



TAGEM
R&D AND INNOVATION

BLACK SEA AGRICULTURAL RESEARCH
INSTITUTE / SAMSUN

DR. DEMET YILDIRIM

Agricultural Engineer (PhD)

EDUCATION

Assoc. prof

PhD Ondokuz Mayıs University
2014-2020 Dep. of Agri. Stru. and Irrigatin

MSc Ondokuz Mayıs University
2002-2005 Dep. of Agri. Stru. and Irrigatin

Bachelor's Degree Ondokuz Mayıs University
1996-2002 Fac. of Agri., Agri. Stru. and Irrigatin

LANGUAGE English KPDS 53.75

CAREER

2012- - Researcher – Black Sea Agricultural Research
Institute - SAMSUN

2010-2012 - Research Assistant - Ondokuz Mayıs University,
Graduate School of Natural and Applied Sciences - SAMSUN

ABOUT ME

She was born in 1983 in Çarşamba. In 2008, she graduated from Ondokuz Mayıs University, Faculty of Agriculture, department of Agricultural Structures and Irrigation. In 2005, she completed her master's degree in Ondokuz Mayıs University, Institute of Science and Technology, Agricultural Structures and Irrigation. Between 2010-2012, she worked as a Research Assistant at Ondokuz Mayıs University, Institute of Science and Technology. In 2020, she completed her doctorate in Ondokuz Mayıs University, Institute of Science and Technology, Department of Agricultural Structures and Irrigation

She continues his studies in the Agricultural Irrigation and Land Reclamation at the Black Sea Agricultural Research Institute.

CONTACT

Karadeniz Tarımsal Araştırma Enstitüsü
Çiftlik Mah. Atatürk Bulvarı No: 313
(Samsun - Ordu Karayolu 17. km),
Gelemen, Tekkeköy / SAMSUN
55300 TÜRKİYE

demet.yildirim@tarimorman.gov.tr

+90 362 256 05 14



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▪ **PROJECTS**

▪ **Projects Conducted**

1. Under Different Plant Communities of Soil Properties - OMÜ BAP – (2009-2010, Asistant Researcher)
2. Determination of Relationships Between Water Stress Index and Yield of Pepper in Greenhouse-- OMÜ BAP - (2009-2010, Asistant Researcher)
3. Determination of Groundwater Properties and Pollution Parameters and evaluation of Geographic Information in Çarşamba Plains - OMÜ BAP - (2010-2012, Asistant Researcher)
4. Using Micro Technology Water Harvesting Production Of Watermelon And Melon In Black Sea Region - TAGEM – (2014-2016, Leader)
5. Use of Micro-Catchment Water Harvesting Method in Watermelon and Melon Cultivation of Extension Project - EYDB – (2017-2019, Leader)
6. The Effect of Micro-Catchment Water Harvesting on Pepper Paste Cultivation in Semi-Arid Regions – OMÜ BAP – (2017-2019, Asistant Researcher).
7. Determination of Technical and Economic Performance of Drip Irrigation Systems in Bafra Plain – TAGEM – Yardımcı Araştırmacı (2017-2021, Asistant Researcher).
8. Investigation of the Usage Opportunities Drip Irrigation Systems in Rice in Bafra Plain Conditions – TAGEM – Yardımcı Araştırmacı (2018-2021, Asistant Researcher).

▪ **Ongoing Projects**

1. Determination of the Most Appropriate for Peach Cultivation Irrigation Program in Carsamba Plain – TAGEM-Proje Lideri (2018- Leader)
2. Determination of the Most Appropriate Periodic Restricted Irrigation Program for Pear Cultivation in Çarşamba Plain – TAGEM – Proje Lideri (2021- Leader)
3. Determination of the Effect of Complementary Irrigation on Yield and Quality Parameters in Hazelnut in Giresun and Samsun Conditions – TAGEM – (2017-2022, Asistant Researcher)
4. Towards a sustainable water use in Mediterranean rice-based agro-ecosystems - AB Prima Projesi- (2018-2022, Asistant Researcher).
5. Development of fiber plants as flax, hemp and nettle reinforced polymeric composite materials to use in irrigation system materials and drainage panels (2020- Asistant Researcher)
6. Determination of the Efficiencies of N and Si Fertilizers in Drip Irrigation Paddy Cultivation under Bafra Plain Ecological Conditions (2022- Asistan Researcher)
7. Development of Digital Irrigation Management System for Wheat and Soybean Crops Grown in Bafra Plain Conditions (2021- Asistan Researcher)



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▪ **PUBLICATIONS**

▪ **INTERNATIONAL ARTICLES AND PAPERS**

▪ **Articles Published in International Journals**

1. Yıldırım, D., Cemek, B., Unlukara, A., 2022. The effect of mulched ridge and furrow micro catchment water harvesting on red pepper yield and quality features in Bafra Plain of Northern Turkey. *Agricultural Water Management*. 262:107305. <https://doi.org/10.1016/j.agwat.2021.107305>.
2. Arslan, H., Taşan, M., Yıldırım, D., Köksal, E.S., Cemek, B., 2014. Predicting field capacity, wilting point, and the other physical properties of soils using hyperspectral reflectance spectroscopy: two different statistical approaches. *Environmental Monitoring and Assessment*. 186:5077-5088. DOI 10.1007/s10661-014-3761-2.

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

1. Yeşiloğlu Cevher, E., Yıldırım, D., Gurdil, G.A.K., 2022. Using artificial neural network application in modelling the mechanical properties of loading position and storage duration of pear fruit. 8th International Conference on Trends in Agricultural Engineering. September 20-23, 2022- Prague Czech Republic.
2. Yıldırım, D., Cemek, B., Ünlükara, A., 2022. Evaluation of the effect of ridge–furrow micro chactment water harvesting in red pepper plant height compare to soil water content, canopy, air and soil temperature by 3d model. 2. International and 15. National Congress on Agricultural Structures and Irrigation-ICASI 2022. May 12-15, 2022-Diyarbakır.
3. Cantürk, A., Yıldırım, D., Cemek, B., 2022. Modelling The Maximum, Minimum And Mean Temperature Performance Of Using Artificial Neural Network And Time Series Methods. 2. International and 15. National Congress on Agricultural Structures and Irrigation-ICASI 2022. May 12-15, 2022-Diyarbakır.
4. Cemek, B., Yıldırım, D., 2019. Evaluation of Thornthwaite Equation for Estimating Evapotranspiration in Samsun province in Northern Turkey. 6th Congress on Soil and Water Resources with International Participation. pp:104, November 12-14, Menemen-İzmir.
5. Cemek, B., Yıldırım, D., 2019. Forecast of Monthly Mean, Maximum and Minimum Temperature by Soft Computing Tecniques. 6th Congress on Soil and Water Resources with International Participation pp:139, November 12-14, Menemen-İzmir.
6. Yıldırım, D., Cemek, B., Mohamed, J.M., 2019. Modeling Climate Variable Using Time Series Analysis for Somalia. 9th International Symposium on Atmospheric Sciences. pp:882-892-İstanbul.
7. Yıldırım, D., Cemek, B., 2018. Suitable water harvesting systems according to regions in Turkey. Uluslararası Su ve Çevre Kongresi, pp:2228, March 22-24 2018 – Bursa
8. Yıldırım, D., Cemek B., 2018. Crop water stress index (CWSI) values of pepper plants under greenhouse conditions. The 2nd International UNIDOKAP Black Sea Symposium on BIODIVERSITY, pp:106-113, November 22-30 2018 – Samsun.
9. Yıldırım, D., Cemek, B., 2018. Evaluation of suitable rain water harvesting tecniques for middle black sea region. The 2nd International UNIDOKAP Black Sea Symposium on BIODIVERSITY, pp: 246-253, November 22-30 2018 – Samsun.



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10. Cemek, B., Küçüktopçu, E., Yıldırım, D., Arslan, H., 2018. Estimation of Bafra Kızılırmak Delta Water Level Using Artificial Neural Networks. International Water and Environmental Congress, pp:2380, March 22-24 2018 – Bursa.
11. Yıldırım, D., Cemek, B., Ünlükara, A., 2016. Evaluating the Soil Moisture Content through Different Interpolation Methods. 6th International Conference on Trends in Agricultural Engineering, 7-9 September 2016-Prague Czech Republic.
12. Yeşiloğlu, E., Yıldırım, D., Öztekin, Y.B., 2016. Effect of Loading Position and Storage Duration on the Mechanical Properties of Abate Fetel Pear Variety. 6th International Conference on Trends in Agricultural Engineering, 7-9 September 2016-Prague Czech Republic.
13. Yıldırım, D., Arslan, H., Cemek, B., 2015. Assessment of Spatial Distribution of Precipitation with Different Interpolation Methods for Yeşilirmak Catchment. 2nd International Conference on Sustainable Agriculture and Environment. I:273-278. 30 September- 3 October 2015-Konya.
14. Yıldırım, D., Cemek, B., 2013. Effects of different irrigation treatments on growth, yield and quality parameters of pepper under greenhouse conditions. Actual Problems of Science and Agriculture In The process of European İntegration Congress. 13-15 November 2013, 635.649:631.67:635.044 –Russia.

▪ **NATIONAL ARTICLES AND PAPERS**

▪ **Articles Published in National Journals**

1. Yıldırım, D., Cemek, B., Küçüktopçu, E., 2019. Estimation of daily evaporation using fuzzy artificial neural network (ANFIS) and multilayer artificial neural network system (ANN). Soil Water Journal. pp:24-31, DOI: 10.21657/topraksu.654778.
2. Arslan, H., Yıldırım, D., 2011. Water Quality Assessment of the Drainage Canals in Bafra Plain Using Multivariate Statistical Analysis, Journal of Agricultural Faculty of Gaziosmanpaşa, 28:2, 61-71-Tokat.
3. Arslan, H., Cemek, B., Demir, Y., Yıldırım, D., 2011. Determination of sea water intrusion with environmental isotopes, Reserch Journal of Agricultural Sciences, 4(2): 59-64.
4. Cemek, B., Çetin, S., Yıldırım, D., 2011. Livestock and poultry production, water consumption and water quality features, Reserch Journal of Agricultural Sciences 4 (1): 57-67.

▪ **National Papers, Seminars, etc.**

1. Yıldırım, D., Cemek, B., 2013. Evapotranspiration comparison with different models for greenhouse. III. National of Congress Soil and Water Resources, Page: 586-592. 22-24 October- Tokat
2. Cemek, B., Yıldırım, D., Kara, F., 2014. Assesment of spatial distribution of solar radiation with different enterpolation methods in black sea region. 12. National of Congress Cultural Teknique. 21-23. May 21-23. Mayıs
3. Yıldırım, D., 2012. Monthly and seasonal crop water consumption of changeing analyzing for Samsun province, II. National of Congress Irrigation and Agricultural Structure, Page: 543-548 – İzmir.



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4. Arslan, H., Cemek, B., Güler, M., Yıldırım, D., 2012. Assesment of spatial distribution of sodium persentage (ESP) with different enterpolation methods, II. National of Congress Irrigation and Agricultural Structure, Page: 505-512, İzmir
5. Arslan, H., Cemek, B., Demir, Y., Yıldırım, D., 2012. Evaluation of seawater intrusion with geostatistical methods in Bafra plain, II. National of Congress Irrigation and Agricultural Structure, Page: 439-446, İzmir.
6. Application of computational fluid dynamics (CFD) In the planning of ventilation systems in plant production structures (Greenhouses) (Graduate Seminar - Ondokuz Mayıs University, Graduate School of Natural and Applied Sciences, Department of Agricultural Sutrustructure and Irrigatiton, 2010)
7. Determination and comparison of different interpolation methods and artificial neural networks in reference plant water consumption (ET_0) (Doctoral Seminar - Ondokuz Mayıs University, Graduate School of Natural and Applied Sciences, Department of Agricultural Sutrustructure and Irrigatiton, 2015).

▪ **OTHER PUBLICATIONS**

1. Çetin Ö., Sönmez B., Küçükcoşkun Ş., Bilgen Karaca G., Gönen E., Çolak Bozkurt Y., Özfıdaner M., Baydar A., Çebi Ü., Özer S., Öztürk O., Aydın B. , Dinç N., Aydınşakir K., Özbek Ö., Tunç T., Evren S., Uygan D., Fidantemiz Y.F., Cantürk A., Taşan M., Yıldırım D., Avağ K., Güngör B., Dündar MA., Demirci S., Özçelik S., Gündüz M., Şen S., Nacar A.S., Taş Anlağan M., Doğan P., Karabat K., Afacan H., Ölmez Ataol H., 2022. Deficit Irrigation Guide for Crops Grown in Turkey. Ministry of Agriculture and Forestry, General Directorate of Agricultural Research and Policies. Ankara Turkey.

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

1. The effect of ridge-furrow micro catchment water harvesting in red pepper yield and quality features (Doctoral Thesis - Ondokuz Mayıs University, Graduate School of Natural and Applied Sciences, Department of Agricultural Sutrustructure and Irrigatiton, 2020).
2. Determination of the yield relationship with the plant water stress index of pepper in greenhouse conditions (Yüksek Lisans Tezi - Ondokuz Mayıs University, Graduate School of Natural and Applied Sciences, Department of Agricultural Sutrustructure and Irrigatiton, 2012).

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

1. Workshop on the Effects of Climate Change on Agriculture, 5-7 Kasım 2018, İzmir. (Spaeker)
2. 5th International Course on Watershed Hydrology and Soil Conservation. Water Harvesting Case Study (Educationist)
3. 7th International Course on Sustainable Management of Soil and Water Resources. Water Harvesting Case Study (Educationist)
4. 4th International Course on Watershed Hydrology and Soil Conservation. Water Harvesting Case Study (Educationist)
5. 6th International Course on Sustainable Management of Soil and Water Resources. Water Harvesting Case Study (Educationist)
6. 12th Session of the conference of the parties to the united national convention to combat desertification (UNCCD COP 12)-2015, Ankara (Participant)



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- 7.** Water Harvest Training in Arid and Semi-Arid Areas with International Participation, 28-29 November 2014, Şanlıurfa (Participant)
- 8.** Statistical II Training, 24-28 November 2014, Ankara (Participant)
- 9.** Statistical I Training 2013, Ankara (Participant)
- 10.** Water Management Project Preparation Training 2012, Şanlıurfa