



TAGEM
R&D AND INNOVATION

BLACK SEA AGRICULTURAL RESEARCH
INSTITUTE / SAMSUN

DR. MURAT BİROL

Agricultural Engineer (PhD)

EDUCATION

- **Assoc. prof**
 - **PhD** 2013-2020 Gaziosmanpasa University
G. School of Natural and Applied Sc.
 - **MSc** 2008-2011 Gaziosmanpasa University
G. School of Natural and Applied Sc.
 - **Bachelor's Degree** 2004-2008 Gaziosmanpasa University
Soil Science and Plant Nutrition
- LANGUAGE** English (YÖK Dil 66.25)

CAREER

- 2011- - Researcher - Black Sea Agricultural Research
Institute - SAMSUN
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ABOUT ME

He was born in 1983 in Antalya. He graduated from Antalya High School in 2001. Camping and playing music are among his hobbies.

He works at the Soil Water Resources Department, Soil and Plant Nutrition Unit at the Black Sea Agricultural Research Institute. He works on pyrolysis and Biochar in organic wastes.

CONTACT

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▪ **PROJECTS**

▪ **Projects Conducted**

1. Determination of the effect of biochar application to yield of rotation plants some of soil physical chemical and biological properties - TAGEM (2015- 2020) - Project Leader
2. Determination of Plant Nutrition Status and Potential Toxic Element Contents of Bartın and Zonguldak Regions Agricultural Soils, Preparation of Soil Data Base and Soil Maps - TAGEM (2016-2018) - Assistant Researcher
3. Determination of Organic Agriculture Basins in DOKAP Region - Eastern Black Sea Project Regional Development Administration – DOKAP (2016-2018) - Assistant Researcher
4. Determination of important physical and chemical properties of soils cultivated with different plants in terms of irrigation and drainage and estimation of these parameters through artificial intelligence techniques: A Case for Bafra Plain Right Coast - TUBITAK 1001 (2017-2020) Assistant Researcher
5. Evaluation of the Technical Performances of Some Drip Irrigation Systems used in Bafra Plain Province - TAGEM (2017-2021) - Assistant Researcher
6. Investigation of the Usage Opportunities Drip Irrigation Systems in Rice Growing in Bafra Plain Conditions - TAGEM (2019-2021) - Assistant Researcher

▪ **Ongoing Projects**

1. Characterization of Biochar Produced from Some Agricultural Residues and Its Effects on Soil Quality- TAGEM (2022- Continuing) - Project Leader
2. The Effect of Supplementary Irrigation on Yield and Quality Parameters of Hazelnut Grown in Samsun and Giresun Conditions - TAGEM (2018 - Continuing) Assistant Researcher
3. Determining The Effects Of Biochars Enriched With Phosphoric Acid on Yields Of Wheat and Corn and Soil Quality - TAGEM (2018 – Continuing) - Assistant Researcher
4. Towards a sustainable water use in Mediterranean rice-based agro-ecosystems. AB Prima Project (2018- Continuing) - Assistant Researcher
5. Determination of agricultural land use planning with GIS modeling A Case for Vezirköprü TAGEM (2019 - Continuing) - Assistant Researcher
6. Estimating Soil Organic Carbon and Related Physical Soil Degradation Indicators under Future Climate Conditions - TAGEM (2022 - Continuing) Assistant Researcher
7. Quality Assessment of Bafra Plain Left Coast Soils in Terms of Sustainable Land Management - TAGEM – (2022 - Continuing) - Assistant Researcher
8. Determination of the Efficiencies of Nitrogen and Silicon Applications in Drip Irrigation Paddy Cultivation in Bafra Plain Ecological Conditions - TAGEM - (2023 - Continuing) - Assistant Researcher



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▪ **PUBLICATIONS**

▪ **INTERNATIONAL ARTICLES AND PAPERS**

▪ **Articles Published in International Journals**

1. **Bırol, M.** & Günal, H. (2022). Field scale variability in soil properties and silage corn yield. *Soil Studies*, 11 (1) , 27-34 . DOI: 10.21657/soilst.1143238
2. Özgöz, E., Günal, H., Acir, N., Gökmen, F., **Bırol, M.**, Budak, M., (2012). Soil Quality and Spatial Variability Assessment of Land Use Effects in a Typic Haplustoll. *Journal of Land Degradation and Development*. DOI: 10.1002/ldr.1126

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

1. **Bırol, M.**, Dengiz, O., Öztürk, E., (2021) Physico-chemical and morphological properties of soils in Black Sea Agricultural Research Institute . International Congress of Engineering and Natural Sciences Studies. Ankara, Turkey, pp:494-507.
2. **Bırol, M.**, Günal, E., (2021) Agricultural Use of Wood Vinegar. 3th International Conference on Food, Agriculture and Veterinary. İzmir, Turkey, Abstract Book, pp:52-53
3. **Bırol, M.**, Dengiz, O., (2019) Comparison of Enrichment Factor of Heavy Metal Concentration in Micro Catchments Located on Çarşamba Delta Plain and Upland Positions, In: Proceedings of the International Soil Congress, Ankara, Turkey, pp. 434-440
4. Saygın, F., Dengiz, O., İç, S., **Bırol, M.**, (2019) Variation of Aggregate Stability and Mean Weight Diameter of Soils Developed on North-western and South-eastern Toposequence, In: Proceedings of the International Soil Congress, Ankara, Turkey, pp. 40-46
5. Bayraklı, B., Dengiz, O., Öztürk, E., İç, S., Erkoçak, A., Kesim, E., Kars, N., **Bırol, M.**, (2018). Identification of suitable micro catchments for organic agriculture using GIS and remote sensing in east part of the Black Sea region. 10th International Congress on Environment and Soil Resources Conservation. 17-19 October. Almaty, Kazakhstan.
6. Günal, H, Önen, H., Acir, N., Budak, M., **Bırol, M.**, (2011). Saline Soil Formation within a Lacustrine Environment In Mid-Anatolia of Turkey. *Fundamental for Life: Soil, Crop, & Environmental Sciences*, Oct. 16-19, 2011, San Antonio, TX.130-20.

▪ **NATIONAL ARTICLES AND PAPERS**

▪ **Articles Published in National Journals**

1. **Bırol, M.** & Günal, E. (2022). Use of Wood Vinegar in Agriculture. *Bilecik Şeyh Edebali University Journal of Science*, 9 (1) , 596-608.

▪ **National Papers, Seminars, etc.**

1. **Bırol, M.**, Günal, H., Erdem, H., (2017). The Effects of Two Different Biochar Types on Biological Soil Properties in a Clay Soil. 5th Congress on Soil and Water Resources with International Participation, (2017) Kırklareli Abstract Book, p:54.



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2. Polat A., Acir N., Günal A, Matur E., Budak M., **Bırol, M.** Importance of Field Scale Variabilities of Soil Characteristics in terms of agricultural practices GAP Agrucultral Congress Apr. 28- May. 1,2015 Şanlıurfa p:682-686

▪ **OTHER PUBLICATIONS**

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

1. **Bırol, M.** & Günal, H., (2022). Use of Biochar in Agricultural Production, Changing Structures and Expectations in Agriculture. Chapter: 10, pp: 243-278. ISBN: 978-625-8323-16-0. IKSAD Publishing House, Ankara, Turkey.
2. **Bırol, M.** & Günal, H., (2022). Contribution of Biochar to the Delivery of Soil Based Ecosystem Services, Changing Structures and Expectations in Agriculture. Chapter: 11, P: 279-309. ISBN: 978-625-8323-16-0. Iksad Publishing House, Ankara, Turkey.
3. Determining The Effects Of Two Different Biochars On Crop Yields And Soil Quality. PhD Thesis. Gaziosmanpasa University, Graduate School Of Science, Soil Science And Plant Nutrition Department (2020)
4. Geostatistical Modelling of Field Scale Variability in Soil Properties and Silage Corn Yield. MsC Thesis. Gaziosmanpasa University, Graduate School Of Science, Soil Science And Plant Nutrition Department (2011)
5. Soil Compaction and effect of Land Use, Bachelor's Degree Thesis. Faculty of Agriculture, Soil Science and Plant Nutrition Department (2008)

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