150	
15	14	1	150	
25	14	74	150	
20	14	9	150	
15	14	87	150	
10	14	0	150	
10	14	0	150	
20	14	0	150	
15	14	123	150	
15	14	8	150	
15	14	56	150	
20	14	25	150	
10	14	142	150	
20	14	74	150	
20	NA	400	400	
15	60	84	100	
15	60	64	100	
15	60	53	100	
20	28	63	96	
20	28	75	96	
15	60	29	100	
15	60	0	100	
15	60	46	100	
15	60	25	100	
15	60	5	100	
15	60	48	100	
15	60	26	100	
15	45	89	120	
35	45	43	120	
25	45	85	120	
5	45	85	120	
30	45	59	120	
20	45	93	120	

10	45	96	120
20	45	93	120
30	45	68	120
5	45	71	120
10	45	100	120
35	45	74	120
15	45	99	120
25	45	85	120
30	45	78	120
15	45	22	120
25	45	88	120
5	45	1	120
35	45	67	120
20	45	84	120
10	45	4	120
35	45	14	120
25	45	64	120
15	45	80	120
10	45	71	120
20	45	90	120
30	45	57	120
5	45	58	120
25	21	113	120
20	21	33	50
25	32	67	100
25	32	24	40
25	32	82	100
20	28	0	400
20	28	212	400
20	28	396	400
20	78	94	100
25	61	50	60
25	61	44	60
25	61	54	60
10	14	105	150
25	14	24	150
20	14	132	150
20	14	38	150
30	14	58	150
20	14	112	150
25	14	75	150
25	14	15	150
30	14	15	150
15	14	124	150
15	14	112	150
30	14	118	150
30	14	66	150
15	14	45	150
20	14	32	150
25	14	92	150
20	14	48	150
10	14	30	150
30	14	14	150
20	14	140	150
15	14	38	150
10	14	148	150

20	14	116	150
25	30	144	300
25	30	33	300
25	30	111	300
25	30	285	300
25	7	150	150
25	21	105	117
20	91	125	144
20	91	121	144
25	210	64	150
25	210	103	150
20	33	150	150
5	33	111	150
20	33	120	150
15	33	132	150
10	33	135	150
10	33	105	150
10	33	30	150
10	33	142	150
15	33	135	150
25	240	1	200
25	240	1	200
25	240	198	200
25	240	179	200
25	240	5	200
25	240	178	200
20	21	18334	19100
20	75	11	200
20	75	90	200
20	75	11	200
20	14	208	400
25	55	26	60
20	28	109	160
20	28	101	160
25	21	117	121
20	56	107	120
20	56	92	120
20	56	102	120
20	56	77	120
20	56	86	120
20	56	88	120
20	34	106	150
25	49	152	400
25	35	152	400
5	140	276	400
5	140	336	400
5	140	320	400
15	45	20	100
10	45	81	100
5	35	0	30
15	35	27	30
25	35	30	30
10	35	6	30
15	35	20	30
20	35	30	30
15	35	28	30

25	14	86	150
20	28	77	101
25	40	71	90
5	40	33	90
15	40	72	90
20	560	0	200
20	560	0	80
10	560	158	200
5	560	0	80
15	560	40	80
15	560	132	200
10	560	0	80
5	560	10	200
20	90	150	150
5	90	0	150
10	90	75	150
10	90	108	150
25	90	96	150
30	90	14	150
20	90	75	150
20	90	75	150
20	90	108	150
15	90	75	150
15	90	80	150
25	90	20	150
25	42	31	120
25	42	50	120
25	30	8	150
25	30	46	150
25	89	78	80
15	30	144	150
30	30	30	150
15	30	69	150
20	30	112	150
25	30	38	150
25	7	0	300
10	30	150	150
5	30	150	150
10	30	150	150
20	30	134	150
20	30	116	150
10	14	7	300
10	14	28	300
20	42	3	150
5	56	11	300
15	7	4	300
25	7	3	300
10	224	108	150
15	7	0	300
30	14	2	300
20	30	144	150
5	30	150	150
5	30	2	150
25	30	60	150
5	30	0	150
30	30	6	150

25		10	20	300
10		30	45	150
25		30	76	150
25		30	26	150
15		14	32	300
30		14	27	300
5		56	18	300
25		14	29	300
25		14	13	300
15		30	150	150
15		14	13	300
15		30	81	150
10		30	4	150
5		224	146	150
10		224	30	150
5		224	142	150
25		56	38	50
20		30	95	100
20	NA		71	90
30	NA		58	90
5	NA		41	90
20		28	52	96
20		9	188	400
20		9	148	400
20		9	180	400
20		9	152	400
20		9	160	400
35		25	36	150
15		25	137	150
20		25	138	150
15		25	133	150
30		25	123	150
20		25	133	150
10		25	140	150
25		25	137	150
20		60	274	300
20		60	294	300
20		60	270	300
20		60	186	300
20		14	33	45
25		30	47	60
20		28	81	101
15		168	0	75
10		168	0	75
15		168	17	75
10		168	29	75
15		168	46	75
20		168	2	75
20		168	0	75
20		168	0	75
10		168	75	75
15		35	22	100
20		35	72	100
15		30	32	100
20		30	84	100
20	NA		15	300

20	NA		255	300
20		60	93	150
20		60	50	150
20		42	27	150
20		42	13	150
20		42	10	150
20		42	25	150
20		21	15	20
20		21	0	20
20		42	24	150
20		28	79	100
20		42	0	150
20		50	2	200
20		50	4	200
20		50	152	200
20		50	0	200
10		70	178	200
25		14	90	200
25		14	100	200
25		14	158	200
25		14	126	200
25		84	3	300
25		84	262	300
10		35	156	200
5		35	156	200
10		35	156	200
25		42	123	300
20		28	32	100
25		42	60	300
25		42	57	300
25		42	70	150
25		42	130	150
15		36	270	600
15		36	450	600
15		21	38	150
20		21	142	150
30		21	130	150
25		21	120	150
10		21	39	150
25		21	138	150
35		21	115	150
20		21	120	150
10		252	0	150
10		252	120	150
25		252	0	150
5		252	147	150
15		252	0	150
25		28	68	150
15		28	0	150
10		28	72	150
15		14	0	150
15		28	96	150
10		14	2	150
15		14	120	150
10		14	3	150
25		14	2	150

25	14	24	150
25	28	0	150
25	14	0	150
10	14	2	150
25	14	0	150
10	28	0	150
10	14	30	150
25	14	0	150
10	14	0	150
25	14	0	150
25	14	0	150
15	14	142	150
10	14	0	150
10	14	0	150
25	14	0	150
25	14	52	150
15	14	0	150
25	14	0	150
10	14	0	150
15	14	0	150
10	14	0	150
10	14	0	150
15	14	0	150
15	14	0	150
10	14	3	150
25	14	2	150
25	14	0	150
10	14	2	150
25	14	0	150
15	14	150	150
10	14	0	150
25	14	60	150
15	14	0	150
10	14	0	150
10	14	8	150
25	14	72	150
25	14	0	150
10	28	72	150
10	14	0	150
25	14	0	150
10	14	4	150
25	14	0	150
10	14	2	150
15	14	3	150
10	14	12	150
25	14	0	150
15	14	0	150
25	14	0	150
10	14	0	150
10	14	0	150
15	14	2	150
10	14	90	150
15	14	108	150
10	14	0	150
15	14	60	150
10	14	0	150

10		14	0	150
10		14	0	150
10		14	0	150
10		14	0	150
15		14	0	150
25		14	2	150
25		14	0	150
10		28	0	150
25		14	0	150
10		14	3	150
10		14	0	150
25		14	86	150
25		14	0	150
15		14	105	150
10		14	2	150
25		14	2	150
25		14	2	150
25		14	0	150
10		14	2	150
10	NA		0	150
5		182	200	200
25	NA		141	150
5		105	150	200
10	NA		0	150
10	NA		0	150
15	NA		0	250
15	NA		220	250
15	NA		2	250
15	NA		104	200
15	NA		0	250
15	NA		212	250
15	NA		128	250
15	NA		210	250
15	NA		88	250
15	NA		238	250
15	NA		230	250
15	NA		2	250
15	NA		58	250
15	NA		0	250
15	NA		175	250
15	NA		230	250
15	NA		8	250
15	NA		240	250
15	NA		240	250
15	NA		230	250
15	NA		220	250
15	NA		0	250
15	NA		232	250
15	NA		8	250
15	NA		15	250
15	NA		68	250
15	NA		8	250
15	NA		190	250
15	NA		15	250
15	NA		240	250
15	NA		102	250

15	NA	0	250
15	NA	0	250
15	NA	176	200
15	NA	238	250
15	NA	235	250
15	NA	242	250
15	NA	0	250
15	NA	228	250
15	NA	235	250
15	NA	22	250
15	NA	80	250
15	NA	100	250
15	NA	112	250
15	NA	20	250
15	NA	218	250
15	NA	90	250
15	NA	112	250
15	NA	120	250
15	NA	225	250
15	NA	198	250
15	NA	28	250
15	NA	208	250
15	NA	212	250
15	NA	240	250
15	NA	125	250
15	NA	0	250
15	NA	35	250
15	NA	0	250
15	NA	45	250
15	NA	168	250
15	NA	178	250
15	NA	18	250
15	NA	0	250
15	NA	0	250
15	NA	40	250
15	NA	70	250
15	NA	0	250
15	NA	45	250
15	NA	0	250
15	NA	15	250
15	NA	10	250
15	NA	150	250
15	NA	215	250
15	NA	222	250
15	NA	42	250
15	NA	0	250
15	NA	142	250
15	NA	2	250
15	NA	85	250
15	NA	5	250
15	NA	90	250
15	NA	0	250
15	NA	225	250
15	NA	0	250
15	NA	105	250
15	NA	95	250

15	NA		5	250
15	NA		0	250
15	NA		95	250
15	NA		40	250
15	NA		145	250
25	NA		80	125
20	NA		78	125
25	NA		6	250
5	NA		372	400
5	NA		304	400
5	NA		312	400
5	NA		272	400
5	NA		284	400
25		180	20	36
20		180	74	90
20		180	83	90
5		180	27	36
20		180	28	36
10		180	23	36
15		180	28	36
5	NA		308	400
5	NA		248	400
5	NA		264	400
10		200	0	150
5		200	142	150
10		200	142	150
0		200	141	150
20		200	0	150
15		200	0	150
25		200	0	150
10		200	0	150
25		200	122	150
20		200	0	150
15		200	0	150
5		200	75	150
15		200	142	150
25		200	0	150
25		200	108	150
20		200	135	150
15		168	48	400
10		168	144	400
5		168	108	400
10		240	1	180
15		240	1	180
5		240	40	180
15		240	0	180
5		240	132	180
10		240	20	180
20		28	67	80
20		66	56	66
20		28	50	200
15		180	23	36
20		180	78	90
25		180	17	36
5		180	15	36
10		180	26	36

20	180	63	90
20	180	32	36
15	21	1710	3000
15	21	2430	3000
15	21	1440	3000
15	21	2940	3000
15	100	8	90
15	100	62	90
40	42	172	400
10	42	0	400
40	42	0	400
30	42	128	400
25	42	212	400
10	42	0	400
15	42	52	400
30	42	148	400
25	42	204	400
30	42	208	400
15	42	0	400
30	42	196	400
20	42	148	400
25	42	0	400
25	42	116	400
25	28	180	400
20	42	0	400
25	30	10	50
30	30	0	50
25	30	2	50
15	30	22	50
10	30	47	50
10	30	35	50
20	30	4	50
5	30	48	50
25	21	76	100
10	28	156	400
25	30	7	100
25	30	49	100
20	NA	10	45
15	84	5	60
20	84	4	60
10	84	24	60
10	70	130	200
30	84	1	60
25	84	2	60
5	84	48	60
35	84	0	60
15	50	475	864
20	50	389	864
20	28	74	200
20	28	28	200
30	28	92	200
20	28	26	200
25	28	88	200
20	28	54	200
20	28	76	200
20	28	76	200

30	28	98	200
15	28	64	200
25	28	78	200
20	28	72	200
15	28	48	200
20	28	0	200
20	28	60	200
20	28	0	200
25	14	102	200
25	28	3518	4200
25	28	132	150
25	28	2	150
25	28	0	150
25	28	138	150
25	28	150	150
25	28	0	150
25	28	129	150
25	28	2	150
20	30	237	300
20	30	252	300
20	30	285	300
20	30	261	300
25	50	122	150
20	30	177	300
20	30	100	100
20	NA	117	500
25	14	2	150
10	14	0	150
15	14	9	150
10	14	106	150
25	14	123	150
25	14	117	150
15	14	16	150
10	14	86	150
10	14	2	150
25	14	0	150
10	14	8	150
25	14	6	150
10	14	120	150
10	14	4	150
25	14	20	150
25	14	14	150
10	14	4	150
25	14	80	150
25	14	105	150
10	14	58	150
15	14	93	150
15	14	148	150
15	14	114	150
25	14	2	150
10	14	4	150
15	14	3	150
10	14	147	150
25	14	14	150
25	14	147	150
10	14	2	150

15		37	332	400
15		37	60	400
15		30	3	200
15		30	126	200
20		80	35	125
20		80	119	125
20		80	9	125
20		80	71	125
20		80	1	125
20		80	44	125
20		21	0	30
20		21	30	30
5		350	0	150
20		350	0	150
15		350	150	150
10		350	30	150
5		350	0	150
20		350	0	150
10		350	30	150
15		350	150	150
15		350	150	150
5		350	0	150
20		350	0	150
10		350	30	150
20		28	181	200
15		350	75	150
10		350	90	150
20		350	0	150
5		350	0	150
15		42	0	100
15		42	0	100
15		42	0	100
15		42	4	100
15		60	79	100
20		84	82	100
20		84	45	100
5	NA		60	60
20		84	96	100
25		84	80	100
30	NA		24	25
30	NA		22	25
0	NA		24	25
45	NA		2	25
5	NA		25	25
15	NA		25	25
20	NA		24	25
5	NA		54	60
25	NA		25	25
10	NA		24	25
25	NA		22	25
10		48	145	150
10		48	147	150
10		48	150	150
25		140	23	75
25		140	52	75
25		140	32	75

25		84	188	400
25		133	12	30
15		133	29	30
10		133	26	30
5		133	6	30
20		133	27	30
25		84	260	400
25		84	152	400
25		84	324	400
25		84	140	400
25		90	150	150
25		49	0	100
20		49	1	100
15		42	30	200
15		42	106	200
25		42	114	200
25		42	106	200
15		42	0	400
15		42	92	400
25		42	100	400
25		42	68	400
25		18	27	90
15		140	10	200
5		140	178	200
5		140	152	200
15	NA		94	100
5	NA		77	100
15		140	164	200
5	NA		96	100
15	NA		11	100
30		8	0	180
30		8	153	180
20	NA		110	120
20	NA		57	120
20	NA		86	120
15		42	37	75
15		42	2	75
15		42	28	75
15		42	0	75
15		42	0	75
15		42	14	75
15		42	32	75
15		42	0	75
15		42	48	75
15		42	64	75
15		42	28	75
15		42	8	75
15		42	60	75
15		42	75	75
15		42	15	75
15		42	60	75
15		42	16	75
15		42	68	75
15		42	28	75
15		42	0	75
15		42	0	75

15		42	38	75
15		42	71	75
15		42	0	75
15		42	0	75
15		42	0	75
15		42	75	75
15		42	45	75
15		42	32	75
15		42	8	75
15		42	2	75
15		42	16	75
15		42	16	75
15		42	26	75
15		42	32	75
15		42	10	75
15		42	14	75
15		42	0	75
15		42	6	75
15		42	75	75
15		42	0	75
15		42	0	75
15		42	14	75
15		42	26	75
15		42	0	75
15		42	1	75
15		42	14	75
15		42	0	75
15		15	0	200
25		15	200	200
20		15	200	200
5		15	200	200
25		15	0	200
10		15	0	200
10		15	200	200
5		15	0	200
15		15	200	200
20		15	0	200
25	NA		5	7
25	NA		6	7
20		28	92	400
20		28	0	400
20		28	277	400
20		28	179	400
20		28	0	400
20		28	77	400
20		28	28	400
20		28	73	400
20		28	0	400
20		28	46	400
20		28	0	400
20		28	31	400
20		28	0	400
20		28	169	400
20		28	155	400
20		28	0	400
20		28	281	400

25	56	0	500
20	56	0	500
20	56	395	500
20	56	0	500
20	28	0	400
20	28	362	400
5	56	64	200
20	56	114	200
15	56	106	200
30	56	104	200
10	56	92	200
25	56	110	200
15	56	104	200
30	56	110	200
20	56	116	200
5	56	86	200
10	56	100	200
25	56	112	200
10	56	44	200
20	56	48	200
30	56	44	200
25	56	46	200
5	56	34	200
15	56	42	200
30	56	30	200
25	56	32	200
20	56	36	200
10	56	26	200
15	56	32	200
5	56	14	200
20	56	38	100
25	56	16	100
20	56	0	100
25	56	50	100
25	56	46	100
25	56	2	100
25	56	7	100
25	56	73	100
25	14	189	200
20	14	180	200
20	14	168	200
20	14	164	200
20	14	162	200
20	14	172	200
25	14	182	200
20	14	172	200
20	14	190	200
20	14	191	200
20	14	177	200
25	14	183	200
20	14	179	200
20	14	183	200
20	14	187	200
25	14	191	200
25	40	75	90
20	70	99	100

20	70	91	100
5	336	120	150
25	7	45	100
20	42	1	100
20	42	88	100
15	42	29	100
20	42	36	100
25	42	30	100
20	32	56	80
25	28	385	400
5	112	95	100
5	168	10	100
20	26	195	200
25	26	107	200
15	26	150	200
10	26	61	200
40	26	0	200
5	26	0	200
35	26	0	200
30	26	41	200
25	84	1	60
20	84	2	60
10	84	13	60
30	84	1	60
15	84	2	60
35	84	0	60
5	84	16	60
20	84	11	60
25	84	13	60
5	84	48	60
30	84	21	60
35	84	24	60
10	84	30	60
15	84	18	60
15	84	1	60
5	84	43	60
25	84	2	60
10	84	16	60
30	84	10	60
35	84	8	60
20	84	1	60
5	84	60	60
30	84	1	60
25	84	2	60
15	84	3	60
35	84	0	60
10	84	26	60
20	84	2	60
25	7	30	100
20	84	12	60
15	84	16	60
10	84	24	60
25	84	11	60
5	84	48	60
35	84	24	60
30	84	18	60

5	84	48	60	
30	84	7	60	
35	84	6	60	
15	84	4	60	
20	84	2	60	
10	84	26	60	
25	84	2	60	
15	30	160	200	
10	30	150	200	
10	30	60	200	
15	30	90	200	
15	30	160	200	
10	30	156	200	
10	30	60	200	
15	30	106	200	
15	30	118	200	
10	30	100	200	
20	280	0	120	
15	280	76	120	
10	280	106	120	
5	280	0	120	
20	28	181	200	
25	14	196	200	
25	7	32	100	
20	21	65	100	
20	21	4	100	
25	40	40	100	
25	40	79	100	
10	40	0	100	
15	40	90	100	
10	40	54	100	
15	40	100	100	
25	40	95	100	
20	40	100	100	
20	40	97	100	
20	40	0	100	
15	40	95	100	
25	40	97	100	
20	40	97	100	
10	40	80	100	
30	40	30	100	
25	40	97	100	
30	40	97	100	
25	40	0	100	
10	40	63	100	
15	40	0	100	
30	40	0	100	
30	40	97	100	
25	40	95	100	
5	160	84	100	
5	160	76	100	
5	160	88	100	
5	160	6	100	
20	28	180	200	
5	NA	200	200	
0	91	166	200	

15		91	0	200
5		77	5	9
5		77	4	9
5		336	0	150
30		336	0	150
25		336	50	150
10		336	0	150
20		336	108	150
15		336	75	150
15		30	194	200
15		30	166	200
15		34	70	100
20		34	60	100
10		34	45	100
25		7	28	100
5		168	6	100
30		168	41	100
20		168	70	100
15		168	52	100
15		168	59	100
5		168	0	100
30		168	36	100
20		168	75	100
5	NA		10	30
5	NA		22	30
20		42	63	150
30		42	150	150
25		42	138	150
35		42	0	150
5		42	2	150
10		42	6	150
20		42	30	150
40		42	0	150
5		42	0	150
40		42	0	150
5		42	0	150
10		42	57	150
10		42	20	150
10		42	10	150
25		42	22	150
5		42	0	150
10		42	120	150
15		42	22	150
25		42	147	150
40		42	0	150
10		42	0	150
20		42	147	150
20		42	148	150
35		42	0	150
40		42	0	150
15		42	142	150
25		42	144	150
25		42	148	150
30		42	141	150
25		42	0	150
35		42	146	150

35		42	135	150
25	NA		174	200
25	NA		194	200
25	NA		160	200
25	NA		184	200
25	NA		184	200
25	NA		170	200
25	NA		180	200
25	NA		166	200
25	NA		130	200
25	NA		190	200
25	NA		146	200
25	NA		144	200
25	NA		126	200
20		28	36	400
20		28	216	400
25		28	40	400
25		28	232	400
25		5	13	50
35		5	0	50
35		3	0	50
20		5	30	50
25		3	22	50
15		3	6	50
30		3	6	50
15		5	18	50
20		3	16	50
20		5	32	50
25		5	12	50
30		5	6	50
30		3	2	50
25		3	17	50
20		3	17	50
20		5	11	50
30		3	14	50
30		5	2	50
20		3	14	50
30		5	0	50
10		42	1176	2400
25		28	1776	2400
10		42	792	2400
25		28	1992	2400
20		30	98	200
20		30	0	200
20		52	4	60
25		7	30	100
25		30	0	150
25		30	132	150
25		21	90	200
25		21	66	200
25		21	46	200
25		21	34	200
30		21	22	200
30		21	34	200
20		21	58	200
20		21	60	200

25	30	0	200
25	30	189	200
10	56	88	100
10	56	88	100
25	56	5	100
25	56	30	100
20	28	0	200
5	168	120	200
15	28	2	100
5	28	20	100
20	28	10	100
5	28	56	100
5	28	14	100
15	28	20	100
20	28	81	100
0	28	0	100
35	28	2	100
15	28	0	100
10	28	2	100
25	28	77	100
20	28	92	100
10	28	70	100
30	28	46	100
20	28	82	100
10	28	20	100
20	28	82	100
40	28	0	100
5	28	34	100
30	28	28	100
25	28	56	100
25	28	72	100
10	28	87	100
5	28	76	100
25	28	74	100
20	28	80	100
15	28	0	100
25	28	44	100
10	28	82	100
0	28	38	100
15	28	0	100
10	28	80	100
15	28	86	100
30	28	50	100
5	28	67	100
20	28	40	100
35	28	28	100
10	28	55	100
5	28	68	100
30	28	46	100
10	28	67	100
15	28	89	100
10	28	10	100
15	28	72	100
15	28	82	100
35	28	2	100
15	28	91	100

0		28	0	100
10		28	79	100
5		28	64	100
10		28	86	100
0		28	0	100
25		28	52	100
15		28	89	100
20	NA		130	200
20		42	94	100
20		42	98	100
15		40	84	100
15		40	74	100
25		7	54	100
15		40	72	100
15		40	70	100
15		40	47	100
15		40	59	100
15		40	28	100
15		40	21	100
15		40	25	100
15		40	26	100
15		40	61	100
15		40	43	100
25	NA		46	100
25	NA		68	100
15		40	91	100
20		35	40	40
20		35	20	40
20		20	2000	2000
20		20	1940	2000
10		14	106	200
20		14	192	400
20		14	364	400
20		14	380	400
20		14	355	400
20		30	129	180
10		30	128	180
20		30	139	180
25		30	132	180
25		30	103	180
5		30	94	180
30		30	121	180
10		30	112	180
35		30	75	180
5		30	96	180
15		30	126	180
25		34	18	20
15		30	119	180
10		30	137	180
20		30	134	180
25		30	143	180
35		30	103	180
25		30	134	180
30		30	114	180
5		30	93	180
5		30	79	180

10		30	116	180
20		30	115	180
25		28	80	100
20		30	57	135
20		30	23	32
25		45	222	240
10		15	0	120
15		15	119	120
30		15	0	120
15		15	112	120
20		15	112	120
25		15	23	120
30		15	0	120
10		15	112	120
0		15	0	120
5		15	0	120
25		15	36	120
5		210	60	60
10		210	37	60
20		210	0	60
5		210	55	60
10		210	0	60
20		210	0	60
20		210	0	60
15		210	0	60
20	NA		219	300
20	NA		0	300
20	NA		15	300
20		35	158	1050
25		35	430	1050
35		35	0	1050
30		35	0	1050
30		35	126	1050
35		35	0	1050
15		35	578	1050
20		35	724	1050
20		35	158	1050
20		35	903	1050
25		35	10	1050
30		35	0	1050
15		35	158	1050
30		35	10	1050
20		35	0	1050
20		35	262	1050
15		35	210	1050
25		35	0	1050
35		35	0	1050
20		35	0	1050
30		35	0	1050
15		35	0	1050
20		35	158	1050
30		35	0	1050
25		35	10	1050
35		35	0	1050
30		35	0	1050
30		35	0	1050

20	70	75	100
20	18	95	100
20	18	91	100
25	70	75	100
10	70	80	100
20	70	80	100
20	30	400	400
15	70	90	100
10	70	80	100
25	70	72	100
20	70	80	100
20	70	85	100
15	70	85	100
25	34	15	20
25	70	79	100
15	70	76	100
25	70	58	100
20	70	76	100
20	70	85	100
10	70	76	100
10	70	70	100
20	70	74	100
20	30	400	400
20	70	82	100
15	70	70	100
30	175	12	240
25	175	96	240
15	175	7	240
30	175	22	240
25	175	118	240
15	175	5	240
15	175	53	240
30	175	14	240
25	175	137	240
5	180	78	80
5	180	72	80
30	21	18	24
20	36	148	300
25	21	12	45
25	21	21	45
25	16	182	200
15	35	0	100
40	35	30	100
15	35	83	100
5	35	0	100
20	35	8	100
30	35	18	100
30	35	98	100
35	35	5	100
10	35	25	100
10	35	0	100
25	35	48	100
5	35	0	100
20	35	92	100
35	35	85	100
40	35	0	100

25	35	95	100
25	34	20	20
25	33	141	150
25	33	150	150
25	33	132	150
25	33	142	150
25	33	90	150
25	33	144	150
25	33	142	150
25	33	128	150
25	15	132	165
10	28	0	150
10	28	144	150
10	28	150	150
10	28	0	150
25	28	89	100
25	21	200	200
25	30	51	60
15	7	46	50
25	34	19	20
25	6	100	100
25	12	219	300
10	14	0	150
20	14	0	150
20	14	0	150
25	14	0	150
20	14	0	150
20	14	0	150
10	14	0	150
15	14	0	150
25	14	0	150
20	14	114	150
15	14	114	150
20	14	0	150
25	14	114	150
20	14	0	150
10	14	0	150
10	14	114	150
15	14	0	150
20	14	114	150
25	14	0	150
15	14	0	150
25	14	0	150
20	14	150	150
25	14	132	150
15	14	140	150
10	14	46	150
20	14	0	150
25	14	8	150
20	14	0	150
20	14	30	150
20	14	0	150
10	14	0	150
10	14	0	150
20	14	30	150
25	14	0	150

15		14	20	150
20		14	0	150
10		14	116	150
15		14	0	150
15		14	0	150
20		14	150	150
25		90	200	400
5		90	184	400
30		90	112	400
15		90	372	400
15		90	364	400
10		90	320	400
20		90	356	400
20		90	384	400
20	NA		2	150
25	NA		2	150
10	NA		69	150
25	NA		105	150
20	NA		104	150
10	NA		22	150
20	NA		104	150
20	NA		15	150
10		37	10	50
15		37	50	50
15		37	50	50
15		37	48	50
15		37	48	50
20		37	50	50
10		37	48	50
20		37	50	50
10		37	48	50
20		37	48	50
10		37	48	50
15		37	48	50
20		37	48	50
15		37	48	50
15		37	48	50
15		37	48	50
20		37	48	50
15		37	48	50
15		37	48	50
15		37	48	50
10		37	48	50
20		37	48	50
15		37	48	50
10		37	48	50
10		30	57	200
10		30	0	200
10		30	0	200
10		30	75	200
10		30	36	200
10		30	34	200
10		30	0	200
10		30	0	200
20		54	83	100
20		54	79	100

20		60	16	50
20		60	28	50
20		31	199	200
10		31	196	200
10		31	189	200
20		31	200	200
20		31	199	200
20		31	199	200
10		31	199	200
10		31	190	200
10		31	175	200
10		31	132	200
20		31	198	200
20		31	181	200
10		31	146	200
20		31	193	200
20		31	142	200
10		31	195	200
25	NA		95	300
15		60	87	100
15		60	15	100
20		42	9	10
20		42	38	40
20		42	21	40
10		28	144	200
20		200	0	100
15		100	78	100
5		28	102	200
20		200	0	100
25		28	118	200
15		100	80	100
20		28	164	200
15		28	164	200
20		200	0	100
15		100	95	100
25		65	0	60
15		65	0	60
25		65	56	60
20		65	0	60
25		65	0	60
30		65	0	60
20		30	116	120
20		365	288	300
20		365	264	300
20		365	171	300
15		28	138	250
25		60	45	500
25		60	445	500
25		60	0	500
25		60	405	500
25		60	0	500
25		60	85	500
25		60	50	500
25		60	205	500
25		60	0	500
25		60	0	500

25	60	430	500
25	60	0	500
25	60	0	500
25	60	275	500
25	60	0	500
25	60	145	500
10	28	117	150
10	28	146	150
10	28	147	150
10	28	148	150
20	99	8	200
20	99	128	200
20	99	6	200
20	99	164	200
20	NA	52	150
10	28	35	100
10	28	97	100
20	28	93	100
25	28	35	100
15	28	51	100
30	28	77	100
20	28	6	100
15	28	0	100
10	28	0	100
30	28	97	100
10	28	0	100
25	28	99	100
20	40	60	60
30	40	0	60
5	40	0	60
25	28	57	60
15	28	70	100
20	365	0	25
10	365	13	25
15	365	3	25
10	365	12	25
20	365	0	25
20	365	0	25
5	365	22	25
15	365	1	25
5	365	21	25
25	365	0	25
5	72	10	500
15	149	24	25
20	124	24	25
10	365	7	25
20	146	20	25
15	365	0	25
20	72	459	500
25	72	242	500
20	365	0	25
25	365	0	25
5	365	24	25
20	365	0	25
20	72	477	500
30	72	3	500

10	72	9	500
10	365	1	25
0	365	3	25
0	365	21	25
10	365	1	25
25	365	0	25
15	78	25	25
10	365	2	25
15	365	0	25
25	355	22	25
25	365	0	25
25	365	0	25
15	72	243	500
25	355	24	25
5	365	18	25
15	72	481	500
10	30	12	50
30	30	5	50
30	30	40	50
25	30	2	50
15	30	50	50
15	30	50	50
15	30	0	50
10	30	12	50
10	30	0	50
25	30	2	50
30	30	5	50
30	30	40	50
15	30	0	50
25	30	45	50
10	30	0	50
25	30	45	50
15	40	380	400
15	40	392	400
20	20	0	20
20	20	15	20
5	150	300	300
20	150	114	300
5	150	300	300
15	14	97	100
15	14	86	100
15	14	86	100
15	14	95	100
15	14	95	100
15	14	64	100
15	14	16	100
15	14	1	100
15	14	49	100
15	14	20	100
15	14	93	100
15	14	85	100
15	14	100	100
15	14	90	100
15	14	92	100
15	14	36	100
15	14	32	100

15	14	87	100
15	14	97	100
15	14	1	100
15	14	93	100
15	14	99	100
15	14	36	100
15	14	54	100
15	14	82	100
15	14	13	100
15	14	97	100
15	14	99	100
15	14	93	100
15	14	39	100
15	14	81	100
15	14	91	100
15	14	64	100
15	14	100	100
15	14	97	100
15	14	94	100
15	37	4	200
25	37	106	200
25	37	192	200
15	37	178	200
25	37	196	200
15	37	188	200
20	21	134	200
5	21	0	50
30	21	2	50
10	21	5	50
10	21	45	50
15	21	28	50
25	21	6	50
15	28	88	200
15	14	22	100
15	28	54	200
15	14	91	100
15	14	40	100
20	52	53	60
20	52	3	60
20	52	47	60
20	20	4	10
20	28	22	200
15	21	28	150
15	21	101	150
15	21	136	150
15	28	0	200
10	28	35	50
20	28	198	200
15	28	84	200
10	28	28	50
15	21	141	150
25	28	5	50
20	28	23	50
25	28	5	50
20	28	19	50
15	28	26	50

25	28	20	50
10	28	36	50
15	28	48	50
30	28	0	50
5	28	0	50
30	28	1	50
15	28	24	50
20	28	22	50
15	28	50	50
5	28	18	50
20	28	78	100
30	28	100	100
25	28	4	100
25	28	100	100
30	28	98	100
20	28	79	100
35	28	100	100
10	28	63	100
15	28	4	100
20	28	100	100
20	28	3	100
15	28	45	100
20	28	81	100
10	28	30	100
25	28	95	100
20	28	3	100
15	28	37	100
30	28	100	100
15	28	37	100
35	28	69	100
15	28	95	100
30	28	51	100
35	28	58	100
25	28	18	100
25	28	91	100
25	28	100	100
25	28	100	100
30	28	58	100
20	365	0	50
30	365	38	50
25	365	50	50
15	365	37	50
5	365	10	50
35	365	17	50
10	365	9	50
20	365	42	50
5	200	132	150
5	200	117	150
15	21	294	300
15	21	120	300
15	18	136	150
25	18	76	150
25	18	16	150
20	18	128	150
15	18	144	150
10	18	138	150

10		18	100	150
20		18	135	150
25		106	158	200
25		106	196	200
25		106	138	200
25		106	110	200
25		106	173	200
25		106	123	200
10		66	120	150
25		30	190	200
20		20	6	10
20		5	192	200
20		14	0	100
25		14	7	100
25		14	95	100
20		21	90	100
20		14	95	100
20	NA		200	200
20	NA		200	200
20	NA		168	200
20	NA		156	200
20	NA		72	200
15		15	11	150
5		15	9	150
20		15	2	150
15		15	150	150
20		15	149	150
15		15	13	150
15		15	150	150
20		15	0	150
10		15	150	150
10		15	150	150
25		15	148	150
10		15	2	150
5		15	149	150
10		15	8	150
15	NA		152	200
20		70	0	500
15		70	0	500
25		70	0	500
15		70	0	500
10		70	253	500
30		70	0	500
5		70	3	500
20		70	0	500
30		70	0	500
25		70	0	500
15		70	1	500
10		70	125	500
15		70	0	500
20		70	0	500
5		70	0	500
20		70	0	500
10		30	0	100
20		30	100	100
30		30	20	100

20		30	97	100
15		30	86	100
15		30	50	100
25		30	71	100
10		30	71	100
30		30	84	100
25		30	96	100
25		30	98	100
20		30	41	100
20		30	0	100
15		30	98	100
15		30	0	100
25		30	4	100
25		20	0	80
25		20	0	80
25		20	78	80
25		20	57	80
20		20	7	10
25		28	23	50
25		28	42	50
25	NA		10	50
25	NA		40	50
25	NA		30	50
25	NA		40	50
25		14	188	200
20		28	19	20
20		28	0	20
10		35	0	200
10		35	110	200
10		35	0	200
20		35	200	200
30		35	8	200
30		35	180	200
20		35	0	200
30		35	186	200
10		35	194	200
20		35	200	200
20		35	116	200
30		35	0	200
20		14	0	400
15		14	4	400
15		14	36	400
30		14	64	400
30		14	104	400
15		14	4	400
15		14	12	400
20		14	44	400
30		14	8	400
25		14	140	400
20		14	8	400
20		14	84	400
15		14	172	400
25		14	24	400
15		14	164	400
15		14	0	400
25		14	140	400

25		14	12	400
30		14	24	400
15		14	0	400
25		30	300	400
30	NA		16	400
20	NA		68	400
20	NA		37	75
20	NA		4	400
25	NA		280	400
30	NA		36	75
15	NA		8	400
25	NA		35	75
15	NA		64	400
15	NA		38	75
20	NA		28	400
25	NA		0	400
20	NA		348	400
30	NA		0	400
15		30	0	60
15		30	20	60
15		30	49	60
15		30	37	60
15		30	1	60
15		30	1	60
20		20	7	10
25		56	39	40
25		90	149	160
20		56	31	50
20		56	13	50
20	NA		3	125
20	NA		120	125
20	NA		0	125
20	NA		20	125
25		21	50	250
25		21	0	250
25		21	200	250
25		21	250	250
25		21	125	250
25		21	112	250
25		21	250	250
25		21	162	250
25		21	125	250
25		21	2	250
25		21	85	250
25		21	250	250
25		21	200	250
25		21	250	250
25		21	212	250
25		21	250	250
30		21	18	60
35		21	51	170
20		28	90	100
30		28	66	100
10		28	59	100
20		14	64	320
20		14	10	52

20	14	46	228
20	14	54	272
20	14	5	5
20	14	0	5
20	21	163	200
20	14	0	5
20	14	3	5
20	14	380	400
15	50	0	48
25	50	12	48
25	50	0	48
15	50	22	48
25	70	778	810
25	15	23	25
25	15	23	25
25	15	24	25
25	15	23	25
25	15	24	25
25	15	21	25
20	21	152	200
25	15	21	25
25	15	25	25
25	15	23	25
25	15	24	25
25	15	22	25
25	15	24	25
25	15	20	25
25	15	22	25
25	15	25	25
25	15	24	25
20	42	1	120
20	42	98	120
25	15	22	25
15	21	10	80
15	21	28	80
5	147	0	150
20	147	110	150
10	147	68	150
25	30	180	200
20	30	0	200
20	30	0	200
25	30	0	200
20	30	0	200
15	30	0	200
15	30	0	200
25	30	16	200
30	30	60	200
20	30	0	200
20	30	166	200
25	30	20	200
30	30	0	200
20	30	92	200
15	42	0	60
15	42	27	60
15	42	5	60
15	42	32	60

15	42	30	60	
15	42	15	60	
15	42	21	60	
15	42	21	60	
15	42	24	60	
15	42	24	60	
15	42	17	60	
15	42	17	60	
15	42	30	60	
15	42	0	60	
15	42	21	60	
15	42	24	60	
15	42	0	60	
15	42	21	60	
15	42	24	60	
15	42	0	60	
15	42	27	60	
15	42	24	60	
15	42	24	60	
15	42	0	60	
20	28	40	60	
10	28	60	60	
15	28	48	60	
20	28	51	60	
20	28	60	60	
5	28	19	60	
20	NA	228	400	
30	30	0	100	
20	30	5	100	
5	30	8	100	
15	30	66	100	
5	30	54	100	
20	30	5	100	
15	30	37	100	
10	30	37	100	
25	30	17	100	
25	30	2	100	
5	30	8	100	
10	30	69	100	
20	30	30	100	
25	30	2	100	
10	30	37	100	
15	30	37	100	
30	30	0	100	
30	30	8	100	
10	50	70	80	
10	50	14	80	
20	28	132	300	
20	42	4	120	
20	42	106	120	
20	28	153	300	
20	28	147	300	
20	28	168	300	
25	84	109	120	
20	84	279	300	
25	84	0	300	

25	84	288	300
25	84	0	300
20	84	3	300
20	21	157	200
20	21	168	200
20	21	173	200
20	21	170	200
20	21	176	200
20	42	109	120
20	42	9	120
20	21	171	200
20	21	57	60
20	21	54	60
20	21	22	60
15	35	40	150
15	35	21	150
25	35	14	150
25	35	26	150
25	28	141	150
25	28	118	150
15	28	128	150
15	28	2	150
25	90	105	150
15	90	75	150
20	90	105	150
20	60	150	150
20	90	94	150
5	90	0	150
20	60	100	150
10	90	14	150
20	NA	336	400
15	25	282	300
25	21	98	100
25	120	0	120
25	120	76	120
5	120	66	120
5	120	0	120
10	120	2	120
10	120	0	120
15	120	104	120
20	120	71	120
15	120	0	120
15	120	0	120
25	120	0	120
25	120	0	120
15	120	89	120
20	120	0	120
15	120	0	120
15	120	84	120
5	120	0	120
10	120	1	120
5	120	0	120
20	120	0	120
20	120	0	120
15	120	103	120
10	120	60	120

15	120	101	120
25	21	98	100
25	21	50	100
35	21	12	400
35	42	0	100
10	21	4	400
30	42	86	100
30	21	296	400
15	21	384	400
40	21	212	400
30	21	376	400
30	42	60	100
30	21	332	400
10	21	324	400
25	21	384	400
15	21	148	400
10	42	0	100
25	42	89	100
15	42	91	100
25	21	256	400
25	105	155	200
20	21	140	400
15	42	4	100
20	21	388	400
10	42	95	100
20	42	90	100
35	21	164	400
10	21	376	400
25	21	380	400
35	21	0	400
30	21	364	400
20	42	30	100
15	21	12	400
15	21	400	400
35	42	82	100
10	21	36	400
25	42	79	100
20	21	372	400
20	21	276	400
25	21	344	400
20	30	180	200
25	14	0	150
20	14	0	150
15	14	4	150
15	14	138	150
20	14	0	150
15	14	0	150
15	14	15	150
20	14	68	150
20	14	0	150
25	14	0	150
35	14	20	150
20	14	15	150
20	14	0	150
15	14	0	150
10	224	0	150

25	14	0	150
25	14	0	150
10	14	0	150
10	14	0	150
15	14	75	150
20	14	14	150
30	14	134	150
20	14	0	150
15	224	0	150
20	224	0	150
10	14	16	150
20	14	60	150
10	14	14	150
25	14	38	150
35	14	116	150
25	14	40	150
15	14	86	150
30	14	0	150
5	224	146	150
25	14	12	150
20	14	148	150
20	14	76	150
20	14	40	150
30	14	8	150
20	14	0	150
20	14	38	150
30	14	26	150
20	14	0	150
15	14	0	150
15	14	78	150
10	14	90	150
15	14	0	150
25	14	0	150
20	224	0	150
20	14	52	150
10	14	0	150
35	14	0	150
35	14	0	150
25	14	148	150
25	14	0	150
10	28	15	150
15	28	12	150
25	28	21	150
15	28	10	150
20	28	26	150
25	28	12	150
20	28	14	150
10	28	10	150
25	28	22	150
30	28	18	150
25	28	122	150
30	28	14	150
20	28	74	75
10	28	68	75
15	28	71	75
5	28	45	75

20	56	80	100
10	90	44	200
15	90	98	200
10	90	16	200
15	90	98	200
15	90	182	200
15	90	150	200
20	90	182	200
20	90	180	200
20	28	90	100
5	364	150	150
10	364	150	150
15	364	150	150
20	364	150	150
0	364	150	150
20	15	49	125
20	15	115	125
15	56	24	150
35	56	0	150
15	56	0	150
30	56	4	150
20	56	58	150
35	56	150	150
30	56	150	150
25	56	124	150
25	56	3	150
20	56	4	150
30	14	4	100
25	14	6	100
35	14	0	100
20	14	0	100
35	14	1	100
30	14	6	100
25	14	1	100
20	14	3	100
20	14	1	100
25	14	3	100
25	14	3	100
35	14	2	100
35	14	2	100
30	14	6	100
20	14	0	100
35	14	0	100
30	14	74	100
30	14	17	100
25	14	44	100
20	14	0	100
35	14	15	100
30	14	4	100
35	14	6	100
25	14	3	100
35	14	15	100
30	14	6	100
20	14	1	100
25	14	3	100
30	14	7	100

20	14	1	100
25	14	1	100
20	14	0	100
15	28	96	150
15	28	16	150
10	28	0	150
20	28	100	150
10	28	0	150
20	28	0	150
15	28	106	150
15	28	0	150
10	28	2	150
15	28	117	150
15	28	0	150
20	28	10	150
20	28	112	150
10	28	0	150
10	28	6	150
20	28	130	150
15	28	10	150
20	28	118	150
10	28	0	150
10	28	90	150
15	28	0	150
20	28	2	150
20	28	0	150
10	28	24	150
20	28	0	150
10	28	0	150
10	28	0	150
10	28	0	150
15	28	0	150
15	28	112	150
20	28	124	150
10	28	84	150
15	28	0	150
20	28	110	150
15	28	106	150
20	28	0	150
10	28	0	150
20	28	0	150
10	28	0	150
15	28	78	150
15	28	0	150
20	28	126	150
20	28	135	150
15	28	0	150
20	28	0	150
10	28	9	150
10	28	2	150
15	28	93	150
10	28	0	150
20	28	0	150
10	28	0	150
10	28	94	150
15	28	0	150

15		28	0	150
15		28	10	150
20		28	0	150
20		28	94	150
20		28	140	150
10		28	0	150
15		28	111	150
20		25	136	150
15		60	196	200
15		60	6	200
20		60	190	200
20		60	96	200
15		70	4	45
15		70	20	45
15		70	2	45
15		70	32	45
15		14	83	100
15		90	27	400
15		90	94	400
25		90	80	400
15		90	40	400
25		90	194	400
25		90	333	400
25		90	192	400
20		90	92	400
15		90	204	400
20		90	199	400
20		90	327	400
20		90	293	400
20		14	49	60
20		14	20	60
20		14	50	60
20		14	11	60
20		14	28	60
20		14	44	60
20		28	97	100
20		28	100	100
10		21	148	150
20		21	82	150
15		21	38	150
20		21	150	150
20		21	90	150
20		21	148	150
10		21	2	150
15		21	148	150
15	NA		113	240
10	NA		60	240
5	NA		24	240
20	NA		137	240
15		28	129	150
20		28	316	400
20		28	308	400
20		28	340	400
20		28	384	400
20		28	352	400
20		28	372	400

25	14	133	225
25	14	173	225
20	28	376	400
20	28	388	400
20	28	376	400
20	28	380	400
20	28	352	400
20	28	328	400
20	28	380	400
20	28	372	400
20	28	372	400
20	28	364	400
25	21	261	300
25	21	138	300
25	21	224	300
25	21	285	300
25	21	231	300
20	21	90	120
10	14	24	50
25	28	100	100
10	28	84	100
15	28	100	100
15	28	78	100
20	28	30	100
15	28	50	100
20	28	10	100
25	28	1	100
25	30	0	150
25	15	51	150
20	30	6	150
20	15	128	150
20	15	122	150
20	15	122	150
10	30	33	150
15	15	138	150
20	15	150	150
20	30	10	150
20	15	148	150
15	15	150	150
15	15	110	150
10	15	116	150
25	15	68	150
10	15	124	150
25	15	110	150
15	30	30	150
20	15	114	150
15	42	141	150
10	42	0	150
5	42	125	150
15	42	147	150
10	42	139	150
15	42	139	150
25	42	16	150
15	42	12	150
15	42	1	150
15	42	0	150

5	42	0	150	
25	42	146	150	
10	30	184	200	
10	30	0	200	
20	28	95	100	
10	28	95	100	
15	28	100	100	
25	28	75	100	
5	14	27	150	
10	14	0	150	
20	14	123	150	
20	14	0	150	
35	14	2	150	
25	14	123	150	
35	14	38	150	
25	14	9	150	
10	14	80	150	
35	14	116	150	
25	14	134	150	
20	14	6	150	
10	14	0	150	
5	14	0	150	
5	14	8	150	
35	14	52	150	
10	14	105	150	
25	14	2	150	
20	14	100	150	
5	14	0	150	
20	14	138	150	
20	14	0	150	
25	14	8	150	
35	14	104	150	
35	14	68	150	
20	14	0	150	
10	14	16	150	
10	14	66	150	
35	14	57	150	
10	14	0	150	
35	14	0	150	
5	14	0	150	
5	14	0	150	
25	14	135	150	
5	14	2	150	
25	14	0	150	
20	14	57	150	
10	14	0	150	
25	14	82	150	
5	14	0	150	
20	NA	400	400	
5	252	42	99	
5	252	85	99	
20	30	43	99	
20	30	50	99	
5	252	0	99	
20	7	250	250	
10	14	8	50	

20		21	250	250
20		21	300	300
20		21	300	300
25		30	22	50
15		30	21	50
15		30	42	50
10		30	24	50
25		30	40	50
10		30	42	50
10		30	29	50
15		30	30	50
25		30	28	50
25		30	40	50
15		30	45	50
10		30	45	50
10		30	38	50
10		30	44	50
25		30	37	50
15		30	43	50
15		30	45	50
25		30	42	50
20		30	40	50
15		30	48	50
10		30	48	50
10		30	48	50
25		30	40	50
15		30	44	50
20		30	18	50
25		30	45	50
20		130	174	200
25		21	210	300
25		28	278	300
25		28	247	300
20	NA		210	300
5	NA		210	300
15	NA		204	300
20	NA		231	300
20	NA		213	300
25	NA		207	300
10	NA		225	300
10	NA		207	300
20	NA		210	300
25	NA		225	300
10	NA		213	300
25	NA		228	300
15	NA		216	300
10	NA		219	300
5	NA		123	300
15	NA		210	300
25		28	273	300
25		28	229	300
25		28	268	300
25		28	229	300
25		28	239	300
25		28	284	300
25		28	293	300

25	28	260	300
25	28	230	300
25	28	207	300
20	28	55	100
15	28	55	100
25	28	12	100
10	28	39	100
10	28	45	100
20	28	49	100
25	28	14	100
15	28	84	100
15	28	72	100
25	28	28	100
10	28	68	100
20	28	59	100
25	15	2	150
25	15	96	150
20	3	194	200
10	3	180	200
15	3	190	200
5	3	196	200
25	3	184	200
15	42	736	800
20	20	0	100
25	20	33	100
5	20	30	100
30	20	0	100
20	20	72	100
15	20	0	100
15	20	72	100
10	20	0	100
10	20	39	100
25	20	0	100
5	20	0	100
30	20	0	100
20	62	34	300
20	62	235	300
10	294	0	150
5	294	134	150
15	294	0	150
5	294	150	150
10	20	2	150
30	20	0	150
5	20	0	150
20	20	3	150
25	20	0	150
20	20	8	150
15	20	46	150
25	20	6	150
15	20	21	150
10	20	12	150
15	30	312	400
15	30	364	400
25	30	376	400
20	30	328	400
5	30	0	400

5		30	0	400
15		30	384	400
25		30	344	400
10		21	186	315
10		21	195	315
10		21	268	315
10		21	211	315
20		20	100	100
20		160	99	100
20		20	94	100
30		30	103	210
20		21	282	300
10	NA		95	100
30	NA		95	100
20	NA		95	100
15		180	48	150
20	NA		68	150
10		180	40	150
20		180	57	150
20	NA		69	150
20		21	196	200
10		21	68	200
25		21	192	200
10		21	48	200
25		21	196	200
10		21	0	200
20		21	198	200
15		21	192	200
20		21	192	200
10		21	158	200
10		21	52	200
15		21	182	200
15		21	164	200
10		21	46	200
25		21	174	200
10		21	156	200
15		21	170	200
20		21	166	200
15		21	172	200
10		21	0	200
10		21	110	200
20		21	176	200
20		21	170	200
15		21	162	200
10		21	20	200
25		21	174	200
15		21	198	200
10		21	30	200
20		21	196	200
10		21	0	200
10		21	154	200
20		21	196	200
15		21	190	200
25		21	192	200
10		21	42	200
25		21	196	200

10		21	68	200
15		21	174	200
20		21	194	200
35		30	384	420
25		30	386	420
15		30	46	420
35		30	361	420
15		30	98	420
25		30	385	420
35		30	364	420
25		30	390	420
15		30	59	420
15		30	89	420
35		30	352	420
25		30	392	420
15		30	55	420
25		30	386	420
35		30	367	420
25		30	387	420
35		30	367	420
15		30	99	420
25		14	40	40
25		14	12	40
30		14	28	40
20	NA		9	150
15		180	6	150
20		180	3	150
20	NA		74	150
10		180	3	150
20		20	33	500
20		20	156	500
20		20	14	500
20		20	58	500
20		28	60	100
25		28	63	150
20		28	48	150
25		28	57	150
20		28	93	150
25		21	178	200
25		21	146	200
25		21	131	200
25		21	86	200
25		21	117	200
25		21	158	200
25		21	147	200
10		180	72	150
15		180	62	150
20		180	69	150
20	NA		74	150
20	NA		72	150
25		21	101	200
15		28	410	450
25		28	45	45
25		30	93	100
25		30	73	100
25		30	61	100

15	NA		54	160
25	NA		145	160
25	NA		43	160
10	NA		35	160
25	NA		144	160
10	NA		148	150
15	NA		130	160
15	NA		147	150
10	NA		146	160
10	NA		1	160
15	NA		0	150
15	NA		145	160
10	NA		65	160
15	NA		19	160
25	NA		61	160
15		42	48	50
35		42	37	50
25		42	50	50
10		42	47	50
20		42	50	50
5		42	0	50
10		42	49	50
10		42	42	50
35		42	34	50
10		42	41	50
15		42	42	50
30		42	43	50
10		42	40	50
25		42	6	50
30		42	7	50
10		42	49	50
20		42	42	50
5		42	0	50
20		28	38	60
20		28	54	60
25		80	168	200
20		80	191	200
10		80	186	200
15		80	200	200
10		80	200	200
20		80	200	200
15		80	158	200
25		80	200	200
20		30	34	45
20		30	10	45
15		14	100	100
0		84	100	100
15		14	46	100
15		14	96	100
0		84	100	100
15		14	100	100
15		14	58	100
25		21	328	400
25		21	194	400
20		28	211	400
25		27	245	400

25		21	128	400
25		21	400	400
25		21	336	400
25		7	95	100
25		27	379	400
25		7	29	100
25		28	15	150
20		28	150	150
20		28	22	150
15		28	98	150
10		28	0	150
10		28	38	150
25		28	0	150
15		28	82	150
15		14	41	100
30		14	92	100
30		14	40	100
15		14	94	100
25	NA		2	150
25	NA		150	150
15		70	150	250
25		70	35	250
15		70	40	250
25		70	142	250
20		70	44	250
25		70	51	250
30		70	18	250
30		70	18	250
20		70	45	250
10		70	33	250
15		70	56	250
20		70	142	250
20		13	292	300
25		15	114	150
25		21	380	400
25		21	384	400
25		21	104	200
25		21	178	200
25		21	128	200
25		60	15	160
25		60	50	160
5		60	3	160
10		60	71	160
15		60	26	160
5		60	27	160
25		21	356	400
20		5	4	200
20		5	30	200
20		22	23	100
20		22	120	500
20		22	250	500
20		22	58	450
20		20	32	40
20		20	0	40
15		40	295	300
40		40	174	300

20	40	294	300
25	40	283	300
10	40	289	300
25	40	282	300
30	40	270	300
15	40	291	300
30	40	283	300
35	40	253	300
35	40	218	300
10	40	285	300
10	40	273	300
30	40	262	300
20	40	293	300
20	40	293	300
5	40	5	300
10	28	141	300
25	28	87	300
10	28	81	300
25	28	18	300
10	28	117	300
25	28	96	300
10	28	99	300
25	28	48	300
25	28	39	300
10	28	123	300
20	30	212	250
25	30	208	250
10	30	225	250
25	30	242	250
20	30	208	250
15	30	212	250
15	30	225	250
10	30	212	250
25	120	196	400
25	120	192	400
20	14	81	100
20	14	21	100
15	14	14	100
20	14	100	100
25	14	100	100
30	14	99	100
35	14	84	100
25	14	100	100
20	14	59	100
20	14	99	100
30	14	98	100
35	14	82	100
20	14	10	100
15	14	2	100
20	15	150	150
5	15	150	150
15	15	150	150
15	60	123	150
15	60	0	150
10	15	150	150
20	15	150	150

25		15	0	150
25		28	58	400
25		28	168	400
20		28	230	400
20		28	260	400
25		28	64	400
20		28	69	400
20		28	98	400
25		28	178	400
20		28	66	400
20		28	63	400
20		28	192	400
20		28	262	400
25		28	92	400
25		28	26	400
25		28	33	400
25		28	86	400
5		245	184	200
25		20	0	50
25		20	42	50
20		20	0	50
20		20	50	50
15		20	50	50
20		20	50	50
15		20	4	50
15		20	50	50
15		20	50	50
25		20	50	50
25		20	50	50
15		20	44	50
25		20	0	50
15		20	0	50
15		20	0	50
15		20	50	50
25		20	36	50
15		20	50	50
15		20	44	50
15		20	38	50
15		20	0	50
5	NA		69	100
15	NA		88	100
10	NA		93	100
25	NA		87	100
30	NA		75	100
20	NA		95	100
15	NA		88	100
10	NA		97	100
20	NA		88	100
30	NA		65	100
25	NA		90	100
5	NA		62	100
20	NA		78	100
25	NA		91	100
10	NA		92	100
5	NA		82	100
30	NA		72	100

15	NA		94	100
25		20	79	100
25		20	43	100
25		20	8	100
25		20	12	100
25		20	93	100
25		20	5	100
5	NA		47	100
15	NA		65	100
25	NA		61	100
20	NA		71	100
10	NA		89	100
30	NA		52	100
25		48	325	500
25		48	285	500
15		30	100	200
10		15	237	300
15		15	270	300
25		15	180	300
20		15	234	300
20		15	258	300
25		15	207	300
30		15	105	300
30		15	69	300
10		15	270	300
5		15	30	300
30		15	51	300
15		15	270	300
10		15	270	300
20		15	270	300
20		10	364	450
20		60	56	150
20		60	108	150
20		60	22	150
20		60	0	150
15		56	90	100
20		2	48	50
15		22	98	100
10		22	90	100
10		22	18	100
25		22	90	100
15		22	99	100
25		22	95	100
10		22	98	100
15		22	91	100
15		22	62	100
25		22	98	100
10		22	98	100
25		22	95	100
25		14	97	100
15		23	81	100
25		14	70	100
25		14	86	100
15		21	18	300
15		21	291	300
20		21	12	300

20		21	60	300
10		21	33	300
15		21	237	300
15		21	63	300
10		21	24	300
25		14	68	90
25		28	0	50
25		28	0	50
25		28	5	50
25		28	32	50
20	NA		27	30
15	NA		27	30
20	NA		14	30
20	NA		24	30
20	NA		27	30
20	NA		0	30
20	NA		27	30
20	NA		27	30
20	NA		22	30
20	NA		27	30
20	NA		0	30
20	NA		0	30
15	NA		24	30
20	NA		20	30
20	NA		6	30
20	NA		14	30
20	NA		16	30
20	NA		27	30
20	NA		2	30
20	NA		28	30
20	NA		25	30
20	NA		26	30
15	NA		0	30
15	NA		23	30
20	NA		14	30
20	NA		0	30
20	NA		24	30
20	NA		26	30
20	NA		18	30
20	NA		24	30
20	NA		15	30
20	NA		0	30
20	NA		27	30
20	NA		3	30
20	NA		29	30
20	NA		23	30
20	NA		0	30
20	NA		27	30
15	NA		30	30
20	NA		27	30
20	NA		23	30
20	NA		29	30
20	NA		14	30
20	NA		0	30
20	NA		29	30
20	NA		27	30

20	NA	27	30
20	NA	22	30
20	NA	27	30
20	NA	16	30
20	NA	24	30
20	NA	22	30
20	NA	0	30
20	NA	22	30
20	NA	26	30
20	NA	0	30
20	NA	16	30
20	NA	15	30
20	NA	28	30
20	NA	8	30
20	NA	22	30
20	NA	9	30
20	NA	23	30
20	NA	26	30
20	NA	29	30
20	NA	27	30
20	NA	26	30
20	NA	6	30
20	NA	24	30
20	NA	26	30
20	NA	0	30
20	NA	30	30
20	NA	24	30
20	NA	0	30
20	NA	29	30
20	NA	0	30
15	NA	27	30
15	NA	20	30
20	NA	22	30
20	NA	22	30
20	NA	27	30
15	NA	22	30
20	NA	15	30
20	NA	26	30
15	NA	0	30
20	NA	6	30
15	NA	18	30
20	NA	0	30
20	NA	30	30
20	NA	29	30
20	NA	12	30
20	NA	9	30
20	NA	27	30
20	NA	6	30
15	NA	16	30
20	NA	26	30
15	NA	22	30
20	NA	14	30
20	NA	26	30
20	NA	16	30
20	NA	20	30
20	NA	16	30

20	NA		22	30
20	NA		14	30
20	NA		22	30
20	NA		30	30
20	NA		15	30
20	NA		20	30
20	NA		28	30
20	NA		13	30
20	NA		22	30
20	NA		16	30
20	NA		29	30
15	NA		24	30
20	NA		16	30
15	NA		26	30
15	NA		0	30
20	NA		15	30
20	NA		0	30
20	NA		0	30
20		12	40	50
20		12	36	50
20		12	28	50
20		12	46	50
20		13	163	320
20		13	198	320
30		13	51	320
10		13	122	320
15		13	141	320
25		13	157	320
35		13	10	320
25		13	90	320
15		10	112	125
15		25	0	100
20		33	46	100
20		25	106	150
15		23	64	100
15		11	80	250
20		28	380	400
15		50	38	40
30		50	40	40
20		50	38	40
20		50	40	40
20		70	40	40
10		50	31	40
30		70	38	40
10		50	32	40
15		70	23	40
25		50	40	40
30		50	40	40
15		50	36	40
25		70	40	40
15		50	36	40
15		70	32	40
25		70	40	40
15		70	26	40
25		70	40	40
15		70	28	40

25	50	40	40
30	70	40	40
25	50	40	40
25	50	40	40
15	50	36	40
10	70	0	40
30	70	0	40
30	50	0	40
15	50	38	40
20	85	32	40
15	85	34	40
15	70	25	40
20	85	12	40
20	70	28	40
25	70	0	40
10	85	7	40
25	70	0	40
25	70	0	40
30	70	0	40
25	85	2	40
25	50	8	40
10	70	32	40
25	85	18	40
25	70	0	40
25	85	4	40
15	70	2	40
15	85	16	40
15	70	18	40
15	50	38	40
25	85	0	40
30	70	0	40
20	50	34	40
15	70	27	40
20	85	15	40
15	70	26	40
25	70	0	40
10	50	36	40
15	85	25	40
30	85	0	40
15	70	0	40
30	85	0	40
10	85	7	40
20	70	0	40
15	85	8	40
30	85	0	40
15	85	9	40
25	85	5	40
15	85	30	40
30	85	0	40
10	50	38	40
15	70	36	40
20	50	36	40
20	70	8	40
10	70	24	40
15	70	14	40
25	85	0	40

25	70	2	40
15	70	28	40
25	70	1	40
25	50	22	40
25	70	0	40
25	50	31	40
25	85	5	40
20	70	7	40
15	70	2	40
25	50	39	40
15	50	38	40
15	50	39	40
10	85	38	40
20	70	22	40
15	70	14	40
10	70	0	40
15	85	40	40
25	70	10	40
10	85	36	40
25	70	4	40
10	70	4	40
25	85	2	40
20	85	31	40
25	70	2	40
30	70	0	40
15	85	22	40
30	50	2	40
10	70	16	40
20	70	0	40
30	70	0	40
25	70	0	40
30	70	0	40
15	70	1	40
25	14	200	200
20	14	200	200
15	300	0	100
10	300	40	100
5	300	61	100
10	300	87	100
15	300	0	100
5	300	80	100
10	300	77	100
5	300	84	100
5	300	97	100
0	300	62	100
0	300	23	100
10	300	33	100
10	300	74	100
0	300	71	100
15	300	4	100
5	300	75	100
10	300	79	100
5	300	76	100
10	300	83	100
10	300	81	100
15	300	4	100

5	300	83	100
5	300	73	100
0	300	46	100
15	300	9	100
10	300	77	100
5	300	91	100
5	300	93	100
15	300	10	100
0	300	76	100
10	300	84	100
0	300	64	100
5	300	71	100
5	300	78	100
10	300	87	100
10	300	83	100
10	300	96	100
5	300	87	100
5	300	95	100
10	300	99	100
5	300	69	100
15	300	0	100
0	300	17	100
15	300	0	100
5	300	97	100
10	300	97	100
0	300	84	100
10	300	91	100
5	300	97	100
15	300	0	100
10	300	88	100
0	300	94	100
15	300	0	100
5	300	98	100
0	300	51	100
10	300	52	100
5	300	90	100
10	300	69	100
5	300	91	100
10	300	99	100
15	23	66	100
35	28	0	400
15	28	0	400
10	28	0	400
10	28	188	400
25	28	16	400
10	28	0	400
15	28	0	400
10	28	228	400
15	28	80	400
35	28	0	400
25	28	0	400
0	28	0	400
30	28	4	400
30	28	0	400
10	28	172	400
25	28	0	400

15	28	60	400
0	28	0	400
0	28	0	400
25	28	0	400
15	28	0	400
5	28	320	400
5	28	344	400
0	28	24	400
40	28	0	400
10	28	32	400
15	28	0	400
30	28	24	400
5	28	0	400
15	28	0	400
10	28	8	400
10	28	136	400
40	28	0	400
15	28	0	400
20	28	0	400
0	28	80	400
10	28	108	400
10	28	80	400
5	28	276	400
5	28	16	400
5	28	0	400
15	28	0	400
20	28	0	400
5	28	304	400
15	28	172	400
10	28	8	400
10	28	0	400
30	28	0	400
35	28	0	400
25	28	0	400
30	28	0	400
25	28	0	400
15	28	144	400
10	28	108	400
15	28	84	400
35	28	0	400
15	28	200	400
15	28	0	400
15	28	120	400
30	28	0	400
10	28	0	400
5	28	0	400
20	28	108	400
15	28	0	400
25	28	0	400
5	28	0	400
25	28	0	400
35	28	0	400
20	28	32	400
5	28	348	400
5	28	8	400
0	28	0	400

20	28	0	400
15	28	0	400
20	28	0	400
10	28	276	400
5	28	0	400
25	28	0	400
30	28	0	400
5	28	272	400
30	28	0	400
10	28	260	400
15	28	0	400
10	28	120	400
10	28	0	400
20	28	76	400
20	28	0	400
10	28	72	400
20	28	36	400
15	28	0	400
20	28	0	400
35	28	0	400
10	28	0	400
0	28	276	400
20	28	0	400
5	28	288	400
15	28	16	400
5	28	268	400
0	28	144	400
20	28	0	400
15	28	0	400
25	28	12	400
20	28	0	400
25	28	24	400
10	28	172	400
25	28	0	400
20	28	120	400
10	28	0	400
15	28	140	400
5	28	0	400
25	21	21	150
25	21	135	150
25	21	64	150
25	21	32	150
20	14	39	100
20	14	85	100
20	14	10	100
20	14	65	100
20	14	93	100
20	14	66	100
25	42	58	200
25	42	66	200
15	42	94	200
25	42	84	200
15	42	130	200
15	42	134	200
25	42	82	200
15	42	134	200

0	28	0	400
5	28	268	400
0	28	0	400
35	28	116	400
0	28	0	400
5	28	272	400
20	28	328	400
5	28	0	400
0	28	0	400
35	28	8	400
35	28	8	400
25	28	208	400
15	28	8	400
15	28	0	400
15	28	288	400
15	28	348	400
5	28	0	400
30	28	112	400
0	28	48	400
0	28	0	400
10	28	348	400
20	28	156	400
-5	28	0	400
15	28	4	400
10	28	284	400
15	28	84	400
5	28	312	400
10	28	84	400
5	28	0	400
20	28	324	400
10	28	268	400
-5	28	0	400
10	28	0	400
20	28	324	400
20	28	364	400
5	28	236	400
20	28	328	400
5	28	84	400
15	28	356	400
-5	28	0	400
5	28	64	400
0	28	168	400
0	28	0	400
0	28	0	400
0	28	0	400
25	28	296	400
0	28	0	400
30	28	184	400
5	28	0	400
10	28	316	400
5	28	80	400
15	28	332	400
15	28	352	400
30	28	200	400
10	28	0	400
25	28	184	400

5	28	0	400
10	28	348	400
25	28	308	400
5	28	256	400
10	28	0	400
10	28	0	400
10	28	40	400
5	28	140	400
0	28	0	400
15	28	0	400
5	28	0	400
20	28	8	400
10	28	48	400
10	28	64	400
5	28	80	400
5	28	40	400
10	28	76	400
10	28	332	400
10	28	324	400
0	28	0	400
5	28	60	400
10	28	8	400
20	28	104	400
15	28	32	400
0	28	28	400
10	28	176	400
30	28	8	400
30	28	4	400
-5	28	0	400
5	28	104	400
0	28	16	400
5	28	0	400
15	28	24	400
5	28	0	400
25	28	228	400
20	28	40	400
30	28	188	400
0	28	0	400
10	28	0	400
15	28	360	400
5	28	124	400
10	28	0	400
0	28	0	400
15	28	84	400
15	28	200	400
25	28	40	400
25	28	0	400
0	28	0	400
10	28	164	400
10	28	144	400
5	28	0	400
5	28	68	400
0	28	0	400
20	28	12	400
0	28	0	400
10	28	220	400

-5		28	0	400
10		28	12	400
5		28	48	400
5		28	100	400
5		28	80	400
40		28	0	400
20		28	28	400
0		28	0	400
0		28	0	400
25		28	16	400
0		28	0	400
0		28	0	400
10		28	240	400
25		28	4	400
0		28	0	400
10		28	148	400
0		28	60	400
5		28	168	400
5		28	0	400
20		28	48	400
15		28	20	400
10		28	0	400
15		28	188	400
-5		28	0	400
5		28	20	400
10		28	12	400
15		28	40	400
15		28	12	400
40		28	0	400
0		28	16	400
35		28	0	400
15		28	24	400
0		28	0	400
10		28	124	400
10		28	0	400
25		28	288	400
0		28	68	400
5		28	224	400
5		28	100	400
25		28	8	400
10		28	56	400
10		28	40	400
0		28	0	400
5		28	0	400
5		28	0	400
15		28	195	200
20		28	183	200
25		28	194	200
15		28	196	200
20		28	198	200
20		28	179	200
20		28	196	200
25		28	194	200
20	NA		168	300
10	NA		0	200
20	NA		0	200

25	NA		148	200
25	NA		10	200
20	NA		48	300
20	NA		249	300
20	NA		130	200
20	NA		117	300
10	NA		142	200
10	NA		144	200
10	NA		0	200
20	NA		45	300
20	NA		120	200
25	NA		24	200
20	NA		270	300
20	NA		0	200
20	NA		180	300
25	NA		134	200
20	NA		99	300
25		7	0	300
25		7	184	300
25		7	214	300
25		7	0	300
25		7	0	300
25		7	142	300
15		23	53	100
25		7	70	300
25		7	0	300
25		7	174	300
25		7	0	300
25		7	20	300
25		7	99	300
25		7	237	300
25		7	56	300
25		7	235	300
25		7	45	300
25		7	4	300
25		7	159	300
25		7	3	300
25		7	186	300
25		7	269	300
25		7	0	300
25		7	0	300
25		7	234	300
15		30	94	100
10		30	9	100
20		30	20	100
15		30	35	50
15		30	16	100
30		30	2	100
10		30	4	100
10		30	18	100
25		30	11	100
5		30	5	100
15		30	8	100
15		23	86	100
20		30	440	500
25		33	9	20

25		33	16	20
25		33	10	20
25		33	16	20
20		12	160	200
20	NA		63	100
15		28	0	120
20		60	91	120
25		21	102	120
20		21	108	120
25		21	12	120
10		90	20	120
15		28	49	120
15		60	72	120
20		28	372	400
20		28	80	400
10		20	27	100
25		20	7	100
15		20	18	100
20		20	9	100
5		20	46	100
20	NA		7	100
20	NA		62	100
25	NA		160	500
25	NA		135	500
25	NA		145	500
25	NA		175	500
15	NA		141	150
40	NA		146	150
25	NA		144	150
20		21	196	200
20		21	7	200
30	NA		148	150
30		21	199	200
30		21	197	200
20		21	0	200
30		21	73	200
30		21	200	200
20		21	189	200
20	NA		142	150
15		23	69	100
30		28	2	200
10		28	52	200
15		28	146	200
10		28	46	200
10		28	110	200
30		28	36	200
5		28	22	200
15		28	156	200
20		28	140	200
25		28	110	200
25		28	98	200
15		28	94	200
15		28	164	200
10		28	104	200
20		28	152	200
20		28	84	200

25	28	40	200
5	28	0	200
20	28	154	200
20	28	166	200
10	28	54	200
5	28	0	200
15	28	48	200
10	28	44	200
10	28	42	200
15	28	118	200
20	28	48	200
25	28	168	200
15	28	176	200
5	28	48	200
20	28	152	200
25	28	72	200
15	28	152	200
5	28	46	200
15	28	146	200
20	28	106	200
20	28	134	200
25	28	154	200
20	30	70	100
5	30	3	100
0	30	0	100
20	30	67	100
0	30	10	100
20	30	58	100
10	30	30	100
20	30	74	100
5	30	29	100
10	30	46	100
25	21	5	100
25	21	92	100
25	21	384	400
25	21	337	400
25	21	289	400
15	49	83	125
10	49	4	125
15	49	87	125
20	49	46	125
15	49	2	125
25	49	6	125
25	49	37	125
20	49	2	125
25	49	24	125
10	49	0	125
20	49	61	125
15	49	4	125
25	49	0	125
20	49	2	125
10	49	95	125
10	49	86	125
15	14	72	80
20	28	120	300
20	28	255	300

20	28	270	300
20	28	261	300
20	28	270	300
20	28	297	300
25	30	180	200
25	30	70	200
15	60	156	175
25	60	119	175
25	60	154	175
20	60	154	175
10	60	112	175
15	60	152	175
10	60	112	175
20	60	149	175
10	60	149	175
5	60	126	175
25	60	135	175
5	60	114	175
25	60	135	175
5	60	158	175
5	60	98	175
20	60	135	175
15	60	131	175
15	60	136	175
20	60	121	175
10	60	158	175
15	23	79	100
20	7	18	50
35	7	31	50
35	7	30	50
25	7	45	50
40	7	41	50
15	7	8	50
25	7	45	50
25	7	39	50
15	7	6	50
25	7	41	50
20	7	28	50
35	7	34	50
40	7	32	50
35	7	37	50
15	7	1	50
25	7	44	50
35	7	22	50
35	7	28	50
25	7	45	50
40	7	16	50
20	7	26	50
40	7	20	50
35	7	21	50
25	7	44	50
25	7	43	50
15	7	4	50
35	7	27	50
20	7	23	50
25	7	40	50

15		7	3	50
20		7	36	50
25		7	45	50
25		7	38	50
15		7	6	50
25		7	43	50
20		7	40	50
25	NA		328	400
20	NA		0	400
25	NA		60	400
25	NA		402	600
25	NA		12	400
15	NA		0	400
25	NA		184	400
25	NA		0	400
30	NA		483	600
15	NA		340	400
30	NA		328	400
30	NA		164	400
25	NA		348	400
30	NA		32	400
20	NA		54	600
15	NA		0	400
20	NA		8	400
20	NA		304	400
25	NA		486	600
15	NA		0	600
10		179	43	50
0		179	220	900
5		179	37	50
15		179	0	50
20		152	2	50
20		152	48	50
20		152	36	50
20		152	22	50
20		152	2	50
20		152	6	50
20		152	0	50
20		152	0	50
20		152	26	50
20		152	24	50
20		152	12	50
20		152	25	50
20		152	12	50
20		152	32	50
20		152	32	50
20		152	42	50
20		152	28	50
20		152	16	50
20		152	0	50
20		152	0	50
20		152	6	50
20		152	8	50
20		152	0	50
20		152	38	50
20		152	8	50

20		152	46	50
30	NA		0	25
30	NA		15	25
25	NA		15	25
25	NA		0	25
15		23	67	100
30	NA		33	90
30	NA		4	90
30	NA		0	90
30	NA		63	90
30	NA		0	120
30	NA		11	120
30	NA		44	120
30	NA		10	120
20		157	38	75
25	NA		250	400
5		42	0	150
25		42	41	150
30		42	0	150
15		42	6	150
10		42	0	150
20		42	24	150
20		12	8	90
15		12	0	90
25		12	82	90
30		12	14	90
25		12	14	90
20		12	78	90
30		12	58	90
15		12	4	90
20		20	76	400
15		20	40	400
15		20	40	400
25		20	40	400
25		20	40	400
20		20	76	400
30		20	40	400
30		20	40	400
25		16	54	300
20		16	93	300
20		16	36	300
15		16	18	300
15		16	87	300
25		16	132	300
20		28	104	150
25		28	94	150
25		20	84	100
25		20	10	100
25		25	77	100
25		14	188	200
25		14	10	200
25		60	38	150
20		60	68	150
10		60	99	150
15		60	75	150
10		15	26	120

25		15	48	120
5		15	10	120
30		15	22	120
20		15	12	120
15		15	16	120
5		15	40	120
25		7	12	50
20		7	18	50
15		7	18	50
10		7	14	50
15		21	90	150
10		21	30	150
20		21	48	150
25		21	123	150
20		21	126	150
10		21	11	150
15		21	48	150
25		21	87	150
25	NA		37	50
20	NA		14	135
20	NA		20	135
25	NA		0	50
20	NA		126	135
25	NA		49	50
25	NA		180	200
25	NA		154	160
20		21	24	30
25		11	15	30
30		34	16	200
15		34	0	200
25		34	100	200
15		34	0	200
30		34	40	200
25		11	270	300
20		34	0	200
25		34	156	200
20		34	64	200
25		14	189	200
25		14	20	200
25		14	174	200
25		14	34	200
20		14	38	100
25		14	18	100
20		14	0	100
15		90	376	600
15		90	416	600
5		45	76	120
10		45	85	120
20		28	100	100
30		45	84	120
15		45	84	120
35		45	92	120
20		45	82	120
25		45	81	120
25		16	238	440