



RESUME- December , 2020

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ADDRESS :

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LANGUAGES:

- Arabic
- English

EDUCATION:

- **B.Sc.** 1994 Jordan University of Science and Technology
MAJOR: Animal Science.
- **M.Sc.** 2001 Jordan University of Science and Technology
MAJOR: Plant Production

Thesis title: Impact of alfalfa (*Medicago sativa*) as a smother crop on corn (*Zizania mays* L.) and weeds.

Advisor: Dr. Hani Ghosheh

- **Ph.D.** 2005. New Mexico State University (USA)
MAJOR: Agronomy (Plant physiology)

Emphasis: **Environmental stress physiology of plants**

Dissertation title: Ecotypic variation in drought and salinity responses of bigtooth maples.

Advisor: Dr. Rolston St. Hilaire

Dissertation projects:

- 1- Bigtooth maples exposed to asynchronous cyclic irrigation show provenance differences in drought adaptation mechanisms.
- 2- Water relations, plant development, and carbon isotope discrimination of drought-stressed bigtooth maples.
- 3- Salinity responses of bigtooth maples native to arid environments.

**A BRIEF ABOUT
MY PhD WORK:**

I have done and passed my dissertation defense on October 20 2005, from the Agronomy and Horticulture Department at New Mexico State University (NMSU) in the USA. My dissertation research project titled “**Ecotypic variation in drought and salinity responses of bigtooth maples**”. My goal was to characterize and compare drought and salinity responses of bigtooth maples originating in the southwestern states of New Mexico, Texas, Utah and Arizona. I studied the effect of environmental stresses on the plant physiological characteristics.

**ONGOING
RESEARCHS:**

- Effect of **Titanium dioxide nanoparticles** on the physiological responses of spinach under salt stress (will be published soon)
- Effect of **Silver nanoparticles** on the physiological responses of spinach under salt stress (will be published soon)
- Alleviation of salinity-induced damage on Eggplant (*Solanum melongena* L.) by **halophilic bacteria isolated from the Dead Sea** (will be published soon)
- Evaluation of *Jatropha curcas* (Linn.) optimal growth under different environmental conditions. (will be published soon)
- Evaluation of different tomato cultivars under **drought stress, salinity** and olive mill wastes (will be published soon)
- Evaluation of eggplants *Solanum melongena* under drought stress, salinity olive mill wastes (will be published soon)
- Evaluation of vetch *Vicia orobus* under **deficit irrigation** (will be published soon)
- Heavy metals and plant physiological responses

EXPERIENCE:

- Research assistant:
- Parasitology research laboratory, Jordan University of Science and Technology. 1996-1998.
- Research assistant and Teaching assistant at New Mexico State University, USA, Jan 2002- Dec 2005. I assisted in teaching:
- Graduate course BIOL/AGRO/ HORT 533 (Environmental physiology of plants).
- HORT 210 (Ornamental plants).
- HORT 307 (landscape design).
- HORT 308 (landscape construction).
- Associate professor at the Hashemite University, department of biology and biotechnology. 2006-2019, 2-11-2020 **to date**
- Associate professor at Prince El-Hassan bin Talal Faculty for Arid Lands, Department of natural resources in the arid lands, 06-01-2019 to 2-11-2020

TEACHING

I teach the following courses at the Hashemite university:

Graduate courses:

- Environmental physiology of plants
- Advanced plant physiology
- Graduate Seminar

Undergraduate courses:

Department of biology and biotechnology

- Plant physiology
- Plant Biology
- Principles of plant sciences
- Biotechnology
- General biology (1)
- General biology (2)
- Seminar for undergraduate

- Seminar for graduate
- Special topics

Department of natural resources in the arid lands

- Arid Lands Biodiversity and Vulnerability
- Desert Medicinal Plants
- Desert Agricultural Systems
- Farming Services and Extension

EXAMINATION

COMMITTEE:

-Supervisor of graduate student:

- Rama Hesham Abdul Rahman Khawatmi with thesis title: Effect of Titanium dioxide nanoparticles on the physiological responses of spinach under salt stress, 2019
- Sabreen Ahmad Othman Othman with thesis title: Effect of Silver nanoparticles on the physiological responses of spinach under salt stress, 2019
- Haifa Raba'a with thesis title: The effect of Halophilic bacteria isolated from the Dead Sea on the physiological responses of Eggplants (*Solanum melongena* L.) under salinity stress, 2019
- Ruba Malek Saleh AL-Mohusaien with thesis title: Physiological responses of olive trees under deficit irrigation and olive mill wastewater irrigation 2018
- Suzan A. A. Shahrestani with thesis title: Physiological responses of three olive cultivars under saline conditions, 2011
- Ala' F. Al-afaeshat with thesis title: Growth and water relation of drought–stressed Irhaba tomato as compared with Amani and GS-12 tomato cultivars, 2011
- **Member in the Examination committee of many master students (Examples):**
- Afnan Basem Masarwah, with thesis title: Chemical composition of essential oil, in vitro antioxidant and antibacterial activities of *cleome arabica* L. growing in Jordan. Jordan University of Science and Technology, November, 2020

- Bayan saleh abu Sailik, with thesis title: The antinociceptive and inflammatory activities of *Laurus nobilis* extracts in rodents. at the Hashemite University, April, 2017.
- Rasha Kayed, with thesis title: The antinociceptive and inflammatory activities of *Gundelia tournefortii* extracts in animal modle. at the Hashemite University, at the Hashemite University, March, 2017.
- Emtethal Abdallameed AlKhataibeh, at the Hashemite University, 2015.
- A member in the Examination committee of a master student kholoud Alqadoumi at the Hashemite University, 2010.
- Iman Yousef Rida Hamdan, with thesis title: Examination of the flavor pathway enzymes of olive oil fruits from different locations in Jordan. at the Hashemite University, 2009.

**JOURNAL
REVIEWER:**

Referee for many peer reviewed journals

PUBLICATIONS

A. Refereed Journal Articles

- Abdul Latief A. Al-Ghzawi, Zakaria I. Al-Ajlouni, Khaldoun O. Al San, **Emad Y Bsoul**, Iyad Musallam, Yahya Bani Khalaf, Nawal Al-Hajaj, Abdel Rahman Al-Tawaha, Yaser Aldwairi and Hala Al-Saqqar. 2019. Yield stability and adaptation of four spring barley (*Hordeum vulgare* l.) cultivars under rain-fed conditions. RESEARCH ON CROPS journal
- R. Alkhatib, B. ALkhatib, L. AL-Eitan, N. Abdo, M. Tadros, and **E. Bsoul**. 2018. **Physio-anatomical responses of tobacco under caffeine stress** Photosynthetica Photosynthetica (2018) 56
- Al-Hammouri, A. A., J. Ibbini, **E. Bsoul** and S. Sanogo, 2017. Effect of salinity on recovery of *Rhizoctonia solani* from infected tomato (*Solanum lycopersicon* Mill). Bulg. J. Agric. Sci., 23 (5): 757–761.
- Bsoul E. Y.**, Shahrestani A., and Saleh M. Shdiefat. 2016. Growth, nutrient aquesition, and physiological responses of three olive cultivars to induced salt stress. Journal of Plant Nutrition, 40:14, 1955-1968.

- Bsoul E**, Gioannini R., and R. St. Hilaire. 2016. Bigtooth Maples from Three Geographically Different Origins Endure Root Zone Salinity. *J. Environ. Hort.* 34(4):111-117.
- Wedyan M., Al Harahsheh A., **Bsoul E.**, Qnais E., and Muhaidat R. 2016. Cd and Fe concentrations of surface water of Al Zarqa Channelized Stream, Jordan. *Polish Journal of Environmental Studies. Pol. J. Environ. Stud.* Vol. 25, No. 6 (2016), 2617-2521
- Al-Ghzawi A., Juma'a A. K. Al-Rawashdeh I. M, Al-Kofahi S. D, and **Bsoul E. Y.** 2016. Diversity of herbaceous plant communities and *Artemisia herba-alba* Asso. at different governorates' open-lands in Jordan. 2016. *Bulgarian Journal of Agricultural Science.* 22 (No 6) 2016, 897–905.
- Bsoul E. Y.**, Jaradat S., Al-Kofahi S., Al-Hammouri A., and Alkhatib R. 2016. Growth, water relation and physiological responses of three eggplant cultivars under different salinity levels. *Jordan journal of biological science.* 9: 123 – 130.
- Belal S. Obeidat, Kamel Z. Mahmouda, Jumana A. Maswadeh, and **Emad Y. Bsoul.** 2016. Effects of feeding *Atriplex halimus* L. on growth performance and carcass characteristics of fattening Awassi lambs. *Small Rumin. Res.*, 91: 29-38
- Bsoul E.Y**, Al-Afaeshat A, and Qaryouti M. 2016. Growth, water relation and physiological responses of drought stressed Irhaba tomato landrace as compared with Amani and GS-12 cultivars. *Journal of Food, Agriculture & Environment*, 14: 78-84.
- Muhaidat R., Al-Qudah, M., Samir O., Jacob H., Hussein, E, Al-Tarawneh, I., **Bsoul E**, and Abu Orabi, S. 2015. Phytochemical investigation and in vitro antibacterial activity of essential oils from *Cleome droserifolia* (Forssk.) Delile and *C. trinervia* Fresen.(Cleomaceae) *South African Journal of Botany* 99: 21–28
- Alkhatib, R., **Bsoul E.**, Douglas A. Blom, Kajal Ghoshroy, Rebecca Creamer, and Soumitra Ghoshroy. 2013. Microscopic Analysis of Lead Accumulation in Tobacco (*Nicotiana tabacum* var. Turkish) Roots and Leaves. *Journal of Microscopy and Ultrastructure* 1(2013) 57–62.
- Alghzawi, A. A., **Bsoul E.**, F. Aukour, Z. Al-Ajlouni, M. Al-Azzam, and M. Ajlouni. 2011. Genetic Variation For Quantitative Traits In Jordan Lentil Landraces. *Adv. Environ. Biol.*, 5(11): 3676-3680

Bsoul, E., R. St. Hilaire, and D. VanLeeuwen. 2007. Bigtooth maples from selected provenances effectively endure deficit irrigation. *Hortscience*: 42:1167-1173.

Bsoul, E., R. St. Hilaire, and D. VanLeeuwen. 2006. Bigtooth maples exposed to asynchronous cyclic irrigation show provenance differences in drought adaptation mechanisms. *J. Amer. Soc. Hort. Sci.* 131:459-468.

VanLeeuwen, D., R. St. Hilaire and **E. Bsoul.** 2006. Statistical analysis of mixed model factorial experiment with missing factor combinations: The case of asynchronous cyclic drought data. *J. Amer. Soc. Hort. Sci.* 131: 201-208.

Ghosheh, H. Z., **Bsoul E. Y.,** and Abdullah A. Y. 2004. Utilization of Alfalfa (*Medicago sativa* L.) as a Smother Crop in Field Corn (*Zea mays* L.). *Journal of Sustainable Agriculture* 25(1): 5-17.

B. Selected Research Impacts:

1. Proposed a new way to analyze asynchronous drought data.

VanLeeuwen, D., R. St. Hilaire, and **E. Bsoul.** 2006. Statistical analysis of mixed model factorial experiment with missing factor combinations: The case of asynchronous cyclic drought data. *J. Amer. Soc. Hort. Sci.* 131: 201-208.

At the end of June 2006, this paper was the third most accessed in this journal.

2. Determined that significant provenances differences in drought responses occur in bigtooth maples indigenous to a wide geographic range.

Bsoul, E., R. St. Hilaire and D. VanLeeuwen. 2006. Bigtooth maples exposed to asynchronous cyclic irrigation show provenance differences in drought adaptation mechanisms. *J. Amer. Soc. Hort. Sci.* 131:459-468.

C. Symposia Proceedings

Obeidat, B. S., C. A. Löest, P. J. Defoor, J. E. Sawyer, V. A. Munn, and **E. Y. Bsoul.** 2003. Effects of corn flake weight on nutrient intake and retention by finishing heifers. *Proc. West. Sec. Am. Soc. Anim. Sci.* 54:375-377.

St. Hilaire, R., **E. Bsoul,** and C. Bowen-O'Connor. 2005. Ecophysiology and micropropagation of bigtooth maples: Proceedings of the Metropolitan Tree Improvement Alliance Symposium: Increasing Tree Diversity for Sustainable Urban Forests, June 19-21, 2004, Lisle, Illinois.
<http://www.ces.ncsu.edu/fletcher/programs/nursery/metria/metria13/hilaire/index.html>, accessed Mar. 8, 2005

D. Published Abstracts

Bsoul, E. and R. St. Hilaire. 2007. Bigtooth maples from selected provenances can cope with short-term root zone salinity. HortScience 42: 993.

Bsoul, E. and R. St. Hilaire. 2003. Drought tolerance determined for bigtooth maples indigenous to the Southwest. HortScience 38: 811-812.

Bsoul, E. Y., and St. Hilaire, R. 2004. Water relations, Growth, and Carbon Isotope Discrimination of Drought-Stressed Bigtooth Maples Indigenous to New Mexico, Texas, and Utah. HortScience. 39:771

CONFERENCE:

2005

- 10th Xeriscape conference, Albuquerque, New Mexico, USA

2004

- American Society for Horticultural Science annual conference, USA, Austin, Texas, USA.

2003

- American Society for Horticultural Science Centennial conference, USA, Providence, Rhode Island, USA.