



INSTITUTE OF AGRICULTURE,  
NATURAL RESOURCES & EXTENSION

---

University of Alaska Fairbanks

## **Fully Funded PhD Position in Plant Breeding and Genetics**

Spring 2027

Institute of Agriculture, Natural Resources and Extension  
Department of Natural Resources and Environment  
**University of Alaska Fairbanks**

### **Research Focus**

The Small Grain Breeding and Research Program at the University of Alaska Fairbanks is seeking a highly motivated PhD student to conduct research in **wheat breeding, genetics, and adaptation to subarctic environments**.

The research will focus on understanding the genetic basis of wheat adaptation, stress tolerance, and grain yield under Alaska's unique growing conditions. The student will work with diverse wheat germplasm and breeding populations using a combination of:

- Multi-location field phenotyping
- Germplasm characterization and evaluation
- Controlled hybridization and population development
- Quantitative and molecular genetic approaches
- Genome-wide association and related genomic analyses
- Statistical analysis of genotype, environment, and genotype  $\times$  environment interactions

The project will provide opportunities for hands-on training in applied plant breeding, field experimentation, quantitative genetics, genomics, and data analysis.

### **Required Qualifications**

- M.S. degree in Plant Science, Plant Breeding, Agronomy, Plant Biology, Genetics, or a closely related field
- Strong foundation in plant genetics and experimental design
- Experience with field, greenhouse, laboratory, or molecular research
- Strong written and oral communication skills in English
- Ability to meet the [admission requirements of the University of Alaska Fairbanks Graduate School](http://www.alaska.edu/graduate).

### **Preferred Qualifications**

- Previous experience in plant breeding or crop improvement
- Experience with molecular markers, genomic data, GWAS, or quantitative genetics



INSTITUTE OF AGRICULTURE,  
NATURAL RESOURCES & EXTENSION

---

University of Alaska Fairbanks

- Experience with statistical analysis using **R and/or Python**
- Experience with field phenotyping, breeding populations, or multi-environment trials

### How to apply

Interested applicants should apply using the [UA Career portal](#) with subject line: Spring 2027 PhD Application

- A detailed CV
- A cover letter describing research experience, future interests, and career goals
- Unofficial academic transcripts
- Up to three publications, thesis chapters, posters, or writing samples (optional)

### Start Date:

Applications will be reviewed as they are received. Selected applicants will be contacted for a virtual interview.