

YONG SUK CHUNG

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EDUCATION

B.S. in Horticultural Science | Korea University | Seoul, Korea, 2003

M.S. in Plant Breeding and Plant Genetics | University of Wisconsin | Madison, WI, 2007

Advisor: Professor James Nienhuis

Ph.D in Plant Breeding and Plant Genetics | University of Wisconsin | Madison, WI, 2014

Advisor: Professor Shelley Jansky

PROFESSIONAL EXPERIENCES

Associate Professor (tenure track), Department of Plant Resources and Environment, Jeju National University, 2022-present

Member of European Cooperation in Science and Technology, 2022-present
Nexu4agifood project.

CEO of Pytomix Corporation, 2021-present
R&D with Phenomics and Smart-farming.

Assistant Professor (tenure track), Department of Plant Resources and Environment, Jeju National University, 2018-2022
Plant Breeding and Genetics using conventional and modern methods with phenomics.

Senior Researcher, LG Chemical FarmHannong Ltd., 2017-2018
Hybrid rice seed evaluation and production in Vietnam.

Research Professor, Chungnam National University, 2016-2017
Genomic mapping using genotype by sequencing.
Genomic analysis.

Postdoctoral Research Associate, Plant Sciences Institute, Iowa State University, 2014-2016
Advisor: Professor Patrick Schnable
Develop field-based high throughput phenotyping system for corn using time lapse as a Project Lead.
Establish multidisciplinary collaborations with several ISU departments and private company.

Lab Manager, Department of Horticulture, University of Wisconsin, 2013
Manage acedimic and industrial breeding program.

Research Assistant (Masters and PhD programs), Department of Horticulture, University of Wisconsin, 2004-2014
Perform various types of researches.

PUBLICATIONS

- Kim JY, Lee CW, Park JE, Kim N, Kim SL, Baek JH, **Chung YS**, and Kim KH. (**Corresponding author**). 2023. Comparison of Various Drought Resistance Traits in Soybean (*Glycine max* L.) Based on Image Analysis for Precision Agriculture. *Plants*. 12: 2331. (SCIE, IF 4.658).
- Kim DW, Jeong SJ, Lee WS, Yun H, **Chung YS**, Kwon YS, Kim HJ. 2023. Growth monitoring of field-grown onion and garlic by CIE L* a* b* color space and region-based crop segmentation of UAV RGB images. *Precision Agriculture*. 11:1-20. (SCIE, IF 5.767).
- Baloch FS, Altaf MT, Liaqat W, Bedir M, Nadeem MA, COMERTPAY G, Çoban N, Ludidi NN, AASIM M, **Chung YS**, Nawaz MA. 2023. Recent advancements in the breeding of sorghum crop: current status and future strategies for marker-assisted breeding. *Frontiers in Genetics*. 14:706. (SCIE, IF 4.772).
- Jung DH, **Chung YS**, and Hwang H. 2023. Development of a Model for Estimating Leaf Area and the Number of Flower Using Leaf Length and Width of *Farfugium japonicum* Kitam. *Journal of Bio-Environment Control*. 32:115-21.
- Jang G, Kim DW, Park WP, Kim HJ, **Chung YS**. (**Corresponding author**). 2023. Heterogeneity Assessment of Kenaf Breeding Field through Spatial Dependence Analysis on Crop Growth Status Map Derived by Unmanned Aerial Vehicle. *Plants*. 12:1638. (SCIE, IF 4.658).
- Nabi SU, Mir JI, Yasmin S, Din A, Raja WH, Madhu GS, Parveen S, Mansoor S, **Chung YS**, Sharma OC, Sheikh MA. 2023. Tissue and Time Optimization for Real-Time Detection of Apple Mosaic Virus and Apple Necrotic Mosaic Virus Associated with Mosaic Disease of Apple (*Malus domestica*). *Viruses*. 15:795. (SCIE, IF 5.818).
- Çelik A, EMİRALİOĞLU O, Yeken MZ, ÇİFTÇİ V, Özer G, Kim Y, Baloch FS, **Chung YS**. (**Corresponding author**). 2023. A novel study on bean common mosaic virus accumulation shows disease resistance at the initial stage of infection in *Phaseolus vulgaris*. *Frontiers in Genetics*. 14:423. (SCIE, IF 4.772).
- Kim J, Lee C, Park JE, Mansoor S, **Chung YS**, Kim K. 2023. Drought Stress Restoration Frequencies of Phenotypic Indicators in Early Vegetative Stages of Soybean (*Glycine max* L.). *Sustainability*. 15:4852. (SCIE, IF 3.889).
- Lay L, Lee HS, Tayade R, Ghimire A, **Chung YS**, Yoon Y, Kim Y. 2023. Evaluation of Soybean Wildfire Prediction via Hyperspectral Imaging. *Plants*. 12 :901. (SCIE, IF 4.658).
- Jang G, Kim DW, Kim HJ, **Chung YS**. (**Corresponding author**). 2023. Spatial Dependence Analysis as a Tool to Detect the Hidden Heterogeneity in a Kenaf Field. *Agronomy*. 31;13: 428. (SCIE, IF 3.949).
- Ali A, Naqvi SA, Shakeel MT, Tahir MN, Khan MF, Altaf MT, Ölmez F, Dababat AA, ul Haq Z, Nadeem MA, Hatipoğlu R., **Chung YS**. (**Corresponding author**). 2023. Molecular characterization of divergent isolates of Citrus bent leaf viroid (CBLVd) from citrus cultivars of Punjab, Pakistan. *Frontiers in Genetics*. 13. (SCIE, IF 4.772)
- Yu JK, Chang S, Han GD, Kim SH, Ahn J, Park J, Kim Y, Kim J, **Chung YS**. (**Corresponding author**). 2023. Implication Of High Variance In Germplasm Characteristics. *Scientific Reports*. 13:515. (SCIE, IF 4.997).
- Chung YS**, Yoon SU, Heo S, Kim YS, Kim Y, Han GD, Ahn J. 2022. Classification of Tree Composition in the Forest Using Images from SENTINEL-2: A Case Study of Geomunoreum Forests Using NDVI Images. *Applied Sciences*. 13: 303. (SCIE, IF 2.838).
- Le AT, Choi IL, Han GD, Kang HM, Jung DH, Park WP, Yildiz M, Do TK, **Chung YS**. (**Corresponding author**). 2022. Colored LED Lights: Use One Color Alone or with Others for Growth in *Hedyotis corymbosa* In Vitro?. *Plants*. 12:93. (SCIE, IF 4.658).
- Jang G, Kim J, Kim DW, **Chung YS**, Kim HJ. 2022. Field Phenotyping of Plant Height in Kenaf (*Hibiscus cannabinus* L.) using UAV Imagery. *The Korean Journal of Crop Science*. 67: 274-284.

- Park JE, Kang Y, Han KD, Yildiz M, Kim SH, Kim C, **Chung YS. (Corresponding author)**. 2022. Diversity study of common buckwheat germplasm in the Republic of Korea using GBS. *Plant Biotechnology Reports*. 11: 1-5. (SCIE, IF 2.496).
- Furan MA, Yildiz M, Karatas MD, **Chung YS. (Corresponding author)**. 2022. Phylogenetic inference and secondary structure predictions of Turkish genotypes of *Coriandrum sativum* (L.) based on ITS4 and ITS5 nrDNA sequences. *Plant Biotechnology Reports*. 16: 709-720. (SCIE, IF 2.496).
- Han GD, Yoon SU, **Chung YS**, Ahn J, Lee SJ, Kim YS, Min T. 2022. Tracking Changes of Snow Area Using Satellite Images of Mt.Halla at an Altitude of 1,600 m. 2022. 31: 815-824.
- Sathasivam R, Choi M, Radhakrishnan R, Kwon H, Yoon J, Yang SH, Kim JK, **Chung YS**, Park SU. 2022. **(Corresponding author)**. Effects of various *Agrobacterium rhizogenes* strains on hairy root induction and analyses of primary and secondary metabolites in *Ocimum basilicum*. *Frontiers in Plant Science*. 13:983776. (SCIE, IF 6.627)
- Ali A, Altaf MT, Nadeem MA, SHAH AN, Azeem H, Baloch FS, Karaköy T, Hussain T, Duangpan S, AASIM M, **Chung YS. (Corresponding author)**. 2022. Recent Advancement in OMICS approaches to enhance abiotic stress tolerance in Legumes. *Frontiers in Plant Science*.:3222. (SCIE, IF 6.627)
- Chung YS**, Yoon SU, Heo S, Kim YS, Ahn J, Han GD. 2022. Characterization of Tree Composition using Images from SENTINEL-2: A Case Study with Semiyang Oreum *Journal of Environmental Science International*. 31: 735-741
- Han GD, Choi JM, Choi I, Kim Y, Heo S, **Chung YS. (Corresponding author)**. 2022. From crop specific to variety specific in crop modeling for the smart farm: A case study with blueberry. *Plos One*. 17(8):e0273845. (SCIE, IF 3.752)
- Aasim M, Katirci R, Baloch F, Mustafa Z, Bakhsh A, Nadeem M, Ali S, Hatipoğlu R, Çiftçi V, Habyarimana E, Karaköy T. **Chung YS (Corresponding author)**. 2022. Innovation in the Breeding of Common Bean Through a Combined Approach of in vitro Regeneration and Machine Learning Algorithms. *Frontiers in Genetics*. (SCIE, IF 4.772)
- Ngwangum NJ, Tayade R, Liny L, Yoon JB, **Chung YS**, Kim Y. Utilization of Imaging Data from Different Sources for Bacterial and Fungal Diseases Detection in Major Crops in the Digital Era: A Review. *Journal of Agriculture and Environmental Sciences*. 2022:97-117
- Kim J, Lee C, Park JE, Mansoor S, **Chung YS**, Kim K. Drought Stress Restoration Frequencies of Phenotypic Indicators in Early Vegetative Stages of Soybean (*Glycine max* L.). 2023. *Sustainability*. 15:4852. (SCIE, IF 3.889)
- Han GD, DH Jung, Heo S, **Chung YS. (Corresponding author)**. 2022. SPAD value difference between blueberry cultivar ‘STAR’ by planted ground and pot. *Phyton*. 91: 2583-2590. (SCIE, IF 1.407)
- Han GD, Jung JH, Sun HJ, **Chung YS. (Corresponding author)**. 2022. Radiation treatment to turfgrass cultivar to improve drought tolerance cultivar breeding. *Plant Biotechnology Reports*. 1:1-4. (SCIE, IF 2.496)
- Han GD and **Chung YS. (Corresponding author)**. 2022. Data Structure for Efficient Use of Genetic Resources: A Case Study of Buckwheat. *Korean Journal of Breeding Science*. 54: 98-103.
- Han GD, Jung JH, **Chung YS. (Corresponding author)**. 2022. Inflorescence appearance timing and production rate traits in wild Zoysiagrass (*Zoysia* spp). *Journal of Phytology*. 14: 50-53.
- Han GD, Heo S, Chio JM, **Chung YS. (Corresponding author)**. 2022. SPAD: potential phenotyping method for characterization of blueberry. *Molecular Biology Reports*. 8:1-6. (SCIE, IF 2.742)
- Baloch FS, Nadeem MA, Sönmez F, Habyarimana E, Mustafa Z, Karaköy T, Coemertpa G, Alsaleh A, Çiftçi V, Sun S, **Chung YS**. Magnesium-a Forgotten Element: Phenotypic Variation and Genome Wide Association Study in Turkish Common Bean Germplasm. **(Corresponding author)**. 2022. *Frontiers in genetics*. 13:848663-. (SCIE, IF 4.772)
- Yoon SU, Ahn J, Kim YS, Han GD, **Chung YS**, Lee SJ. **(Corresponding author)**. 2022. Monitoring Temperature Variation in Rising Small Defunct Volcano on Jeju Island, Republic of Korea, Using High-Resolution Sentinel-2 Images. *Atmosphere*. 13:576. (SCIE, IF 3.110)

- Heo S, Choi JM, Le AT, Eun CH, Kim IJ, **Chung YS. (Corresponding author)**. 2022. The effect of gamma-irradiation on the changes of photosynthetic efficiency in Kanpei (*Citrus unshiu* × *C. sinensis*). *Plant Biotechnology Reports*. 16:251-5. (SCIE, IF 2.496)
- Le AT, Yu JK, Han GD, Do TK, **Chung YS. (Corresponding author)**. 2022. Potential Use of Colored LED Lights to Increase the Production of Bioactive Metabolites *Hedyotis corymbosa* (L.) Lam. *Plants*. 11:225. (SCIE, IF 4.658)
- Kim YS, **Chung YS**, Heo S. Image analysis as a potential tool for marker-assisted selection. *Plant Biotechnology Reports*. 10:1-7.
- Tripathi P, Abdullah JS, Kim J, **Chung YS**, Kim SH, Hamayun M, Kim Y. 2021. Investigation of Root Morphological Traits Using 2D-Imaging among Diverse Soybeans (*Glycine max* L.). *Plants*. 10:2535. (SCIE, IF 4.658)
- Jang BK, Ju Y, Jeong D, Jung SK, Kim CK, **Chung YS**, Kim SR. **(Corresponding author)**. 2021. L-lactic acid production using engineered *Saccharomyces cerevisiae* with improved organic acid tolerance. *Journal of Fungi*. 7:928 (SCIE, IF 5.724)
- Tomar V, Singh D, Dhillon GS, **Chung YS**, Poland J, Singh, RP...Kumar U. 2021. Increased predictive accuracy of multi-environment genomic prediction model for yield and related traits in spring wheat (*Triticum aestivum* L.). *Frontiers in plant science*. 12. (SCIE, IF 6.627)
- Kim YS, Heo S, Yoon SU, Ahn J, Choi I. Chang S...**Chung YS. (Corresponding author)**. 2021. Development of Mask-RCNN Model for Detecting Greenhouses Based on Satellite Image. *Korean Journal of Agricultural and Forest Meteorology*. 23:156-162.
- Jung JH, Han GD, Kim J, **Chung YS. (Corresponding author)**. 2021. Reproduction rate and stolon production rate after transplantation of grass germplasm. *Korean Journal of Agricultural Science*. 48:SCien465-471.
- Choi JM, Han GD, Heo S, **Chung YS. (Corresponding author)**. 2021. Effect of Radiation Treatment on Buckwheat Seed Harvest. *Journal of Agricultural, Life and Environmental Sciences*. 33:144-148.
- Han GD, Jang G, Kim J, Kim DW, Rodrigues R, Kim SH...**Chung YS. (Corresponding author)**. 2021. RGB images-based vegetative index for phenotyping kenaf (*Hibiscus cannabinus* L.). *PloS One*. 16:e0256978. (SCIE, IF 3.752)
- Kim J, **Chung YS. (Corresponding author)**. 2021. A short review of RGB sensor applications for accessible high-throughput phenotyping. *Journal of Crop Science and Biotechnology*. 1-5.
- Kim J, Yu JK, Rodrigues R, Kim Y, Park J, Jung JH...**Chung YS. (Corresponding author)**. 2021. Case study: cost-effective image analysis method to study drought stress of soybean in early vegetative stage. *Journal of Crop Science and Biotechnology*. 1-5.
- Han GD, Jung JH, **Chung YS. (Corresponding author)**. 2021. Correlation of Zoysia Grass (*Zoysia*. spp) Survival, Reproduction, and Floret Appearance Rates to Aid in Development of New Hybrid Zoysia Grass Cultivars. *Korean Journal of Crop Science*. 66:265-269.
- Jung JH, Han GD, Kim J, **Chung YS (Corresponding author)**. 2021. Reproduction rate and stolon production rate after transplantation of grass germplasm. *Korean Journal of Agricultural Science*. 48:465-471.
- Sathasivam R, Kim MC, **Chung YS**, Park SU. **(Corresponding author)**. 2021. Effect of cytokinins on growth and phenylpropanoid accumulation in Tartary buckwheat sprouts (*Fagopyrum esculentum* Moench). *Journal of Aridland Agriculture*. 7:89-94.
- Kim KS, Kim SH, Kim J, Tripathi P, Lee JD, **Chung YS**, Kim Y. **(Corresponding author)**. 2021. A large root phenome dataset wide-opened the potential for underground breeding in soybean. *Frontiers in Plant Science*. 1635. (SCIE, IF 6.627)
- Yu JK, **Chung YS. (Corresponding author)**. 2021. Plant Variety Protection: Current Practices and Insights. *Genes*. 12:1127. (SCIE, IF 4.141)
- Kim J, Han GD, Muthukathan G, Rodrigues R, Hyun DY, Kim SH ...**Chung YS (Corresponding author)**. 2021. What Traits Should Be Measured for Biomass in Kenaf?. *Plants*. 10:1394. (SCIE, IF 4.658)

- Park YE, Park CH, Yeo HJ, **Chung YS**, Park SU. (**Corresponding author**). 2021. Resveratrol Biosynthesis in Hairy Root Cultures of Tan and Purple Seed Coat Peanuts. *Agronomy*. 11:975. (SCIE, IF 3.949)
- Kim SH, Tripathi P, Yu S, Park JM, Lee JD., **Chung YS**, ...Kim, Y. 2021. Selection of Tolerant and Susceptible Wild Soybean (*Glycine soja* Siebold & Zucc.) Accessions under Waterlogging Condition using Vegetation Indices. *Polish Journal of Environmental Studies*. 30:3659-3675. (SCIE, IF 1.871)
- Kim NS, Kim JW, Sathasivam R, Park HW, Nguyen BV, Kim MC, Cuong DM, **Chung YS**, Park SU. (**Corresponding author**). 2021. Impact of Betaine Under Salinity on Accumulation of Phenolic Compounds in Safflower (*Carthamus tinctorius* L.) Sprouts. *Natural Product Communications*. 16:1934578X211015090. (SCIE, IF 1.352)
- Tripathi P, Subedi S, Khan AL, **Chung YS**, Kim Y. 2021. Silicon Effects on the Root System of Diverse Crop Species Using Root Phenotyping Technology. *Plants*. 10:885. (SCIE, IF 4.658)
- Park CH, Yeo HJ, Park C, **Chung YS**, Park SU. (**Corresponding author**). 2021. The Effect of Different Drying Methods on Primary and Secondary Metabolites in Korean Mint Flower. *Agronomy*. 11:698. (SCIE, IF 3.949)
- Lee ME, Yoo J, Jin H., Cho SY, **Chung YS**. (**Corresponding author**). 2021. Surface-driven charge storage behaviors of Kenaf-derived carbon electrodes with hierarchical porous structure for lithium-ion capacitors. *Applied Surface Science*. 544:148979. (SCIE, IF 7.392)
- Heo S, **Chung YS**. (**Corresponding author**). (2021). Rapid real-time detection method of ACLSV and ASSVd for apple quarantine field. *Plant Biotechnology Reports*. 15:187-195. (SCIE, IF 2.496)
- Park H, Park SU, Jang BK, Lee JJ, **Chung YS**. (**Corresponding author**). 2021. Germplasm evaluation of Kenaf (*Hibiscus cannabinus*) for alternative biomass for cellulosic ethanol production. *GCB Bioenergy*. 13:201-210. (SCIE, IF 5.957)
- Seong H, **Chung YS**. (**Corresponding author**). 2020. Development of Real-time Quantitative PCR Assay based on SYBR Green I and TaqMan Probe for Detection of Apple Viruses. *Korean Journal of Crop Science*. 65.4:496-507.
- Park CH, Kwon SJ, Kim NS, Baek SA, Yeo HJ, Park YE, **Chung YS**, Kim JK, Park SU. 2020. Metabolic Analysis of Carotenoids and Phenolic Compounds Found in Green and Purple Kenaf. *Natural Product Communications*. 15:1934578X20971138. (SCIE, IF 1.496)
- Chung YS**, Lee U, Heo S, Silva RR, Na CI, Kim Y. 2020. Image-Based Machine Learning Characterizes Root Nodule in Soybean Exposed to Silicon. *Frontiers in Plant Science*. 11. (SCIE, IF 6.627)
- Choi SC, **Chung YS**, Lee YG, Kang Y, Park YJ, Park SU, Kim C. 2020. Prediction of Dhurrin Metabolism by Transcriptome and Metabolome Analyses in Sorghum. *Plants*. 9:1390. (SCIE, IF 4.658)
- Jeong YS, Lee HR, Baek JH, Kim KH, **Chung YS**, Lee CW. 2020. Deep Learning-based Rice Seed Segmentation for Phynotyping. *Journal of the Korea Industrial Information Systems Research*. 25:23-29
- Ryu JY, Choi, Y, Hong KH, **Chung YS**, Cho SK. 2020. Effect of Roasting and Brewing on the Antioxidant and Antiproliferative Activities of Tartary Buckwheat. *Foods*. 9:1331. (SCIE, IF 5.561)
- Kim MC, Kim NS, Kim YB, Kim CM, **Chung YS**, Park SU. (**Corresponding author**). 2020. Betaine Hydrochloride treatment affects growth and phenylpropanoid accumulation in tartary buckwheat (*Fagopyrum tataricum*) seedlings under salt stress. *Agronomy*. 10:906. (SCIE, IF 3.949)
- Kim J, Kim KS, Kim Y, **Chung YS**. (**Corresponding author**). 2020. A short review: Comparisons of high-throughput phenotyping methods for detecting drought tolerance. *Scientia Agricola*. 78:e20190300300. (SCIE, IF 2.420)
- Jang G, Kim J, Kim HJ, Kim YH, Kim DW, Kim KH, Lee CW, **Chung YS**. (**Corresponding author**). 2020. Review: Commercial Unmanned Aerial Vehicle (UAV) platform for field plant breeding application. *Remote Sensing*. 12:998-1018. (SCIE, IF 5.349)
- Kim YH, **Chung YS**, Lee E, Tripathi P, Heo S, Kim KH. (**Co-first author**). 2020. Root Response to Drought Stress in Rice

(*Oryza sativa* L.). International Journal of Molecular Sciences. 21:1513-1534. (SCIE, IF 6.208)

- Chung YS**, Kim K, Hamayun M, Kim YH. 2020. Silicon Enhance the Resistance to Salinity Stress of Soybean (*Glycine max* L.) by Regulation of Reactive Oxygen Species (ROS) and Reactive Nitrogen Species (RNS). *Frontiers in Plant Science*. 20:1725-1735. (SCIE, IF 6.627)
- BAEK J, Lee E, Kim N, Kim SL, Choi I, Ji H, **Chung YS**, Choi MS, Moon JK, Kim KH. 2020. High Throughput Phenotyping for Various Traits on Soybean Seeds Using Image Analysis. *Sensors*. 20:248. (SCIE, IF 3.847)
- Kim DW, Silva RR, Kim JS, Kim Y, Kim HJ, **Chung YS. (Corresponding author)**. 2020. Comparison of Various Kinds of Vegetative Indices for Chlorophyll Contents Using Low-Resolution Camera. *Journal of Crop Science and Biotechnology*. 23:73-79.
- Heo S, Kim C, **Chung YS. (Corresponding author)**. 2019. High-resolution melting analysis for identification of apple cultivars using simple sequence repeat markers. *Plant Biotechnology Reports*. 13:337-344. (SCIE, IF 2.496)
- Jang GJ, Kim JY, Silva R, Kim YH, **Chung YS. (Corresponding author)**. 2019. Case Study: The Effect of Shade on the RGB Images Obtained from Unmanned Aerial Vehicle in Crop Evaluation. *Journal of Agricultural, Life and Environmental Sciences*. 31:143-150.
- Kim DW, Min TS, Kim Y, Silva RR, Hyun HN, Kim JS, Kim KH, Kim HJ, **Chung YS. (Corresponding author)**. 2019. Sustainable Agriculture by Increasing Nitrogen Fertilizer Efficiency Using Low-Resolution Camera Mounted on Unmanned Aerial Vehicles. *International Journal of Environmental Research and Public Health*. 16:3893. (SCIE, IF 4.614)
- Jo JW, Lee MH, Lee HR, **Chung YS**, Beak JH, Kim KH, and Lee CW. 2019. LeafNet: Plants Segmentation using CNN. *Journal of the Korea Industrial Information Systems Research*. 24:1-8.
- Chung YS**, Park M, Lee S. 2019. Rhizome germination rate of *Miscanthus × giganteus* at Different Rhizome Sizes and storage time at low temperature. *Journal of Subtropical Agriculture and Biotechnology*. 35:1-6.
- Shin YH, Ko PY, Ko EJ, Lee SH, **Chung YS**, Jeun YC. 2019. Survey of Huanglongbing prediction in Jeju Island. *Journal of Subtropical Agriculture and Biotechnology*. 35:17-20.
- Chung YS**, Silva RR, Park M, Lee S. 2019. Radiation-Induced Breeding in *Camelina Sativa*. *Journal of Crop Science and Biotechnology*. 22:17-20.
- Chung YS**, Choi JR, Lee S. 2019. Oral Administration of Camelina Oil Effects on Body Weight and Serum Lipid of Mice. *Korean Society for Biotechnology and Bioengineering Journal*. 34:10-14.
- Lee U, Silva RR, Kim C, Kim H, Heo S, Park IS, Kim W, Jansky S, **Chung YS. (Corresponding author)**. 2019. Image Analysis for Measuring Disease Symptom to Bacterial Soft Rot in Potato. *American Journal of Potato Research*. 96:303-313. (SCIE, IF 1.815)
- Kim SL, **Chung YS**, Ji H, Lee H, Choi I, Kim N, Lee E, Oh J, Kang DY, Baek J, Lee GS. **(Co-first author)**. 2019. New Parameters for Seedling Vigor Developed via Phenomics. *Applied Sciences*. 9:1752. (SCIE, IF 2.838)
- Heo S, Kim C, **Chung YS. (Corresponding author)**. 2019. High-resolution melting analysis for identification of apple cultivars using simple sequence repeat markers. *Plant Biotechnology Reports*. 13:337-344. (SCIE, IF 2.496)
- Park CH, Yeo HJ, Park YE, Chun SW, **Chung YS**, Lee SY, Park SU. 2019. Influence of Chitosan, Salicylic Acid and Jasmonic Acid on Phenylpropanoid Accumulation in Germinated Buckwheat (*Fagopyrum esculentum* Moench). *Foods*. 8:153. (SCIE, IF 5.561)
- Kim DW, Kim Y, Kim KH, Kim HJ, **Chung YS. (Corresponding author)**. 2019. Case Study: Cost-effective Weed Patch Detection by Multi-Spectral Camera Mounted on Unmanned Aerial Vehicle in the Buckwheat Field. *The Korean Journal of Crop Science*. 64:159-64.

- Kim SL, **Chung YS**, Silva RR, Ji H, Lee H, Choi I, Kim N, Lee E, Baek J, Lee GS, Kwon TR. (**Co-first author**). 2019. The opening of phenome-assisted selection era in the early seedling stage. *Scientific Reports*. 9:9948. (SCIE, IF 4.996)
- Heo S, **Chung YS**. (**Corresponding author**). 2019. Validation of MADS-box genes from apple fruit pedicels during early fruit abscission by transcriptome analysis and real-time PCR. *Genes & Genomics*. 26:1. (SCIE, IF 1.839)
- Chung YS**, Lee YG, Silva RR, Park S, Park MY, Lim YP, Choi SC, Kim C. 2018. Potential SNPs related to microspore culture in *Raphanus sativus* based on a single-marker analysis. *Canadian Journal of Plant Science*. 98:1072-1083. (SCIE, IF 1.375)
- Chung YS**, Park M, Lee S. 2018. Investigations in to the Capacity and Strength of Rhizome Germination in Three Different *Miscanthus* Species. *Journal of Agricultural, Life and Environmental Sciences*. 30:73-77.
- Chung YS**, Park M, Lee S. 2018. Rhizome Germination Rate of *Miscanthus* × *giganteus* at Different Rhizome Sizes. *Journal of Agricultural, Life and Environmental Sciences*. 30:78-82.
- Chung YS**, Kim KS, Kim C. 2018. Perspectives on high throughput phenotyping in developing countries. *Korean Journal of Agricultural Science*. 45:317-323.
- Chung YS**, Kim J, Kim C. 2018. Breeding of Lignocellulosic Bioethanol Feedstock. *Journal of Crop Science and Biotechnology*. 21:1-2.
- Chung YS**, Jansky S. 2018. Considerations for selecting disease resistant wild germplasm (*Solanum* spp.): lessons from a case study of resistance to bacterial soft rot and Colorado potato beetle. *Genetic Resources and Crop Evolution*. 65:2287-2292. (SCIE, IF 1.524)
- Chung YS**, Nam Y, Lee JH. 2018. Feasibility of Ivy (*Hedra helix*) for landscaping in Seoul, Korea. *Ornamental Horticulture*. 24:424-428.
- Chung YS**, Jun TH, Lee YG, Jung JA, Won SY, Hwang YJ, Silva RR, Choi SC, Kim C. A. 2018. Genetic Linkage Map of Wild Chrysanthemum Species Indigenous to Korea and its Challenges. *International Journal of Agriculture and Biology*. 20:2708-2716. (SCIE, IF 0.887)
- Chung YS**, Choi SC, Jun TH, Kim C. 2017. Genotyping-by-sequencing: a promising tool for plant genetics research and breeding. *Horticulture, Environment, and Biotechnology*. 58:425-431. (SCIE, IF 2.138)
- Chung YS**, Jun T, Kim C. 2017. Digestion efficiency differences of restriction enzymes frequently used for genotype-by-sequencing technology. *Korean Journal of Agricultural Science*. 44:318-324.
- Chung YS**, Choi SC, Silva RR, Kang JW, Eom JH, Kim C. 2017. Case Study: Estimation of Sorghum Biomass Using Canopeo for Digital Image Analysis. *Biomass and Bioenergy*. 105:207-210. (SCIE, IF 5.774)
- Kim C, Lee JH, **Chung YS**, Choi SC, Guo H, Lee TH, Lee S. 2017. Characterization of twenty *Camelina* spp. accessions by using single nucleotide polymorphism genotyping. *Horticulture, Environment, and Biotechnology*. 1-8.
- Park M, **Chung YS**, Lee S. (**Co-first author**). 2017. Quality changes of tomato fruits caused by genotype and environment interactions. *Horticultural Science and Technology*. 35:361-372. (SCIE, IF 0.758)
- Chung YS**, Kim C, Jansky S. 2017. New source of bacterial soft rot resistance in potato tubers. *Genetic Resources and Crop Evolution*. 1-7. (SCIE, IF 1.524)
- Choi SC, **Chung YS**, Kim C. 2016. Perspectives on the genomics research of important crops in the tribe Andropogoneae. *Korean Journal of Agricultural Science*. 43:1-13.
- Chung YS**, Palta J, Bamberg J, Jansky S. 2016. Potential Molecular Markers Associated with Tuber Calcium Content in Wild Potato Germplasm. *Crop Science*. 56:576-584. (SCIE, IF 2.763)
- Jansky SH, **Chung YS**, Kittipadukul P. 2014. M6: A Diploid Potato Inbred Line for Use in Breeding and Genetics Research. *Journal of Plant Registrations*. 8:195-199. (SCIE, IF 0.902)

- Chung YS**, Goeser NJ, Cai X, Jansky S. 2013. The Effect of Long term Storage on Bacterial Soft Rot Resistance in Potato. American Journal of Potato Research. 90:351-356. (SCIE, IF 1.815)
- Jansky S, Hamernik A, **Chung YS**. 2012. M7 Germplasm Release: A tetraploid Cole Derived from *Solanum infundibuliforme* for Use in Expanding the Germplasm Base for French Fry Processing. American Journal of Potato Research. 89:448-452. (SCIE, IF 1.815)
- Koo DH, Hong CP, Batley J, **Chung YS**, Edwards D, Bang JW, Hur Y, Lim YP. 2011. Rapid divergence of repetitive DNAs in Brassica relatives. Genomics. 97:173-185. (SCIE, IF 4.310)
- Chung YS**, Holmquist K, Spooner DM, Jansky SH. 2011. A Test of Taxonomic and Biogeographic Predictivity: Resistance to Soft Rot in Wild Relatives of Cultivated Potato. Phytopathology. 101:205-212. (SCIE, IF 3.670)
- Chung YS**, Sass ME, Nienhuis J. 2008. Validation of RAPD markers for white mold resistance for two snap bean (*Phaseolus vulgaris* L.) populations based on field evaluations, oxalic acid and straw tests. Crop Science. 48:2265-2273.
- Chung YS**, Sass ME, Nienhuis J. 2007. Correlations of White Mold Resistance in Snap Bean (*Phaseolus vulgaris* L.) among Field Evaluations, Oxalic Acid Test, and Straw Test. Annu. Rep. Bean Improv. Coop. 50:129-130.
- Navarro F, Sass ME, **Chung YS**, Nienhuis J. 2004. White mold resistance in two snap bean populations (*Phaseolus vulgaris* L.). Midwest Food Processors Association, Inc. 16:205-208.

(Continued to the next pages)

EXTERNAL FUNDING

- Development of noodle and beverage using buckwheat leaf. Rearch and Service from Jeju Buckwheat Busines Team. USD 75,000. 2018.
- Buckwheat germplasm selection for target traits for Jeju Island. National Research Foundation of Korea (NRF) funded by the Ministry of Education (NRF-2019R1F1A1061916). USD 127,000. 2019-2021.
- Image analysis for drought stress in soybean. Next-Generation BioGreen 21 Program (Project No. PJ01451203), Rural Development Administration, Republic Korea. USD 101,700. 2019-2020.
- Development of phenotype index for green longevity for grass and screening wild grass germplasm for breeding purpose. National Research Foundation of Korea (NRF) funded by the Ministry of Education (2019R1A6A1A11052070). USD 510,000. 2019-2024.
- Development of an approach to analyze timing and locality of migratory pests occurrence. (PJ015870) , Rural Development Administration, Republic Korea. USD 220,000. 2020-2023.
- Stantarization and integration of resooources information for seed-cluster in Hub-Spoke matetial bank (PJ01587004), Rural Development Administration, Republic Korea. USD 1,250,000. 2021-2026.
- Image analysis for brown bug in rice I. National Research Foundation of Korea (NRF). USD 15,000. 2022.
- Image analysis for brown bug in rice II. National Research Foundation of Korea (NRF). USD 15,000. 2022.
- Image analysis for brown bug in rice III. National Research Foundation of Korea (NRF). USD 15,000. 2023.
- Early Starup Pakage. Startup Promotion Institute Preliminary Startup Office. Republic Korea. USD 70,000. 2023.

INVITED SPEAKER AND CHAIR

- Invited speaker at Korean Society of Crop Science, Annual Conference, Muju, Republic of Korea. 2017.
- Chairman for Phenomics Session at the International Crop Breeding Conference, Kwangju, Republic of Korea. 2019.
- Invited Speaker at the 3rd Co-Symposium among Institutes for Crop Genomic Breeding, Jeonju, Republic of Korea. 2019.
- Chairman for Phenomics Session at the Crop Breeding Conference, Jeju, Republic of Korea. 2020.
- Chairman for Phenomics Session at the Crop Breeding Conference, Jeju, Republic of Korea. 2021.
- Chairman for High Throughput Phenotyping & Genotyping Session at the Crop Breeding Conference, Jeju, Republic of Korea. 2021.
- Chairman for Phenomics Session at the Crop Breeding Conference, Jeju, Republic of Korea. 2022.
- Invited Speaker at Estidamah, Riyadh, Saudi Arabia. 2022.
- Invited Speaker at Göttingen University, Göttingen, Germany. 2023.
- Invited Speaker at Ho Chi Minh National University, Ho Chi Minh, Vietnam. 2023
- Invited Speaker at Visayas State University, Baybay, Philippines. 2023
- Chairman for Phenomics Session at the Crop Breeding Conference, Jeju, Republic of Korea. 2023.
- Invited speaker at the 15th International Association for Plant Biotechnology Gongress, Daejeon, Republic of Korea. 2023.
- Invited speaker at 1st International Forum and Exhibition for Sustainable Agriculture, Riyadh, Saudi Arabia. 2023.

AWARDS RECEIVED

- Best Young Scientist. Koean Society of Plant Biotechnology. Pusan, Republic of Korea. 2016.
- Best Teaching Award based on Students Evaluation. Jeju National University. Jeju, Republic of Korea. 2019.
- Best Presentation Award. Koean Society of Plant Breeding. Jeonju, Republic of Korea. 2019.
- Best Research Award for Non-Tenured Professors, Jeju National University. Jeju, Republic of Korea.

SERVICES TO COMMUNITY

- Review Editor of Frontiers in Plant Science. 2019-present.
- Field Editor for Plant Biotechnology Reports. 2020-present.
- Review Board of Agronomy. 2019-present.
- Review Board of Agriculture. 2019-present.
- Associate Editor for Korean Journal of Plant Breeding. 2020-present.
- Associate Editor for Korean Journal of Crop Science. 2020-present.
- Field Editor for Journal of Crop Science and Biotechnology. 2018-present.
- Committee Member of Steering Committee for Woman in Science, Engineering, and Technology, Jeju. 2019-present.
- Director of Research for Subtropical Horticulture Research Institute, Jeju. 2019-present.
- Head Professor for Sustainable Agriculture II at Agricultural Meister College at Jeju. 2019-2022.
- Committee Member of Council of Industry-Academic Cooperation for Jeju Special Self-governing Province Agricultural Research and Extension Services, Jeju, Korea. 2019-present.
- Executive Director for The Korean Society for Citrus and Subtropical Climate Fruits. 2020-present.
- Foreign Cooperation Committee For The Korean Society of Breeding Science. 2020-present.
- Director of Planning and Management at Subtropical Agricultural Life Science Institute in Jeju National University. 2022-present.
- Invited Member of European Society of Research Development. 2022-present.
- Vice President of Bio-Resources Computing Institute, Jeju. 2021-present.
- Guest Editor for Plants for Plant Phenomics for Precision Agriculture. 2023-present.
- Guest Editor for International Journal of Molecular Sciences for in Advances in Phenotyping at Plant and Cell Levels. 2023-present.
- Chairman of Jeju Buckwheat Industry Promotion Committee in Jeju. 2023-present.
- Vice President of International Regional Development Cooperation Research Center in Jeju National University. 2023-present.
- Head of Environmental Hazard Assessment department at Tree Diagnosis Center in Jeju National University. 2023-present.
- Adjunct Professor at Ton Duc Thang University in Ho Chi Minh, Vietnam. 2023-2026.

MEDIA EXPOSED

- Potatoes wild with calcium (<https://www.sciencedaily.com/releases/2016/02/160224133638.htm>). Feb. 2016.
- Indeginous buckwheat (<http://www.jejeconomy.com/news/articleView.html?idxno=14725>). May. 2020.
- Ethanol prodctuin form kenaf germplasm (<http://www.headlinejeju.co.kr/news/articleView.html?idxno=437831>). Jan. 2021.
- Phenomics Symposium (<https://www.mk.co.kr/news/economy/10063227>). Oct. 2021.
- Invitation Lecture in Gotiingen Univeristy (<https://naver.me/5kXgncRG>). Jan. 2023.