Experiment Breakdown

Experiment Part 1 - Recieved bare root seedlings from Cold Stream Farm. Potted on Monday, 26 November 2018. Three cohorts for chilling lengths. I have two growth chambers, both at 4°C. I will rotate seedlings every two weeks. After 4 weeks, I will remove the first cohort and move into the greenhouse. I will remove the second cohort at 6 weeks and final cohort at 8 weeks. Experiment Part 2 - I will monitor the phenology for the each plant. I will observe budburst (BBCH 09) until full leafout (BBCH 19) for each plant and note floral development - if present. Experiment Part 3 - once at least 50% of the buds have reached BBCH 9, I will put the seedling in a growth chamber and ramp the temperature from the greenhouse temperature down to -3°C and then ramp up again after 3 hours at -3 for a 24 hour cycle. I will then move the seedlings back into the greenhouse to monitor percent budburst and record damage.

Finer details

- Chilling conditions: 8 hour photoperiod and constant 4C
- Greenhouse conditions: 12 hour photoperiod, 15C during the day and 10C at night, ambient humidity
- Growth Chamber: Ramp down temperature starting at 6pm to 10C, 8pm to 5C, 10pm to 0C, 12am to -3C, 3am to 0C, 4am to 5C, 6am to 10C and 8am to 15C. 12 hour photoperiod (6-6)

Table 1: List of species being used in experiment. 10 species, 16 per chilling treatment and 8 per false spring treatment per chilling treatment.

Species	**No. of Individs**
FAGGRA (NA)	48
BETPAP	48
BETPOP	48
SORAME	48
ALNRUG	48
NYSSYL (NA)	48
ACESAC	48
VIBDEN	48
SALPUR	48
CORRAC	48