



TAGEM
R&D AND INNOVATION

TRANSITIONAL ZONE AGRICULTURAL
RESEARCH INSTITUTE/ ESKISEHIR

MUSTAFA CAKMAK

Agricultural Engineer

EDUCATION

- **Assoc. prof**
- **PhD**
- **MSc** 2007-2010 Selcuk University- Institute of Science, Field Crops
- **Bachelor's Degree** 1996-2000 Ondokuz Mayıs University Faculty of Agriculture
- **LANGUAGE** English YOKDIL 60

CAREER

- 2002- Researcher. Transitional Zone Agricultural Research Institute / ESKISEHIR
- 1997-2002 Technician. District Directorate of Agriculture Tekkekoy-SAMSUN
- 1995-1997 Technician. District Directorate of Agriculture Saraykent-YOZGAT
- 1993-1995 Technician. District Directorate of Agriculture Boyabat-SINOP
- 1989-1993 Technician. District Directorate of Agriculture Kozluk-BATMAN

ABOUT ME

I started to work for the Ministry of Agriculture and Forestry as a technician in 1989. I studied the department of cool-season cereals from 2002 to 2017 as a cereal breeder on bread and durum wheat, barley, oat, and triticale plants. I have contributed to the development of ten bread wheat cultivars (Mufitbey, Nacibey, ES26, Yunus, Mesut, Reis, Aksungur, Beyhan, Ramisbey, Karaduman), two durum wheat (Dumlupinar, Levent), and two barley varieties (Sabribey, Yuksel).

I have carried out breeding and agronomy projects on saffron, cumin, black cumin, fenugreek and anise plants in the department of medicinal and aromatic plants and plant genetic resources studies since 2018

CONTACT

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▪ **PROJECTS**

▪ **Projects Conducted**

1. Winter Bread Wheat Breeding Studies in Transitional Zone. 2002-2017/ Breeder
2. Winter Durum Wheat Breeding Studies in Transitional Zone. 2002-2017/ Breeder
3. Barley Breeding Studies in Transitional Region. 2010-2017/ Breeder
4. Triticale Breeding Studies in Transitional Region. 2014-2018/ Breeder
5. Oat Breeding Studies in Transitional Region. 2014-2018/ Breeder
6. Determination of Quality Characteristics of Winter Bread Wheat Breeding Material Developed by Transitional Zone Agricultural Research Institute. Researcher
7. Determination of Quality Characteristics of Winter Durum Wheat Breeding Material Developed by Transitional Zone Agricultural Research Institute. Researcher
8. Determination of Morphological and Physiological Traits in Transitional Zone Agricultural Research Institute Winter Bread Wheat Breeding Materials. 2014-2018/ Researcher
9. Wheat Root and Crown Rot Disease and Resistance cyst and lesion nematodes Resources Development project. 2011-2015/ Researcher
10. Determination of Physiological Parameters usable in Bread Wheat Breeding. 2008-2013/ Researcher
11. National Cool Climate Cereal Disease Research Project. 2009-2018/ Researcher
12. Determination of Quality Traits, Drought and Diseases Tolerance of Winter Bread Wheat Crossing-Block. 2012-2014/ Researcher
13. Resistance Breeding Studies for Winter Bread Wheat Diseases in Transition Zone. 2016-17/ Researcher
14. Determination of seed dormancy-preharvest sprouting resistance and some quality traits in the bread wheat landraces and rural wheat lines developed from rural wheat populations. 2014-2018/ Researcher
15. Development of Molecular Markers for Resistance to Yellow Rust Disease in Winter Bread Wheat (*Triticum aestivum* L.). 2006-2010/ Researcher

▪ **Ongoing Projects**

1. Determination of the effectiveness of biofertiliser and biological fungicides in cumin (*Cuminum cyminum* L.) and material development studies by physical mutation application. 2021-2023/ Researcher
2. Western Transitional Zone Vegetable Genetic Resources Project. 2022-2026/ Researcher
3. Saffron from Hand of Woman 2021-2023/ Researcher



▪ **PUBLICATIONS**

▪ **INTERNATIONAL ARTICLES AND PAPERS**

▪ **Articles Published in International Journals**

1. Gummadov,N., Keser,M., Akin,B., Cakmak,M., Mert,Z., Taner,S., Ozturk,I., Topal,A., Yazar,S., Morgounov,A., 2015. Genetic gains in wheat in Turkey: Winter wheat for irrigated conditions. The Crop Journal Volume 3, Issue 6, December 2015, Pages 507-516 <https://doi.org/10.1016/j.cj.2015.07.007>
2. Yildirim,M., Gezginc,H., Paksoy,A.H., Aktas,B., Cakmak,M., Belen,S., Bolat,N., Yorgancilar,O., Keser,M., Braun,H.J., Pfeiffer,W.H., 2014. A study on some characteristics of new registered triticale (X Triticosecale Wittm.) varieties (Aysehanim and Mehmetbey) in Turkey. Journal of Food, Agriculture & Environment Vol.12 (2) : 370 –374, 18 April 2014
3. Yildirim,M., Cakmak,M., 2013. Effects of sister line mixtures on grain yield and some quality parameters in wheat. Journal of Food, Agriculture & Environment 11 (3), pg:915-923
4. Temel,A., Senturk-Akfirat,F., Ertugrul,F., Yumurtaci,A., Aydin,Y., Talas-Ograş,T., Gozukirmizi,N., Bolat,N., Yorgancilar,Ö., Belen,S., Yildirim,M., Cakmak,M., Ozdemir,E., Cetin,L., Mert,Z., Sipahi,H., Albustan,S., Akan,K., Dusunceli,F., Altinkut Uncuoglu,A., 2007. Yr10 gene polymorphism in bread wheat varieties. African Journal of Biotechnology Vol. 7 (14), pp. 2328-2332

▪ **International Papers, Seminars, etc.**

17. Keser,M., Cakmak,M.,2021. Wheat Variety Development in Turkey; Outcome of About One Century of Wheat Breeding Endeavor, 1925-2021. International Congress on Agriculture in Alanya, Agriculture in the World (ICAAW2021), Pg:307. 29-31 October, Alanya-Turkey
18. Sonmez,A.C., Yuksel,S., Belen,S., Cakmak,M., Yildirim,Y., Karaduman,Y., Akin,A., Onder,O.,2019. Determination of Grain Yield and Quality Characteristics of Some Barley (*Hordeum vulgare* L.) Genotypes in Eskişehir Conditions. 1.International Erciyes Agriculture Animal and Food Sciences Conference Book of Abstracts ISBN 978-605-031-099-3. (Oral Pr.) s:32, 24-27 April, Kayseri-Turkey
19. Keser,M., Karaduman,Y., Cakmak,M., Morgounov,A., Ozdemir,F., 2018. Increasing Sunn Pest Damage Thershold Level By Using Strong Gluten Genotypes. 13th Gluten Workshop. Oral Presentation. Book of Abstracts,p:54-55, Mexico City-Mexico
20. Demir,B., Sonmez,M.E., Cakmak,M., Aydin,N., 2017. Determination of the Hmw-Gs in Landraces and Modern Cultivars in Bread Wheat. International Congress of Health and Environment. October 23-25, Adana-Turkey
21. Keser,M., Kucukozdemir,U., Cakmak,M., Karaduman,Y., Yalcin,G., Morgounov,A., Ozdemir,F., 2016. Wheat Landraces; Valuable Sources for Enriching the Quality and Nutritional Values of Modern Germplasm. 15.Int. Cereal and Bread Congress Book of Abstracts,44,18-21 April, Istanbul-Turkey
22. Cakmak,M., Karaduman,Y., Akin,A., 2016. Developing Bread Wheat (*Triticum aestivum* L. em Thell) Genotypes Having Low-Amylose Content. 15th International Cereal and Bread Congress Book of Abstracts,210,18-21 April, Istanbul-Turkey



MUSTAFA CAKMAK Agricultural Engineer

TAGEM
R&D AND INNOVATION

7. Morgounov,A., Akan,K., Akin,B., Belen,S., Cakmak,M., Cetin,L., Keser,M., Kan,M., Küçükcongar,M., Mert,Z., Muminjanov,H., Nazari,K., Özdemir,F., Özer,E., Özseven,İ., Qualset,C., 2014. Wheat landraces currently grown in Turkey: area, diversity and agronomic traits, Annual meeting of Crop Science Society of America, November 2-5, Long Beach-USA
8. Keser,M., Cakmak,M., Imamova,R., Morgounov,A., Ozdemir, F., 2014. Sunn Pest Tolerance in Winter Wheat, 21.Biennial International Plant Resistance to Insect Workshop, 14-18 April, Marrakech-Morocco
9. Morgounov,A., Akin,B., Akan,K., Belen,S., Cetin,L., Mert,Z., Cakmak,M., Keser,M., Nazari,K., Kan,M., Kucukcongar,M., Ozdemir,F., Ozer,E., Muminjanov,H., Ozseven,I., Kucukozdemir,U., Qualset,C., 2014. Resistance to yellow rust in bread wheat landraces currently grown in Turkey. 2nd International Wheat Stripe Rust Symposium, April 28-May 1, Izmir-Turkey
10. Kilic,H, Kendal,E, Aktas,H, Erdemci,İ, Yazar,S, Donmez,E, Taner,S, Kaya,Y, Akcura,M, Ozturk,I., Bolat,N, Cakmak,M, Yildirim,M, Bayramoglu,H.O., 2014. Assessment of Advanced Winter Bread Wheat Lines for Yield and Some Quality Traits in Diyarbakir Conditions. International Mesopotamia Agriculture Congress, S.:424-430. 22-25 September, Diyarbakir-Turkey
11. Akin,A., Karaduman,Y., Cakmak,M., Belen,S., 2013. Determination of Durum Wheat Genotypes Having Suitable Quality Traits. International Plant Breeding Congress. Book of Abstracts, S:346,10-14 November, Antalya-Turkey
12. Belen,S., Bolat, N., Cakmak,M., Yorgancilar,A., Kilinc,A.T., 2012. Winter Bread Wheat Breeding Studies in Transitional Rainfed Zone of Turkey. BGRI Technical Workshop, Poster No:73, September 1-4, Beijing-China
13. Akan,K., Mert,Z., Cetin,L., Dusunceli,F., Bolat,N., Cakmak,M., Belen,S., 2012. Research on Inheritance of Resistance to Yellow Rust in PI 178383 an İzgi 2001 Wheat genotypes. 13th International Cereal Rusts and Powdery Mildews Conf. p.187, 28 August-1 September, Beijing-China
14. Karaduman,Y., Bolat,N., Avcioglu,R., Cakmak,M., Yildirim,M., Belen,S., Akin,A., Yuksel,S., Senturk,S., Ercan,R., 2012. Eskişehir Transitional Zone Agricultural Research Institute studies of development of biscuit wheat 2002-2012. 23rd International Scientific-Experts Congress On Agriculture And Food Industry, Book of Abstracts,s:24, 27-29 September, Izmir-Turkey
15. Kan,M., Kucukcongar,M., Keser,M., Mourgonov,A., Kaya,Y., Donmez,E., Ozbek,K., Karabak,S., Tasci,R., Ulucan,O., Cakmak,M., Yuksel,S., Karadas,K., Denizer,B., 2011. The Diversity of Wheat Land Races in Turkey and Their Potential to Use in Breeding. "Diversity, characterization and utilization of plant genetic resources for enhanced resilience to climate change", Abstract Book pg: 41 October 3-4, Baku- Azerbaijan
16. Karaduman,Y., Bolat,N., Belen,S., Cakmak,M., Yuksel,S., Akin,A., 2011. Effect of nitrogen fertilizer application on biscuit wheat quality characteristics. 6 th International Congress Flour-Bread& 8th Croatian Congress of Cereal Technologists Brasno-Kruh 11, p:135-143, 12-14 October, Opatija, Croatia (oral presentation). Proceedings of the 6th International Congress Flour-Bread '11. 8th Croatian Congress of Cereal Technologists, Osijek: Faculty of Food Technology Osijek, University of Josip Juraj Strossmayer, 12-14 October, Opatija-Croatia



MUSTAFA ÇAKMAK

Agricultural Engineer



17. Akan,K., Mert,Z., Cetin,L., Dusunceli,F., Bolat,N., Cakmak,M., Belen,S., Yorgancilar,O., 2010. Research on Inheritance of Yellow Rust Inheritance in Izgi Wheat Cultivar. 8.International Wheat Conference, (Poster Presentation) June 1-4, St. Petersburg-Russia
18. Akan,K., Mert,Z., Cetin, L., Dusunceli,F., Bolat,N., Cakmak,M., Belen,S.,2009. Research on Inheritance of Yellow Rust Resistance in Izgi-2001 Wheat Cultivar. 12th International Cereal Rust and Powder Mildews Conference. Abstract Book, 148. Antalya-Turkey
19. Ertugrul,F., Akfirat,F., Aydin,Y., Yumurtaci,A., Cetin,L., Albustan,S., Mert,Z., Akan,K., Dusunceli,F., Bolat,N., Cakmak,M., Belen,S., Yorgancilar,O., Ozdemir,E., Altinkut Uncuoglu,A., 2008. Search for Molecular Markers Associated with Yellow Rust Resistance in Turkish Bread Wheat. 33rd FEBS Congress. Athens-Greece
20. Altinkut Uncuoglu,A., Ercan,S., Aydin,Y., Ertugrul,F., Akfirat,F., Hasancebi,S., Cetin,L., Albustan,S., Mert,Z., Akan,K., Dusunceli,F., Bolat,N., Yorancilar,O., Belen,S., Cakmak,M., 2008. An EST-SSR Marker for Yellow Rust Resistance at Seedling and Adult Plant Stage in Turkish Bread Wheat (*Triticum aestivum* L.) Genotypes. XVI. Congress of The Federation of European Societies of Plant Biology (FESPB), FESPB Abstract book P07-012. 17-22 August, Tampere-Finland
21. Gozukirmizi,N., Temel,A., Senturk-Akfirat,F., Ertugrul,F., Yumurtaci,A., Aydin,Y., Talas-Ogras,T., Bolat,N., Yorgancilar,O., Belen,S., Yildirim,M., Cakmak,M., Ozdemir,E., Cetin,L., Mert,Z., Sipahi,H., Albustan,S., Akan,K., Dusunceli,F., Altinkut-Uncuoglu,A., 2007. Screening of Yr10 Wheat (*Triticum aestivum* L.) Yellow Rust (*Puccinia striiformis*) Resistance Gene In Bread Wheat Cultivars. 7th International Symposium in The Series Recent Advances in Plant Biotechnology: Impact on High Quality Plant Production. June 10-16, p:132, (Proceeding), High Tatras-Slovak Republic

▪ NATIONAL ARTICLES AND PAPERS

▪ Articles Published in National Journals

1. Sönmez,A.C.,Yüksel,S., Belen,S., Cakmak,M., Yıldırım,Y., Karaduman,Y., Akın,A., 2017. Kıraç Koşullarda Orta Anadolu ve Batı Geçit Bölgeleri İçin Geliştirilen Bazı Arpa (*Hordeum vulgare* L.) Hat ve Çeşitlerinin Tane Verim ve Bazı Kalite Unsurlarının İncelenmesi, Araştırma Makalesi, DOI : 10.18016/ksudobil.349245 KSÜ Doğa Bilimleri Dergisi, 20 (Özel Sayı), 258-262
2. Sönmez,A.C., Olgun,M., Yüksel,S., Belen,S., Yıldırım,Y., Çakmak,M., Karaduman,Y., Akın,A., Önder,O., 2020. Arpa (*Hordeum vulgare* L.) Islah Materyalinin Bazı Maltlık Kalite Özellikleri ile Bu Özellikler Arası İlişkilerin Belirlenmesi. Black Sea Journal of Agriculture, Cilt:3, sayı:2, 155-161.
3. Kılıç,H., Aktaş,H., Erdemci,İ., Yazar,S., Dönmez,E., Kaya,Y., Taner,S., Akçura,M., Öztürk,İ., Bolat,N., Çakmak,M., Yıldırım,M., Bayramoğlu,H.O., 2016. Kışlık ekmeçlik buğday (*Triticum aestivum* L.) genotiplerinin Diyarbakır şartlarında verim ve bazı kalite özellikleri yönünden değerlendirilmesi. Tr. Doğa ve Fen Dergisi. – Tr. J. Nature Sci 5(2): 11-16.
4. Karaduman,Y., Akın,A., Türkölmez,S., Tunca,Z.Ş., Belen,S., Çakmak,M., Yüksel,S., 2015. İleri Kademe Ekmeçlik Buğday Hatlarının Bazı Teknolojik Kalite Özelliklerinin Değerlendirilmesi. Tarla Bitkileri Merkez Araştırma Enstitüsü Dergisi, cilt:24, sayı:1,s: 24-29.



MUSTAFA CAKMAK

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5. Karaduman,Y., Akın,A., Türkölmez,S., Tunca,Z.Ş., Belen,S., Çakmak,M., Yüksel,S., 2015. İleri Kademe Ekmeklik Buğday Hatlarının Bazı Teknolojik Kalite Özelliklerinin Değerlendirilmesi. Tarla Bitkileri Merkez Araştırma Enstitüsü Dergisi, cilt:24, sayı:1,s: 24-29.
6. Yıldırım,M., Bolat,N., Çakmak,M., Belen,S., 2013. Türkiye Batı Geçit Bölgesi 2004- 2005 Ürün Yetiştirme Sezonu İleri Kademe Makarnalık Buğday Islah Çalışmaları. Gümüşhane Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Cilt 3, Sayı 2, Sayfa 85-90
7. Karaduman,Y., Bolat,N., Avcioglu,R., Cakmak,M., Yildirim,M., Belen,S., Akin,A., Yuksel,S., Senturk,S., Ercan,R., 2013. Eskisehir Transitional Zone Agricultural Research Institute studies of development of biscuit wheat 2002-2012. The journal of Ege University Faculty of Agriculture Special Issue-Volume I, s:95-100. ISSN 1018-8851

▪ **OTHER PUBLICATIONS**

▪ **Ph.D. Thesis, Master Thesis, Reports, Books etc.**

1. **Cakmak.M.**, 2010. Determination of relationships between yield, quality parameters and some phenological, physiological and plant characteristics after heading in bread wheat (*T.aestivum* L.) genotypes. Master Thesis. Selcuk University, Institute of Science Konya-Turkey



MUSTAFA ÇAKMAK

Agricultural Engineer



▪ Membership, Training, Course, Meeting, Congress, Symposium and Other Activities

1. Plant Breeding Course-I 2003 Ankara
2. Plant Breeding Course-II 2004 Ankara
3. Plant Breeding Course-III 2005 Ankara
4. Statistics and Experimental Techniques Course I. /2004-Istanbul
5. Statistics and Experimental Techniques Course II. /2005-Ankara
6. Statistics and Experimental Techniques Course III. /2006-Ankara
7. Evaluation of performance the IWWIP germplasm in Azerbaijan. 2007 May 12-17
8. Evaluation of performance the IWWIP germplasm in Georgia. 2007 May 18-19
9. International Winter Wheat Improvement Program, Traveling Workshop, 2007, Turkiye
10. National Cereal Symposium. 2008 June 2-5, Konya-Turkiye
11. Host Plant Resistance to Cereal Insect Pests. Aleppo/ CARDA, 2010 April 3-30.
12. International Winter Wheat Improvement Program, Traveling Workshop, Bulgaria, Romania 2011 May
13. International Plant Breeding Congress, 2013 10-14 November, Antalya.
14. 21th.Biennial International Plant Resistance to Insects Workshop, Marrakech-Morocco 2014 April 14-18
15. 2nd International Wheat Stripe Rust Symposium Regional Rust Research Center Izmir-Turkiye 2014 April 28-May 1