Azize Homer, PhD

Curriculum Vitae

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Education

Ph.D. Agronomy, 2013. **Emphasis in Plant Breeding and Genetics**, University of Wyoming (UW), Laramie, WY
Dissertation Topic: "Breeding winterhardy pea for the Central Great Plains, USA".
Advisor: Dr. Robin W. Groose

M.S. Agronomy, 1998. Specialization in Plant Breeding and Genetics, University of Nebraska, Lincoln, NE
Thesis Title: "Using bulked segregant analysis to detect SSR marker(s) linked to the *Phytophthora* resistance loci of Soybean". Advisor: Dr. James E. Specht

Knowledge, Experience & Skills

- Agricultural research, production and extension
- Plant breeding techniques and plant genetics
- Breeding new legume varieties
- Experimental design, field plot techniques and variety trials
- Data collection, statistical analysis (SAS, MSTAT), report writing, presentations and publications
- Knowledge of biotechnology and basic molecular laboratory techniques (DNA extraction, PCR, SSR analysis, Northern blot)
- Knowledge of linkage mapping
- Microsoft Office (Word, Excel, PowerPoint)
- Writing research proposals, project management and evaluation
- Teaching at the university level
- Ability to work independently and in a team
- Communication, decision-making, critical thinking, and problem solving

Professional Experience

UW Dept. of Plant Sciences, Laramie, WY **Nov. 2016 - present**

► Plant Breeder Assistant

- Assisting with dry bean breeding research
- Participating in grant proposal writing

The European Commission **2016 - present**

► **Independent Expert Evaluator & Rapporteur,** Research and Innovation Program Horizon 2020

- Contract work: Assisting with evaluation of project proposals, providing topic-specific expertise

Central Research Institute for Field Crops, Ankara, Turkey **2014 - 2016**

► **Postdoctoral Researcher**

- Conducted research on cold tolerance of pea and common vetch germplasm under field and controlled environment

UW Dept. of Plant Sciences, Laramie, WY **2005 - 2012**

► **Graduate Research /Teaching Assistant**

- Conducted research on pea breeding for sustainable crop production
- Performed hybridization, developed new breeds, selected the best winter feed and food pea lines with enhanced winterhardiness
- Co-released 'WyoWinter' feed pea cultivar
- Managed field experiments; supervised and executed planting, maintaining and harvesting of research plots, and forage quality analysis with NIRS
- Conducted multi-location and multi-year variety trials under dryland and irrigated conditions
- Managed data collection and analysis
- Delivered presentations at field days and professional meetings
- Assisted in teaching classes, led a team of three TAs in Genetics

UW Dept. of Plant Sciences, Laramie, WY **2003 – 2005**

► **Project Assistant** - part time

- Assisted with all aspects of the field pea breeding program

Black Sea Agricultural Research Institute, Samsun, Turkey **1994 - 2002**

► **Plant Breeder & Research Specialist**

Joint Division Leader of Soybean, Chickpea and Dry Bean Breeding Programs

Responsibilities:

- Planting, managing field and greenhouse experiments, hybridization, selection within segregating populations, and harvesting
- Evaluating plant breeding material for different traits including disease and insect tolerance, yield, quality, lodging, earliness
- Collecting and entering data, analyzing in SAS, and writing annual reports
- Developıng and releasing new cultivars
- Participating at professional conferences, group meetings and field days and delivering oral presentations
- Traveling to remote project sites and educating members of the regional agriculture community
- Preparing brochures and other materials about grain legume production and variety selection for extension and outreach

Teaching Experience

- **Agroecology -** (Spring 2008) - Laboratory Instructor, University of Wyoming; enrollment: 25
- **Genetics -** (Fall 2008 & Spring 2011, 2012) Discussion Instructor, University of Wyoming; enrollment: 2 sections x 25
- **Biology of Plants and Fungi -** (Fall 2010, 2011) - Laboratory Instructor, University of Wyoming; enrollment:2 sections x24

Publications (maiden name of Demirbas)

Homer, A., J.M. Krall, J.J. Nachtman, A. Islam, and R.W. Groose. 2017. Registration of 'WyoWinter' Feed Pea. *Manuscript in preparation*.

Homer, A and R. W. Groose. 2016. Benefits of Winter Pea in Crop Rotations on the U.S. Central Great Plains. *Journal of Agricultural Science and Technology* A & B. Accepted.

Homer, A and R. W. Groose. 2016. Using an "Index of Merit" to Evaluate Winterhardy Pea Lines. *Journal of Agricultural Science*. Vol. 8, No. 10:45-53. http://dx.doi.org/10.5539/jas.v8n10p45

Homer, A., M. Sahin, and U. Kucukozdemir. 2016. Evaluation of pea (*Pisum sativum* L.) germplasm for winterhardiness in Central Anatolia, Turkey using field and controlled environment. *Czech Journal of Genetics and Plant Breeding*. 52:55-63. http://dx.doi.org/10.17221/186/2015-CJGPB

Homer, A and R. W. Groose. 2015. Developing Winterhardy Vegetable Pea for Wyoming, USA: Description of Winter Survival in Early Generation Breeding Lines. *International Journal of Scientific and Research Publications*. 5:1-6. http://www.ijsrp.org/research-paper-0615/ijsrp-p4204.pdf

Homer, A. 2013. Breeding winterhardy pea for the Central Great Plains, USA. Ph.D. dissertation, University of Wyoming, United States - Wyoming. (Publication No. AAT 3563485). http://search.proquest.com/docview/1400005471

Homer, A., J.M. Krall, J.J. Nachtman, and R.W. Groose. 2013. Breeding Winterhardy Feed Pea for Wyoming. Field Days Bulletin. Agriculture Experiment Station. University of Wyoming. http://www.uwyo.edu/uwexpstn/_files/docs/2013-field-days-bulletin.pdf

Demirbas, A., B.G. Rector, D.G. Lohnes, R.J. Fioritto, G.L. Graef, P.B.Cregan, R.C. Shoemaker, and J.E. Specht. 2001. Simple Sequence Markers Linked to the Soybean *Rps* Genes for Phytophthora Resistance. *Crop Science*. 41:1220-1227. http://dx.doi.org/10.2135/cropsci2001.4141220x

Ustün, Ali., A. Gulumser, and **A. Demirbas**. 1995. Relations among variety, planting date, and Ascochyta Blight disease of Chickpea in the Black Sea Region of Turkey. Conference of New Techniques in Development of Agriculture in Black Sea Region. Ondokuz Mayis University, Samsun, Turkey. p.24-28.

Oral Presentations

Homer, A. and M.Sahin. 2015. Evaluation of pea (*Pisum sativum* L.) germplasm for winterhardiness in Central Anatolia, Turkey. II. International Plant Breeding Congress (IPBC). November 1-5. Antalya, TURKEY

Homer, A. and R.W. Groose. 2013. Using an "Index of Merit" for multitrait evaluation of winterhardy feed pea lines. International Plant Breeding Congress (IPBC). November 10-14. Antalya, TURKEY

Homer, A. 2006. Agricultural research in Turkey. University of Wyoming, Department of Plant Sciences. Graduate Seminar Series. Laramie, WY

Homer, A. and A. Ustun. 2001. Development of soybean genotypes with earliness, high seed yield, disease and insect tolerance and lodging resistance in the Black Sea Region. Annual Progress Report. National Oil Crops Symposium. October 14-18. Edirne, TURKEY

Homer, A. and A. Ustun. 2001. Evaluation of soybean varieties for organic production. Project Proposal. Accepted. National Oil Crops Symposium. October 14-18. Edirne, TURKEY

Poster Presentations

Homer, A. 2015. Winter survival of Common Vetch (*Vicia sativa* L.) Germplasm in Central Anatolia, Turkey. II. International Plant Breeding Congress (IPBC). November 1-5. Antalya, TURKEY.

Homer, A. and R.W. Groose. 2013. Winterhardy Vegetable Pea Breeding for Wyoming, USA. International Plant Breeding Congress (IPBC). November 10-14. Antalya, TURKEY.

Homer, A., J.J. Nachtman, J.M. Krall, and R.W. Groose. 2012. Developing winterhardy feed pea for the Central Great Plains, USA. National Association of Plant Breeders (NAPB) annual meeting. August 6-8. Indianapolis, IN

Homer, A., J.J. Nachtman, J.M. Krall, and R.W. Groose. 2012. Breeding winter feed pea for Wyoming. Sustainable Agriculture Research and Extension Center Field day, University of Wyoming, Lingle, WY (August, 6)

Rector, B.G., **A. Demirbas**, M. J. Livingston, H. L. Olsen, R. A. Ritchie, G. L. Graef, and J.E. Specht. 1999. Integration of the Soybean Microsatellite and Classical Marker Maps. International Plant & Animal Genome VII Conference. January 17-21. Town & Country Hotel, San Diego, CA

Awards/Grants

- **Research Grant.** The Scientific and Technological Research Council of Turkey (TUBITAK). 2014-2016
- **John P. Ellbogen Outstanding Graduate Assistant Teaching Award.** University of Wyoming. 2012
- **Lloyd Graduate Fellowship Award,** University of Wyoming, 2011.
- **Gamma Sigma Delta,** International agriculture honor society, UW Chapter; 2009
- **Research Success Award,** General Directorate of Agricultural Research, Republic of Turkey, Ministry of Agriculture; 2001
- **Research Scholarship.** Funded by the Turkish Ministry of Agriculture to study at the University of Nebraska; 1996-1998

Professional Memberships

- National Association of Plant Breeders (NAPB), U.S.
- Plant Breeders Union of Turkey

Major Course Work

- Plant Breeding
- Genetics
- Population Genetics
- Quantitative Genetics
- Experimental Design
- Statistical Methods in Agriculture &Nature
- Advanced Biochemistry
- Fundamental Crop Physiology
- Field Crop Physiology
- Crop/Weed Ecology
- Horticultural Crop Improvement
- Horticultural Herb Production
- Organic Food Production
- Sustainable Agriculture
- Plant Pathology