



Summer Internship in Plant Breeding and Genetics

Engage in cutting-edge research that combines recent advances in next-generations sequencing and high-throughput phenotyping to improve classical plant breeding. Individuals will have the chance to explore research in an area of interest in diverse areas including bioinformatics, crop modeling, genomics, machine learning, image processing or data science to improve the plant breeding cycle. Projects will be developed around two association mapping panels with data including dense genomic data from genotyping-by-sequencing, high-throughput phenotypic data collected with unmanned aerial vehicles, and manually collected data. Research questions can be developed based on student interest but could include:

Genomic selection and genome wide association mapping for yield and agronomic traits in the panels.

Methods of data extraction and image processing.

Combining genomic, phenomic, and weather data to improve prediction of key traits.

Incorporating multiple measurements into data prediction.

The internship will run from **May 27 to July 29, 2020**, interns will receive:

- A stipend of \$5,047, paid in several installments over the summer.
- Travel reimbursement allowance up to \$600 for airfare, mileage, etc.
- Housing and dining (20 meals per week) in K-State dorms (double occupancy).

Who should apply: Students majoring in genetics, biology, computer science, mathematics, statistics, agronomy or other STEM are encouraged to apply. Women, minorities, and persons with disabilities are encouraged to apply.

How to apply: Send a cover letter, statement of interest, unofficial transcripts, and resume to Dr. Jesse Poland (jpoland@ksu.edu) and Dr. Jared Crain (jcrain@ksu.edu) by **March 20, 2020**.

