



**TAGEM**  
AR-GE & İNOVASYON

TARLA BİTKİLERİ MERKEZ ARAŞTIRMA  
ENSTİTÜSÜ MÜDÜRLÜĞÜ/ ANKARA

## DR. SEMRA PALALI DELEN

### Ziraat Yüksek Mühendisi

#### EĞİTİM

- Doktora** 2017-2022 University of Nebraska-Lincoln  
Agronomy and Horticulture  
Plant Breeding and Genetics
- Lisans** 2010-2014 Ankara Üniversitesi  
Ziraat Fakültesi Tarla Bitkileri Bölümü
- Yabancı dil** İngilizce

#### İŞ TECRÜBESİ

- 2023-Devam Ziraat Yüksek Mühendisi, TARM  
Biyoteknoloji Araştırma Merkezi-ANKARA
- 2019-2022 University of Nebraska-Lincoln, NE, ABD,  
Öğretim Asistanı
- 2017-2022 University of Nebraska-Lincoln, NE, ABD,  
Araştırma Görevlisi

#### HAKKIMDA

1991 yılında Konya-Ereğli’de doğdu. 2014 yılında Ankara Üniversitesi, Ziraat Fakültesi, Tarla Bitkileri Bölümü’nden mezun oldu. Aynı yıl, Milli Eğitim Bakanlığı tarafından 1416 sayılı Kanun kapsamında açılan YLSY bursunu kazanarak ABD’de lisansüstü eğitim almaya hak kazandı. 2017-2022 yılları arasında University of Nebraska-Lincoln’da Doktora öğrenimini tamamladı. Doktora öğrenimi sırasında “population genetics, quantitative genetics ve statistical genomics” konularında kendisini geliştirmeyi hedefleyerek doktora projesini bu konulara paralel şekilde yürüttü. Doktora projeleri mikro ve makro elementler, bu elementlerin birbirleriyle ve verimle genomik düzeyde ilişkileri, elementlerin bitki bünyesine alınımında görev alan genler ve bu genlerin seleksiyon geçmişi, çokgenlik gibi konuların GWAS ve GCTB modelleriyle incelenmesini içerdi. Doktora projesine ek olarak farklı laboratuvarlarda hibrit buğday, çok yıllık buğday, ayçiçeği gibi farklı tahıl projelerine de dahil oldu. 2023 yılında Tarla Bitkileri Merkez Araştırma Enstitüsü Müdürlüğü’nün Biyoteknoloji Araştırma Merkezi’nde göreve başlamıştır.

#### İLETİŞİM



Araştırma ve Teknoloji Geliştirme Kampüsü  
Tarla Bitkileri Merkez Araştırma Enstitüsü,  
Biyoteknoloji Araştırma Merkezi

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### ▪ **PROJELER**

#### ▪ **Yürüttüğü Projeler**

1. Dissecting the genetic architecture of mineral compositions and yield-related traits under different nitrogen conditions in maize. 2019-2022.
2. Hybrid wheat development project by utilizing cytoplasmic male sterility (CMS) and dominant male sterility (DMS). 2017-2019.
3. Variation of microelement concentrations in the grain harvested from hybrid wheat (*Triticum aestivum* L.). 2017-2019

### ▪ **YAYINLAR**

1. **Palali Delen, S., Lee, J., Yang, J. (2023). Improving the metal composition of plants for reduced Cd and increased Zn content: molecular mechanisms and genetic regulations.** Cereal Research Communications, doi: <https://doi.org/10.1007/s42976-023-00453-8>
2. **Palali Delen, S., Xu, G., Velazquez-Perfecto, J., & Yang, J. (2023). Estimating the genetic parameters of yield-related traits under different nitrogen conditions in maize.** Genetics, 223(4), iyad012. doi: <https://doi.org/10.1093/genetics/iyad012>
3. Delen, Y., Mural, R. V., Xu, G., **Palali Delen, S.**, Schnable, J. C., Yang, J., & Dweikat, I. (2022). **Dissecting the genetic architecture of sunflower head diameter using genome-wide association study.** bioRxiv, 2022-10. doi: <https://doi.org/10.1101/2022.10.24.513623>
4. Rodene, E., Xu, G., **Palali Delen, S.**, Zhao, X., Smith, C., Ge, Y., ... & Yang, J. (2022). **A UAV-based high-throughput phenotyping approach to assess time-series nitrogen responses and identify trait-associated genetic components in maize.** The Plant Phenome Journal, 5(1), e20030. doi: <https://doi.org/10.1002/ppj2.20030>

### ▪ **EĞİTİMLER**

1. Genomic and Fluorescence In situ Hybridization (GISH and FISH) Techniques. July 03-07, 2023
2. Plant Genome Editing / TARM-Biyoteknoloji Araştırma Merkezi. September 11-15, 2023
3. Medicinal and Aromatic Plants Workshop. September 11-12, 2023
4. Regional Training Course on Accelerated Breeding Techniques for the Development of Crop Tolerance to Abiotic Stress. November 6 – 17, 2023



## ■ **SUNUM ve POSTERLER**

1. **S. P. Delen**, G. Xu, J. Yang (2022). "Dissecting the Genetic Linkage Between the Toxic Metal (Cd) and Essential Minerals (Zn – Fe) in Maize", 5th International Agriculture Congress, UTAK
2. **S. P. Delen**, G. Xu, J. Velazquez-Perfecto, J. C. Schnable, J. Yang (2022). "Dissecting genetic architectures of yield-related traits under different nitrogen conditions in maize", NAPB (National Association of Plant Breeders)
3. **S. P. Delen**, G. Xu, J. Yang (2022). "Identification of the genetic locus to decouple the genetic linkage between harmful heavy metals and essential minerals in maize", Maize Genetics Conference
4. **S. P. Delen**, G. Xu, Y. Ge, J. Schnable, J. Yang (2021). "Purifying selection of deleterious alleles and its phenotypic consequences on yield-related traits under different nitrogen conditions in maize", UNL Plant Science Symposium
5. **S.P.Delen**, G. Xu, J. Yang (2021). "Investigate the genetic architecture of controlling mineral composition traits in maize", UNL Rothamsted Poster Symposium
6. **S.P.Delen**, G. Xu, J. Yang (2021). "Dissect the genetic architecture in controlling mineral composition traits in maize", ASA, CSSA, SSSA International Annual Meeting, <https://scisoc.confex.com/scisoc/2021am/meetingapp.cgi/Paper/138692>
7. **S. P. Delen**, G. Xu, C. Smith, Y. Ge, J. C. Schnable, J. Yang (2021). "Identification of the yield-related traits associated loci under different nitrogen conditions in maize", Maize Genetics Conference
8. **S. P. Delen**, M. Milner, E. Rodene, B. Sigmon, Y. Ge, J. C. Schnable, J. Yang (2019). "Purifying selection of deleterious alleles and hitchhiking effects on micronutrients during maize domestication and improvement processes", Maize Genetics Conference
9. **S. P. Delen**, C. Liu, Y. Delen, M. Bhatta, P. S. Baenziger, B. Waters (2018). "Variation of Cadmium (Cd), Zinc (Zn), and Iron (Fe) concentrations in the grain harvested from hybrid wheat (*Triticum aestivum* L.)", PSI Retreat.
10. **Palali, S.**, Delen, Y., 2013. Medicinal and aromatic plants utilization in the aromatherapy. Faculty of Agriculture, University of Ankara. The Congress of Student, Ankara University.
11. Delen, Y., **Palali, S.**, 2013. Medicinal and aromatic plants utilization as anticancer remedy. The Congress of Student, Ankara University.



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12. Delen, Y., Gürbüz, B., Uyanık, M., **Palalı, S.**, 2013. Effect of different bacterium inoculation methods and doses on yield and some morphological characteristics of fenugreek (*Trigonella foenum-graecum* L.). 10th Congress of Field Crops, 10-13 September 2013, Konya.

• **Diğer Posterler**

1. Y. Delen, R. V. Mural, G. Xu, S. P. Delen, J. C. Schnable, J. Yang, I. Dweikat (2022). "Insights into the genetic architecture of sunflower head diameter using genome-wide association study (GWAS)", NAPB (National Association of Plant Breeders)
2. M. Grzybowski, C. Miao, S. P. Delen, Y. Ge, J. Yang, J. Schnable (2020). "High-throughput hyperspectral imaging as a tool to explore natural diversity in biochemical traits over time in maize association panel", Maize Genetics Conference
3. J. Chen, Z. Yang, S. P. Delen, G. Xu, X. Cheng, J. Yang (2020). "Visualization of GWAS Results in Maize", YNS (Young Nebraska Scientists)
4. Y. Delen, S. P. Delen, V. Delen, I. Dweikat (2019). "Importance of Wild Helianthus Species and the Possible Consequences of Their Introduction to Agricultural and Marginal Areas of Turkey", 1st International Field Crops Conference in Turkey
5. Y. Delen, S. P. Delen, P. S. Baenziger (2018). "Evaluation of Seed Set in Dominant Male Sterile (DMS) Wheat (*Triticum aestivum* L.) population", PSI Retreat

• **Eğitim Tecrübesi**

1. Teaching Assistant: AGRO 355, Annual and perennial pot plants, 2019. University of Nebraska-Lincoln, Department of Agronomy and Horticulture, Lincoln, NE - ABD.
2. Teaching Assistant: AGRO 824, Plant Nutrition, 2019. University of Nebraska-Lincoln, Department of Agronomy and Horticulture, Lincoln, NE - ABD.
3. Learning Assistant: SCIL 101, Science and decision making for a complex world, 2020. University of Nebraska-Lincoln, Department of Agronomy and Horticulture, Lincoln, NE - ABD.
4. Teaching Assistant: AGRO 932, Biometrical genetics and plant breeding, 2020. University of Nebraska-Lincoln, Department of Agronomy and Horticulture, Lincoln, NE - ABD.

• **Aktiviteler**

1. Nebraska Plant Breeding Symposium, Committee Member, 2018. University of Nebraska-Lincoln, Department of Agronomy and Horticulture, Lincoln, NE - ABD.