Postdoctoral Scholar – Seed Production Systems

Department: Crop and Soil Science
College: College of Agricultural Sciences
Institution: Oregon State University
Location: Corvallis, Oregon
Appointment: Full-time (1.0 FTE)
Duration: Two years
Supervisor: Dr. Juliana Espíndola, Assistant Professor and Extension Seed Crop Specialist

Application Information
Application Deadline: December 1, 2026
Anticipated Start Date: February 1 or March 1, 2027

Position Summary
The Extension Seed Crop Program, within the Department of Crop and Soil Science at Oregon State University (OSU), is seeking a motivated Postdoctoral Scholar to conduct applied research focused on improving seed production systems. This position offers an opportunity to conduct applied research addressing challenges in seed production, collaborate with scientists, and contribute to research that directly supports the seed industry.
The primary focus will be improving hairy vetch (*Vicia villosa*) seed production by investigating reproductive development, flower abortion, seed quality, optimal harvest timing, and agronomic management practices that influence seed production. The Postdoctoral Scholar will also contribute to other research projects involving cool-season grass and legume seed production systems.
The position combines field research, laboratory evaluations, data analysis, and scientific writing. We are looking for a researcher with a strong background in agronomy and seed production, practical field research experience, and excellent communication skills. The successful candidate will have opportunities to develop research ideas, publish scientific findings, supervise students, and engage with growers and industry partners.
This is a two-year position. Extension beyond the initial appointment will depend on the availability of additional funding. Based on satisfactory performance and research progress, the Postdoctoral Scholar may be encouraged to participate in developing research proposals and pursuing funding opportunities to support continued research and a potential extension of the appointment.

Position Duties and Responsibilities
50% – Field Research and Experimental Management

- Design, establish, and manage replicated field experiments in hairy vetch and other grass and legume seed production systems.
- Evaluate reproductive development, flower abortion, seed yield, crop phenotyping, and responses to agronomic management practices.

- Coordinate field activities, including planting, treatment applications, crop monitoring, data collection, and harvest.
- Conduct plant and seed phenotyping using imaging-based approaches.

20% – Laboratory Research and Seed Evaluations

- Process plant and seed samples collected from field experiments.
- Conduct seed quality evaluations, including germination, seed vigor, tetrazolium viability testing, seed moisture content, and seed weight.
- Evaluate biomass, reproductive allocation, harvest index, and seed yield components.

20% – Data Analysis, Scientific Writing, and Reporting

- Organize, analyze, and interpret data from field and laboratory experiments using appropriate statistical methods.
- Prepare manuscripts for publication in peer-reviewed scientific journals.
- Develop research reports, conference abstracts, and scientific presentations.
- Contribute to research proposals and grant applications.

10% – Research Collaboration, Student Supervision, and Extension

- Collaborate with OSU faculty, USDA-ARS scientists, research staff, and external partners.
- Train and supervise undergraduate and graduate research assistants as needed.
- Contribute to Extension activities, including field days, grower meetings, and educational materials.
- Participate in research planning and the development of new projects.

Minimum/Required Qualifications

- Ph.D. in Agronomy, Crop Science, Agricultural Science, or a closely related discipline with a strong background in crop production and management. The degree must be completed before the appointment begins.
- Demonstrated experience conducting agronomic field research, including experimental design, field trial establishment, and data collection.
- Knowledge of seed biology, seed quality, and factors influencing seed yield and production.
- Experience with statistical analysis and interpretation of agricultural research data.
- Excellent scientific writing skills, including preparation of manuscripts, technical reports, and research documents.
- Excellent oral communication and interpersonal skills.
- Demonstrated ability to work independently and collaboratively as part of a research team.
- Willingness to work outdoors under varying weather conditions and maintain a flexible schedule, including working every other weekend during the growing season when research activities require it.
- Possession of a valid driver's license or the ability to obtain one within the first three months of employment.

Preferred Qualifications

- Research experience with hairy vetch or other grass and legume seed production systems, forage crops, or related agricultural cropping systems.
- Experience with reproductive physiology, flowering, and/or seed science and technology.
- Experience with field phenotyping and digital imaging technologies, including RGB imaging, multispectral imaging, UAVs, or computer vision applications for crop evaluation.
- Proficiency in Python programming for image processing, phenotyping, or data analysis, and experience with statistical software such as R, SAS, or Python, particularly for regression and mixed-effects models.
- Experience with field research equipment and small-plot harvesting.
- A record of peer-reviewed scientific publications.
- Experience contributing to research proposals or competitive grant applications.

Required Application Documents

Applicants must submit the following documents:

- **Cover Letter (maximum 1 page):** Describe your research background, experience with agronomic field experiments and seed production systems, relevant technical skills, and interest in the position.
- **Curriculum Vitae (CV):** Include educational background, research experience, scientific publications, awards, and relevant technical skills.
- **Professional References:** Names, affiliations, email addresses, and telephone numbers of three professional references.

Submit applications by email to:

Dr. Juliana Espíndola
Email: espindola.juliana@oregonstate.edu
Subject Line: **Postdoctoral Scholar Application – Seed Production Systems**