KARL KUNZE

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🎓 EDUCATION

2023

Cornell University, Gradudate School
Field of Plant Breeding and Genetics
📍 Ithaca, NY

2017

Cornell University, College of Agriculture and Life Sciences
B.S. Plant Sciences Concentration in Plant Breeding and Genetics, minor in Buisness for the Life Sciences
📍 Ithaca, NY

Thesis: A multi-omics study for intra-individual divergence of the distributions between mRNA isoforms in mammals

💻 RESEARCH EXPERIENCE

**2017
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2020**

Graduate Research Assistant
Measure components of weed competitive ability in organic naked barley variety trials by using field trait phenotypes and aerial imaging to measure barley vigor and growth over 4 trials and 2 years
Genome wide association studies of organic barley diversity panels across 13 location by year field locations throughout the Northern United Sates

Genetic by environmental analysis of winter naked barley variety trials across 8 environments throughout the Northern United States

Evaluation of dormancy and pre-harvest sprouting across a winter malting barley breeding population consisting of 450 lines over two location and two years. A total of 5 timepoint assays were conducted in 2020 and 8 timepoint assays conducted in 2021.

💼 PROFESSIONAL SOCIETIES

Crop Science Society of America(CSSA) student member -present

National Association of Plant Breeders (NAPB) student member -present

New York State Agriculture Society member -present

Cornell Plant Breeding and Genetics Graduate Student Association, Synapsis -present

Alumni of Alpha Gamma Rho, Professional and Social Agricultural Fraternity, Zeta Chapter

CONTACT INFO

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SKILLS

Highly proficient in operating and data collection of a plant breeding program including measurement field phenotypes and integrating genetic data to make selection decision and publish original research

Highly experienced in processing, analysis, organization, and experimental design of field trials of a novel barley breeding program

Highly proficient in R statistical software and Excel for data management and analysis. Moderate proficiency in using git version control

Basic proficiency in Unix shell scripting and command line. Limited experience with Python and Docker.

Highly proficient in flying unmanned aerial systems for imaging of plant variety trials and breeding populations & Certified FAA UAS Part 107 Remote Pilots License. -present

Basic proficiency in Agisoft Pro and Open Drone Map software stitching applications.

Basic proficiency related to

TEACHING EXPERIENCE

2014

Introduction to R Language for Beginners.
Instructor of R and Data Mining Training Courses at SupStat Inc.
♦ Beijing, China

2016
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2017

Computational Biology and Bioinformatics.
Teaching assistant of GBS CB2-201 courses at UAB   **♦** AL, USA

SELECTED PUBLICATIONS AND POSTERS

2014

Genetic and epigenetic signals are found predictive to the distribution of intra-individual divergence of alternative splicing.
Poster for 2013 International Conference of Genomics
♦ /Qingdao, China

Yu L, Chen B, Zhang Z.

2016

ESCRT-0 complex modulates Rbf mutant cell survival by regulating Rhomboid endosomal trafficking and EGFR signaling.
J Cell Sci. 2016 May 15;129(10):2075-84.
Sheng Z, **Yu L**, Zhang T, Pei X, Li X, Zhang Z and Du W.