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|  | | ***CURRICULUM VITAE*** | |
|  | | **Benjamin Torabi**  *work address:*  Agronomy Group,  Gorgan University of Agricultural Sciences and Natural Resources,  Gorgan 49138-15739,  Iran  Email: ben\_torabi@yahoo.com  Global Yield Gap Atlas: <http://www.yieldgap.org/iran> | |
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|  | | **EDUCATIONAL BACKGROUND** | |
| * B.S., ‏1997-2001; Agronomy and Plant Breeding, 3.5 years,   Dept. of Agronomy and Plant Breeding, University of Mazandaran, Sari, Iran   * M.S., 2001-2004; Agronomy, 3 years with thesis,   Dept. of Agronomy and Plant Breeding, Gorgan University of Agricultural Sciences, Gorgan, Iran  ***Thesis:*** Predicting phenological development in chickpea (*Cicer arietinum* L.)   * Ph.D., 2006-2011; Agronomy, 5 years with thesis,   Dept. of Agronomy and Plant Breeding, Gorgan University of Agricultural Sciences, Gorgan, Iran  ***Thesis:*** Analyzing the wheat yield constraints in Gorgan with a simulation model and analytical hierarchy process (AHP) approach | | | |
|  | | **RESEARCH INTERESTS** | |
|  | | Data analysis in agricultural field  Simulation of crops and cropping systems  Climate change and crop production | |
|  | **RESEARCH ACCOMPLISHMENTS** |
| 1. Atlas of yield gap and production potential for major crops in Iran under current and future climate conditions (National Project) 2. Analysis of yield constraints in wheat production (Regional Project) 3. Parameterization and evaluation of simulation models, especially SSM-iCrop model 4. Quantifying growth, development and yield formation in chickpea and safflower in response to environmental conditions, genotype and management practices 5. Past changes in climate and the impact of future climate change on crop production (National Project) | |
|  | **TEACHING EXPERIENCES** |
| * Introductory Statistics * Advanced Statistical Methods * Experimental Designs in Agriculture * Using the SAS Software in Statistical Analyses * Agronomy * Crop Modeling * Plant Production Ecology * Principles of Agronomy * Stress and Stress Coping in Cultivated Plants * Climate Change and Plant Production | |
|  | **SELECTED JOURNAL PAPERS** |
| 1. Soltani, A., **Torabi, B.,** Zeinali, E., Sarparast, R. 2004. Response of chickpea to photoperiod as a qualitative long-day plant. Asian J. Plant Sci. 6: 705-708. 2. Soltani, A., **Torabi, B.,** Zarei, H. 2005. Modeling crop yield using a modified harvest index-based approach: application in chickpea. Field Crops Res. 91: 273-285. 3. Soltani, A., Hammer, G.L., **Torabi, B.,** Robertson, M.J., Zeinali, E. 2006. Modeling chickpea growth and development: phenological development. Field Crops Res. 99: 1-13. 4. Soltani, A., Robertson, M.J. **Torabi, B.,** Yousefi-Daz, M., Sarparast, R. 2006. Modeling seedling emergence in chickpea as influenced by temperature and sowing depth. Agric. For. Meteorol. 138: 156-167. 5. **Torabi, B.,** Soltani, A., Galeshi, S., Zeinali, E. 2011. Assessment of yield gap due to nitrogen management in wheat. Aust. J. Crop Sci. 5(7): 879-884. 6. **Torabi, B.,** Attarzadeh, M., Soltani, A. 2013. Germination Response to Temperature in Different Saffower (*Carthamus tinctorius*) Cultivars. Seed Technol. 35(1): 47-59. 7. **Torabi, B.,** Adibniya, M., Rahimi, A. 2015. Seedling emergence response to temperature in safflower: measurements and modeling. Int. J. Plant Prod. 9(3): 393-314. 8. **Torabi, B.,** Soltani, E., Archontoulis, S.V., Rabii, A. 2016. Temperature and water potential effects on *Carthamus tinctorius* L. seed germination: measurements and modeling using hydrothermal and multiplicative approaches. Braz. J. Bot. Online publication date. 39(2): 427-436. DOI 10.1007/s40415-015-0243-x. 9. Kheyri, N., Ajam Norouzi, H., Mobasser, H.R., **Torabi, B**. 2018. Effect of different resources and methods of silicon and zinc application on agronomic traits, nutrient uptake and grain yield of rice (*Oryza sativa* L.). Applied Ecology and Environmental Research. 16 (5): 5781-5798. 10. Malek, M., Ghaderi-Far, F., **Torabi, B.,** Sadeghipour, H.R., Hay, F.R. 2019. The influence of seed priming on storability of rapeseed (*Brassica napus*) seeds. Seed Science and Technology, 47, 1, 87-92. 11. Kheyri, N., Ajam Norouzi, H., Mobasser, H.R., **Torabi, B.** 2019. Effects of silicon and zinc nanoparticles on growth, yield, and biochemical characteristics of rice. Agron. J. 111:1-7. 12. **Torabi, B.,** Archontoulis, S.V., Hoogenboom, G. 2019. A New function for prediction of biological processes response to temperature. Int. J. Plant Prod. <https://doi.org/10.1007/s42106-019-00063-7>. 13. Zaferanieh, M., Mahdavi, B., **Torabi, B.** 2020. Effect of temperature and water potential on Alyssum homolocarpum seed germination: Quantification of the cardinal temperatures and using hydro thermal time. South African Journal of Botany. 131: 259-266. 14. Dadrasi, A., **Torabi, B.,** Rahimi, A., Soltani, A., Zeinali, E. 2020. Parameterization and evaluation of a simple simulation model (SSM-iCrop2) for potato (*Solanum tuberosum* L.) growth and yield in Iran. Potato Res. DOI: 10.1007/s11540-020-09456-y 15. Soltani, A., Alimagham, S.M., Nehbandani, A., **Torabi, B.,** Zeinali, E., Zand, E., Vadez, V., van Loon, M.P., van Ittersum, M.K. 2020. Future food self-sufficiency in Iran: A model-based analysis. Global Food Security. 24: 100351. <https://doi.org/10.1016/j.gfs.2020.100351> 16. **Torabi, B.,** Adibniya, M. Rahimi, A, Azari, A. 2020. Modeling flowering response to temperature and photoperiod in safflower. Industrial Crops and Products. 151: 112474. 17. Soltani, A., Alimagham, S.M., Nehbandani, A., **Torabi, B.,** Zeinali, E., Dadrasi, A., Zand, E., Ghassemi, S., Pourshirazi, S., Alasti, O., Hosseini, R.S., Zahed, M., Arabameri, R., Mohammadzadeh, Z., Rahban, S., Kamari, H., Fayazi, H., Mohammadi, S., Keramat, S., Vadez, V., van Ittersum, M.K., Sinclair, T.R. 2020. SSM-iCrop2: A simple model for diverse crop species over large areas. Agricultural Systems. 182. 102855. 18. Soltani, A., Alimagham, S.M., Nehbandani, A., **Torabi, B.,** Zeinali, E., Zand, E., Ghassemi, S., Vadez, V., van Ittersum, M.K., Sinclair, T.R. 2020. Modeling plant production at country level as affected by availability and productivity of land and water. Agricultural Systems. 83: 102859 19. **Torabi, B.,** Soltani, A., Galeshi, S., Zeinali, E. 2012. Analysing wheat yield constraints in Gorgan. Journal of Crop Production. 4 (4): 1-17. *[in Persian]*. 20. **Torabi, B.,** Soltani, A., 2013. A simple model for predicting grain yield of maize single cross hybrid. Journal of Crop Production and Processing. 7, 47-57. *[in Persian]*. 21. **Torabi, B.,** Soltani, A., Galeshi, S., Zeinali, E. 2013. Assessment of effect of irrigation regime on wheat yield gap in Gorgan region. Journal of Plant Production. 20 (2), 73-93. *[in Persian]*. 22. **Torabi, B.,** Soltani, A., Galeshi, S., Zeinali, E., Kazemi-Korgehei, M. 2013. Ranking factors causing the wheat yield gap in Gorgan. Journal of Crop Production. 6 (1): 171-189. *[in Persian]*. 23. **Torabi, B.,** Soltani, A., 2013. Assessment of nitrogen fertilizing of wheat farms in Gorgan region. Journal of Crop Production. 6 (4): 19-32. *[in Persian]*. 24. **Torabi, B.,** Soltani, A., Galeshi, S., Zeinali, E. 2015. Balance of N, P and K Nutrients in Different Wheat Farms in Gorgan. Plant Production Technology. 15 (1), 47-57. *[in Persian]*. 25. **Torabi, B.,** Dastfali-Nejad, N., Rahimi, A., Soltani, A. 2015. Assessing the relationship between leaf area and some vegetative characteristics in safflower. Journal of Plant Ecophysiology, 23, 165-175. *[in Persian]*. 26. Soltani, E., Soltani, A., Mohamadi, N., **Torabi, B.,** Zeinali, E. 2015. Estimation of plant parameters of QUEFTS model for optimization of NPK nutrition in wheat. Journal of Crop Production. 8 (3), 41-62. [in Persian]. 27. Bagheri, V., **Torabi. B**. 2015. A simple model to simulate the growth, development and yield of faba bean in Golestan province. Journal of Crop Production. 8 (2): 133-152. *[in Persian]*. 28. Hajarpoor, A., Soltani, A., **Torabi, B.** 2016. Using boundary line analysis in yield gap studies: A case study of wheat in Gorgan. Journal of Crop Production. 4 (8), 183-201. *[in Persian]*. 29. Masoumipour, A., **Torabi, B.,** Rahimi, A. 2016. Evaluation of extinction coefficient and radiation use efficiency in different safflower under different levels of nitrogen fertilizer. Journal of Crop Production. 9 (3), 67-86. *[in Persian]*. 30. **Torabi, B.,** Khatib, F., Rahimi, A. 2017. Assessing some of growth indices in safflower using regression analysis. Iranian Journal of Field Crops Research. 14 (4), 651-655. *[in Persian]*. 31. Dadrasi, V., **Torabi, B.** 2017. Predicting corn growth and yield in Hamadan. Iranian Journal of Field Crop Science. 47 (4), 595-610. *[in Persian]*. 32. Mansouri-Rad, A., Nakhzari-Moghadam, A., Soltani, A., Rahemi-karizaki, A., **Torabi, B.** 2017. Identifying soybean yield-limiting factors by using Comparative Performance Analysis (Case study: Golestan province – Kalaleh). Crops Improvement. 19 (4), 1033-1046. *[in Persian]*. 33. Dadrasi, V., **Torabi, B.,** Ghasemi-Maham, S. 2018. Modeling growth and yield of safflower in Isfahan. Journal of Plant Ecophysiology. 32, 161-176. *[in Persian]*. 34. Siahmarguee, A., **Torabi, B.,** Sohrabi-Rad, E.M. Alimagham, M. 2018. Effect of weeds and management factors on soybean yield gap in Kalaleh region. Crops Improvement. 20 (2), 563-576. *[in Persian]*. 35. **Torabi, B.,** Saadatkhah, H., Soltani, A., Mahdavi, B. 2018. Quantifying the dry matter production and distribution in different organs of safflower cultivars. Journal of Crop Production. 10 (4), 1-14. *[in Persian]*. 36. Dadrasi, A., **Torabi, B.,** Rahimi, A., Soltani, A., Zeinali, E. 2020. Determination of potato yield gap in Golestan province. Journal of Agroecology. DOI:10.22067/jag.v12i2.76734 *[in Persian]*. 37. Ebrahimi, N., **Torabi, B.,** Soltani, A., Zeinali, E. 2021. Parameterization and evaluation of SSM\_iCrop model for prediction of growth and development of faba bean in Gorgan climatic conditions. Crops Improvement. 22(4): 531-542. *[in Persian]*. 38. **Torabi, B.,** Soltani, A., Galeshi, S., Zeinali, E. 2021. Quantifying wheat yield gap in Gorgan conditions. Journal of Crop Production. 13: 1-24. [*in Persian*]. 39. Mohammad Nezhad, Y., Basirat, M., HajiAbaee, H., **Torabi, B.** 2021. Determining the fertilizer requirement for irrigated wheat in Golestan dam fields, using the QUEFTS model. Crops Improvement. 22(3): 433-443. [*in Persian*]. 40. Rahban, S., **Torabi, B.,** Soltani, A., Zeinali, E. 2021. Using SSM-iCrop model to predict phenology, yield, and water productivity of canola (*Brassica napus* L.) in Iran condition. 31(1): 157-177. 41. Sousaraei, N., **Torabi, B.,** Soltani, E., Mashayekhi, K., Medina, J. 2022. Differential seed germination responses of tomato landraces to temperature under climate change scenarios. Seeds, 1, 36–48. https://doi.org/10.3390/seeds1010005. 42. Alasti, O., Zeinali, E., Soltani, A., **Torabi, B.** 2021. Estimating the Potential Increase of Irrigated Barley Production over Iran via Closure of Yield Gap Based on GYGA protocol. Journal of Crop Production. 13: 325-344. [in Persian]. 43. Puorshirazi, S. Zeinali, E., Soltani, A., **Torabi, B.** 2021. Parameterization and Evaluation of a Simple Simulation Model (SSM-iCrop2) for Alfalfa Growth and Yield in Iran. Agroecology. DOI:10.22067/AGRY.2021.70433.1044 [in Persian]. 44. Arabameri, R., Zeinali, E., Soltani, A., **Torabi, B.** 2021. The amount and how to distribute of chickpea and lentil yield gap in Iran. Crops Improvement. DOI:10.22059/JCI.2021.294686.2323 [*in Persian*]. 45. Monemizadeh, Z., Ghaderi-Far, F., Sadeghipour, H.R., Siahmarguee, A., Soltani, A., **Torabi, B.,** Baskin, C.C. 2021. Variation in seed dormancy and germination among populations of Silybum marianum (Asteraceae). Plant Species Biology. DOI: 10.1111/1442-1984.12326. 46. Sousaraei, N., **Torabi, B.,** Soltani, E., Mashayekhi, K., Medina, J. 2022. Differential seed germination responses of tomato landraces to temperature under climate change scenarios. Seeds, 1, 36–48. <https://doi.org/10.3390/seeds1010005> 47. Alasti, O., Zeinali, E., Soltani, A., **Torabi, B.** 2022. Exploring the current status of barley yield and production gap of Iran. European Journal of Agronomy. 139, 126547. 48. Pourshirazi, S., Soltani, A., Zeinali, E., **Torabi, B.,** Arshad, A., 2022. Assessing the sensitivity of alfalfa yield potential to climate impact under future scenarios in Iran. Environmental Science and Pollution Research, https://doi.org/10.1007/s11356-022-20287-x 49. Dadrasi, A., **Torabi, B.,** Rahimi, A., Soltani, A., Zeinali, E. 2022. Modeling Potential production and yield gap of potato using modelling and GIS approaches. Ecological Modelling, 471 (2022) 110050. | |
|  | **RESEARCH REPORT** |
| 1. Soltani, A., Nehbandani, A.R., Dadresi, A., Alimaqam, S.M., Zeinali, E., **Torabi, B.** 2018. Agro-Ecological Zoning (AEZ) of Iran for Plant Production. Gorgan University of Agricultural Sciences and Natural Resources. Research No: 95-354-80. 2. **Torabi, B.,** Gorzin, M., Attarzadeh, M. 2018. Evaluation of genetic diversity and relationships between seed quality traits in safflower. Gorgan University of Agricultural Sciences and Natural Resources. Research No: 95-354-73. 3. **Torabi, B.,** Soltani, A., Zeinali, E, Dadresi, A., Nehbandani, A.R., 2018. Investigating the trends of changes in crop area, production and yield of important crops in Iran.Gorgan University of Agricultural Sciences and Natural Resources. Research No: 95-354-74. 4. **Torabi, B.,** Soltani, A., Rahban, S., Kashefi, E., Pourshirazi, S., Alimaqam, S.M., 2020. Impact of climate change on major plants yield in Iran. The report is written and is being assessed. This research was conducted using scenarios of RCP 4.5 and 8.5 for 2025 and 2055. | |
|  | **BOOKS** |
| 1. Soltani, A., **Torabi, B.,** 2009. Crop modeling: case studies. JDM Press, Mashhad, Iran, ISBN: 964324189-0, *[in Persian]*. 2. Soltani**,** A., **Torabi, B.,** 2014. Design and analysis of agricultural experiments. JDM Press, Mashhad, Iran, ISBN: 9789643243067, *[in Persian]*. 3. Soltani, A., Nehbandani, A.R., Zeinali, E., **Torabi, B.,** et al., 2019. Atlas of yield gap and production potential for major crops in Iran. Agricultural Research Education and Extension Organization and GUSNR. ISBN: 978- 622- 6595-02-5, *[in Persian]*. 4. Galeshi, S., **Torabi, B.,** Rasam, G.A., Rahemi Karizaki, A., Barzgar, A.B. 2009. Stress and Stress Coping in Cultivated Plants [by: Brayan D. Mckersie and Ya’acov Y. Leshem]. 2009. ISBN: 978-964-8440-04-1 [translated in Persian] 5. Galeshi, S., **Torabi, B.,** Rasam, Soltani, E. 2012. Seeds: physiology of development and germination ,2nd ed [by: Bewley, J. Derek and Black, Michael], 978-600-5265-18- 7 [translated in Persian] | |