

Curriculum Vitae



PERSONAL INFORMATION:

Full Name: Afshin SOLTANI

Nationality: Iranian

Academic Level: Professor

Cell:

E-mail:

Current work address:

Agronomy Group,
Gorgan Univ. of Agric. Sci. & Natur. Resour.,
Gorgan 49138-15739
Iran

Primary Email: Afshin.Soltani@gmail.com

Fax: +98-17-32437615

Web: www.gau.ac.ir

My website (in *Persian*): www.AfshinSoltani.ir

Crop modeling website: www.SSM-crop-models.net

Google Scholar: <https://scholar.google.com/citations?user=XfiQMGIAAAAJ&hl=en>

Research Gate: <https://www.researchgate.net/profile/Afshin-Soltani-2>

DATE AND PLACE OF BIRTH

27 May 1971 in Bojnord, Khorasan province, Iran

EDUCATIONA

B.S., 1993; Agronomy and Plant Breeding, 4 years,
Dept of Agronomy and Plant Breeding, Gorgan University of Agricultural Sciences,
Gorgan, Iran

M.S., 1995; Agronomy, 2 years with thesis,
Dept of Agronomy and Plant Breeding, Isfahan University of Technology, Isfahan, Iran
Thesis: Analysis and modeling yield components in grain sorghum
Supervisor: A. Rezaei, Ph.D.; Advisors: M.R. Khajepour, Ph.D., A. Mirlohi, Ph.D.

Ph.D., 1999; Agronomy-Crop physiology, 4 years with thesis,
Dept of Agronomy and Plant Breeding, Tabriz University, Tabriz, Iran
Thesis: Simulating chickpea growth and yield
Supervisors: F.R. Khoie, Ph.D. & K. Ghassemi-Golezani, Ph.D.; Advisor: M.
Moghaddam, Ph.D.

RESEARCH INTERESTS

- Development and application of crop simulation models.
- Environmental impacts of agriculture.
- Plant-environment relationships and agroclimatology.

SSM crop models

I am a co-developer of SSM modeling team headed by Dr. T.R. Sinclair (NC State University). The models have been used in many research works around the world. Please check the website: www.SSM-crop-models.net

RESEARCH ACCOMPLISHMENTS

- Empirical research on seed quality and vigor (18 ISI-papers)
- Biophysical limitation of chickpea yield in Iran (3 ISI-papers)
- Quantification and modelling of development, growth and yield processes in chickpea and wheat (10 ISI papers)
- Generation of weather data for use in crop simulation studies (5 ISI papers)
- Assessing management and genetic options to increase crop production (22 ISI papers)
- Crop production in relation to climate and climate change (9 ISI papers)
- Evaluation environmental impact of crop production (6 ISI papers)
- Analysis of crop yield gap from farmers' fields to country level (5 ISI papers)
- Analysis of food security of Iran toward 2050 (4 ISI papers)

PUBLICATION:

INTERNATIONAL JOURNAL PAPERS

1. Ghassemi-Golezani, K., **A. Soltani**, and S. Atashi. 1997. The effect of water limitation in the field on seed quality of maize and sorghum. *Seed Sci. Technol.* 25: 321-324.
2. **Soltani, A.**, K. Ghassemi-Golezani, F. R. Khoorie, and M. Moghaddam. 1999. A simple model for chickpea growth and yield. *Field Crops Res.* 62: 213-224.
3. **Soltani, A.**, N. Latifi, and M. Nasiri. 2000. Evaluation of WGEN for generation long term weather data for crop simulations. *Agric. For. Meteorol.* 102: 1-12.
4. **Soltani, A.**, F. R. Khoorie, K. Ghassemi-Golezani, and M. Moghaddam. 2000. Thresholds for chickpea leaf expansion and transpiration response to soil water deficit. *Field Crops Res.* 68: 205-210.
5. **Soltani, A.**, S. Galeshi, E. Zeinali, and N. Latifi. 2001. Genetic variation for and interrelationships among seed vigor traits in wheat from the Caspian Sea coasts of Iran. *Seed Sci. Technol.* 29(3): 653-662.
6. **Soltani, A.**, F. R. Khoorie, K. Ghassemi-Golezani, and M. Moghaddam. 2001. A simulation study of chickpea crop response to limited irrigation in a semiarid environment. *Agric. Water Manag.* 49: 225-237.
7. **Soltani, A.**, E. Zeinali, and S. Galeshi. 2001. Simulating Geophysical Fluid Dynamics Laboratory predicted climate change impacts on rice cropping in Iran. *J. Agric. Sci. Technol. (Tehran)* 3: 81-90.

8. **Soltani, A.**, and S. Galeshi. 2002. Importance of rapid canopy closure for wheat production in a temperate sub-humid environment: Experimentation and simulation. *Field Crops Res.* 77: 17-30.
9. **Soltani, A.**, E. Zeinali, S. Galeshi, and N. Latifi. 2002. Germination, seed reserve utilization and seedling growth of chickpea as affected by salinity and seed size. *Seed Sci. Technol.* 30: 51-60.
10. Gholipoor, M., **A. Soltani**, F. Shekari, and Fb. Shekari. 2002. Effect of salinity on water use efficiency and its components in chickpea. *Acta Agronomica Hungarica* 50(2): 127-134.
11. **Soltani, A.**, and G. Hoogenboom. 2003. A statistical comparison of stochastic weather generators WGEN and SIMMETEO. *Clim. Res.* 24: 215-230.
12. **Soltani, A.**, and G. Hoogenboom. 2003. Minimum data requirement for parameter estimation of stochastic weather generators. *Clim. Res.* 25: 109-119.
13. **Soltani, A.**, H. Meinke and P. de Voil. 2004. Assessing linear interpolation to generate daily radiation and temperature data for use in crop simulations. *Eur. J. Agron.* 21: 133-148.
14. **Soltani, A.**, M. H. Ghorbani, S. Galeshi, E. Zeinali. 2004. Salinity effects on germinability and vigor of harvested seeds in wheat. *Seed Sci. Technol.* 32(2): 583-592.
15. **Soltani, A.**, S. Galeshi, and M. R. Attarbashi. 2004. Comparison of two methods for estimating parameters of harvest index increase during seed growth. *Field Crops Res.* 89: 369-378.
16. **Soltani, A.**, B. Torabi, E. Zeinali, and R. Sarparast. 2004. Response of chickpea to photoperiod as a qualitative long-day plant. *Asian J. Plant Sci.* 6: 705-708.
17. **Soltani, A.**, B. Torabi, and H. Zarei. 2005. Modeling crop yield using a modified harvest index-based approach: application in chickpea. *Field Crops Res.* 91: 273-285.
18. **Soltani, A.**, M. Gholipoor, and E. Zeinali. 2006. Seed reserve utilization and seedling of wheat as affected by drought and salinity. *Env. Exp Bot.* 55: 195-200.
19. Koocheki, A., M. Nassiri, **A. Soltani**, H. Sharifi, and R. Ghorbani. 2006. Effects of climate change on growth criteria and yield of sunflower and chickpea crops in Iran. *Clim. Res.* 247-253.
20. **Soltani, A.**, G.L. Hammer, B. Torabi, M.J. Robertson, and E. Zeinali. 2006. Modeling chickpea growth and development: phenological development. *Field Crops Res.* 99: 1-13.
21. **Soltani, A.**, M.J. Robertson, Y. Mohammad-Nejad, and A. Rahemi-Karizaki. 2006. Modeling chickpea growth and development: leaf production and senescence. *Field Crops Res.* 99: 14-23.
22. **Soltani, A.**, M.J. Robertson, and A.M. Manschadi. 2006. Modeling chickpea growth and development: nitrogen accumulation and use. *Field Crops Res.* 99: 24-34.
23. **Soltani, A.**, M.J. Robertson, B. Torabi, M. Yousefi-Daz, and R. Sarparast. 2006. Modeling seedling emergence in chickpea as influenced by temperature and sowing depth. *Agric. For. Meteorol.* 138: 156-167.
24. **Soltani, A.**, M.J. Robertson, A. Rahemi-Karizaki, J. Poorreza, and H. Zarei. 2006. Modeling biomass accumulation and partitioning in chickpea (*Cicer arietinum* L.). *J. Agron. Crop Sci.* 192: 379-389.
25. **Soltani, A.**, and M. Gholipoor. 2006. Teleconnections between El Nino/Southern Oscillation and rainfall and temperature in Iran. *Int. J. Agric. Res.* 6: 603-608.

26. **Soltani, A.**, M. Gholipoor, K. Ghassemi-Golezani. 2007. Analysis of temperature and atmospheric CO₂ effects on radiation use efficiency in chickpea (*Cicer arietinum* L.). J. Plant Sci. 2(1): 89-95.
27. Akram-ghaderi, F., **A. Soltani**, 2007. Leaf area relationships to plant vegetative characteristics in cotton (*Gossypium hirsutum* L.) grown in a temperate sub-humid environment. I. J. Plant production. 1(1): 63-71.
28. **Soltani, A.** G. Hoogenboom. 2007. Assessing crop management options with crop simulation models based on generated weather data. Field Crops Res. 103: 198-207.
29. Gholipoor, M., and **A. Soltani**, 2008. Assessing potential drought avoidance for five crops in Iran using long-term weather data. Int. J. Agric. Res. 3 (3): 202-210.
30. Soltani, E., and **A. Soltani**. 2008. Climatic changes of Khorasan, North-East of Iran, during 1950-2004. Res. J. Environ. Sci. 2: 316-322.
31. Faraji, A., N. Latifi, **A. Soltani**, A.H. Shirani Rad. 2008. Effect of high temperature stress and supplemental irrigation on flower and pod formation in two canola (*Brassica napus* L.) cultivars at Mediterranean climate. Asian J. Plant Sci. 7(4): 343-351.
32. Faraji, A., N. Latifi, **A. Soltani**, A.H. Shirani Rad. 2009. Seed yield and water use efficiency of canola (*Brassica napus* L.) as affected by high temperature stress and supplemental irrigation. Agric. Water. Manag. 96: 132-140.
33. Gholipoor, M., **A. Soltani**. 2009. Future climate impacts on chickpea in Iran and ICARDA. Res. J. Environ. Sci. 3: 16-28.
34. Ghaderi, F.A., **A. Soltani**, H.R. Sadeghipour. 2008. Cardinal temperatures of germination in medicinal pumpkin (*Cucurbita pepo* convar. *Pepo* var *styriaca*), Borago (*Borago officinalis* L.) and black cumin (*Nigella sativa* L.). Asian J. Plant Sci. 7(6): 574-578.
35. Kamkar, B., M. Ahmadi, **A. Soltani**, E. Zeinali. 2008. Evaluating non-linear regression models to describe response of wheat emergence rate to temperature. Seed Sci. Biot. 2: 53-57.
36. Nikoobin, M., F. Mirdavardoost, M. Kashaninejad, **A. Soltani**. 2009. Moisture-dependent physical properties of chickpea seeds. J. Food Process Engineering. 32: 544-564.
37. Zeinali, E., **A. Soltani**, S. Galeshi, S.A.R. Movahedi Naeeni. 2009. Estimates of nitrate leaching from wheat fields in Gorgan, of Iran. Res. J. Env. Sci. 3(6): 645-655.
38. Pourreza, J., **A. Soltani**, A. Naderi, A. Aynehband. 2009. Modeling Leaf Production and Senescence in Wheat American-Eurasian J. Agric. & Environ. Sci., 6 (5): 498-507.
39. Eshraghi Nejad, M., B. Kamkar, **A. Soltani**. 2009. Cardinal temperatures and required biological days from sowing to emergence of three millet species (common, foxtail, pearl millet). J. Agric. Sci. & Tech. 3 (12): 36-43.
40. Davatgar, N., M.R. Neishabouri, A.R. Sepaskhah, **A. Soltani**. 2009. Physiological and morphological responses of rice (*Oryza sativa* L.) to varying water stress management strategies. International Journal of Plant Production 3 (4): 19-32.
41. Mohammadi, H., **Soltani, A.**, Sadeghipour, H.R. and Zeinali, E. 2011. Effects of seed aging on subsequent seed reserve utilization and seedling growth in soybean. International Journal of Plant Production 5 (1), 65-70.
42. Rahemi-Karizaki, A., Galeshi, S., **Soltani, A.** and Kamkar, B. 2010. Variation of Nitrogen Use Efficiency, Grain Protein Concentration and Yield in Wheat

- Cultivars in Temperate Sub Humid. American-Eurasian J. Agric. & Environ. Sci., 9 (1): 08-15,
43. Soltani, E., **Soltani, A.**, Galeshi, S., Ghaderi-Far, F. and Zeinali, E. 2011. Quantifying seed production by volunteer canola (*Brassica napus* L.) and *Sinapis arvensis*. *Planta Daninha*. 29(3): 489-497.
 44. Rassam, Gh., Latifi, N., **Soltani, A.**, and Kamkar, B. 2011. Impact of crop management on weed species diversity and community composition of winter wheat fields in Iran. *Weed Biology and Management* 11, 83–90.
 45. Ghaderi-Far, F., **Soltani, A** & Sadeghipour, H. R. 2011. Change in seed quality during seed development and maturation in medicinal pumpkin (*Cucurbita pepo* subsp. *Pepo*. *Convar. Pepo* var. *styriaca* Greb). *Journal of Herbs, Spices & Medicinal Plants*. 17:249-257.
 46. Torabi, B., A, **Soltani.**, S, Galeshi., E, Zeinali. 2011. Assessment of yield gap due to nitrogen management in wheat. *Australian Journal of Crop Science*. 5(7):879-884.
 47. Bakhshandeh, E., **Soltani, A.**, E, Zeinali., and Kallate-Arab, M. 2012. Predication of plant Height by Allometric Relationships in Field-Grown wheat. *Cereal research Communications*. 40(3): 487-496.
 48. **Soltani, A.**, and T.R. Sinclair. 2011. A simple model for chickpea development, growth and yield. *Field Crops Research* 124 (2011) 252–260.
 49. Bazrgar, A.B., **Soltani, A.**, Koocheki, A.R., Zeinali, E., and Ghaemi, A. 2011. Environmental emissions profile of different sugar beet cropping systems in East of Iran. *African Journal of Agricultural Research* Vol. 6(29), pp. 6246-6255.
 50. **Soltani, A.**, and T.R. Sinclair. 2012. Optimizing chickpea phenology to available water under current and future climates. *Eur. J. Agron.* 38: 22-31.
 51. Khaliliaqdam, N. **Soltani. A.** Latifi . N and Ghaderi-far. F. 2013. Soybean seed aging and environmental factors on seedling growth. *Communications in Soil Science and Plant Analysis*, 44: 1786-1799.
 52. **Soltani, A.**, and T.R. Sinclair .2012. Identifying plant traits to increase chickpea yield in water-limited environments. *Field Crops Research*. 133: 186–196.
 53. Khalilagdam, N. **Soltani, A.** Latifi, N. and Ghaderi Far, F. 2012. Quantitative Response of the longevity of soybean seed under controlled conditions. *J. Agric. & Environ.* 12 (2): 224-230.
 54. Khalilagdam, N. **Soltani, A.**, Latifi, N. and Ghaderi Far, F. 2012. Seed vigor and field performance of soybean seed lots case study: Northern Areas of Iran. *J. Agric. & Environ.* 12 (2):262-268.
 55. Khaliliaqdam, N., **Soltani, A.** 2012. Quality control and Methods for modeling daily global solar radiation (Case study: Gorgan, Iran). *Int. J. Agric. Crop Sci.* 4 (14): 971-978.
 56. Vadeza, V., **Soltani, A.**, Sinclair, T.R. 2012. Modelling possible benefits of root related traits to enhance terminal drought adaptation of chickpea. *Field Crops Res.* 137: 108–115.
 57. Soltani, E., **Soltani, A.**, Galeshi, S., Ghaderi-Far, F., Zeinali, E. 2013. Seed bank modelling of volunteer oilseed rape from seeds fate in the soil to seedling emergence. *Planta Daninha* 31(2): 267-279
 58. **Soltani, A.**, Rajabi, M.H., Zeinali, E., Soltani, E., 2013. Energy inputs and greenhouse gases emissions in wheat production in Gorgan, Iran. *Energy* 50: 54-61.
 59. Vadeza, V., **Soltani, A.**, Sinclair, T.R. 2013. Crop simulation analysis of phenological adaptation of chickpea to different latitudes of India. *Field Crops Res.* 146: 1-9.

60. Khaliliaqdam, N., **Soltani, A.**, Latifi, N., Ghaderifar, F., 2013. Soybean seed aging and environmental factors on seedling growth. *Commu. Soil Sci. Plant Analysis*, 44: 1-14.
61. Khaliliaqdam, N., **Soltani, A.**, Latifi, N., Ghaderifar, F., 2013. Laboratory tests for predicting emergence of soybean cultivars. *Plant Knowledge Journal* 2(2): 89-93.
62. **Soltani, A.**, Maddah, V., Sinclair, T.R., 2013. SSM-Wheat: a simulation model for wheat development, growth and yield. *Int. J. Plant Prod.* 7(4): 711-740.
63. Torabi, B., Attarzadeh, M., **Soltani, A.**, 2013. Germination response to temperature in different safflower (*Carthamus tinctorius*) cultivars. *Seed Technol.* 35(1): 47-59.
64. Nehbandani, A., **A. Soltani**, E. Zeinali, S. Raeisi, R. Najafi. 2013 Allometric relationships between leaf area and vegetative characteristics in soybean. *Int. J. Agric. Crop Sci.* 6(16): 1127-1136.
65. Sinclair, T.R., Marrou, H., **Soltani, A.**, Vadez, V., Chandolu, K.C., 2014. Soybean production potential in Africa. *Global Food Security* 3: 31-40.
66. Hajarpoor, **A., Soltani, A.**, Zeinali, E., Sayyedi, F., 2014. Simulating climate change impacts on production of chickpea under water-limited conditions. *Agric. Sci. Dev.* 3(6): 209-217.
67. Hajarpoor, **A., Soltani, A.**, Zeinali, E., Sayyedi, F., 2014. Potential benefits from adaptation to climate change in chickpea. *Agric. Sci. Dev.* 3(7): 230-236.
68. **Soltani, A.**, M.H.M. Maleki, E. Zeinali. 2014. Optimal crop management can reduce energy use and greenhouse gases emissions in rainfed canola production. *Int. J. Plant Prod.* 8(4): 587-604.
69. **Soltani, A.**, Sinclair, T.R., 2015. A comparison of four wheat models with respect to robustness and transparency: Simulation in a temperate, sub-humid environment. *Field Crops Res.* 175: 37-46.
70. Eshraghi-Nejad, M., Bakhshandeh, A., Gharineh, M.H., **Soltani, A.**, 2015. Prediction of spring barley flowering time based on multiplicative approach of temperature × photoperiod. *Int. J. Agri. Biosci.*, 4(1): 21-26.
71. Maddah, V., **Soltani, A.**, Zeinali, E., Bannayan-Aval, M., 2015. Simulating Climate change Impacts on Wheat Production in Gorgan, Iran. *Bull. Env.Pharmacol. Life Sci.*, 4: 58- 67.
72. Soltani, E., **Soltani, A.**, 2015. Meta-analysis of seed priming effects on seed germination, seedling emergence and crop yield: Iranian studies. *Int. J. Plant Prod.* 9(3): 413-432.
73. Ghanem, M.E., Marrou, H., **Soltani, A.**, Kumar, S., Sinclair, T.R. 2015. Lentil variation in phenology and yield evaluated with a model. *Agron. J.* 107: 1967–1977.
74. **Soltani, A.**, Hajjarpoor, A., Vadez, V., 2016. Analysis of chickpea yield gap and water-limited potential yield in Iran. *Field Crops Res.* 185, 21–30.
75. McDermid, S.P., A.C. Ruane, C. Rosenzweig, N.I. Hudson, M.D. Morales, P. **Soltani, A.**, 2015. The AgMIP Coordinated Climate-Crop Modeling Project (C3MP): Methods and Protocols. In: *HANDBOOK OF CLIMATE CHANGE AND AGROECOSYSTEMS: THE AGRICULTURAL MODEL INTERCOMPARISON AND IMPROVEMENT PROJECT (AGMIP) INTEGRATED CROP AND ECONOMIC ASSESSMENTS? JOINT PUBLICATION WITH ASA, CSSA, AND SSSA (IN 2 PARTS)* Imperial College Press.
76. Soltani, E., Baskin, C.C., Baskin, J.M., **Soltani, A.**, Galeshi, S., Ghaderi-far, F., Zeinali, E., 2016. A quantitative analysis of seed dormancy and germination in

- the winter annual weed *Sinapis arvensis* (Brassicaceae). Botany 94: 289–300
[dx.doi.org/10.1139/cjb-2015-0166](https://doi.org/10.1139/cjb-2015-0166)
77. Amiri, S.R., Deihimfard, R., **Soltani, A.**, 2016. Single supplementary irrigation can boost chickpea grain yield and water use efficiency in arid and semiarid conditions: A modeling study. Agron. J. 108: 2406–2416.
[doi:10.2134/agronj2016.02.0087](https://doi.org/10.2134/agronj2016.02.0087)
 78. Halilou, O., Hissene, H.M., Clavijo Michelangeli, J.M., Hamidou, F., Sinclair, T.R., **Soltani, A.**, Mahamane, S., Vadez, V., 2016. Determination of coefficient defining leaf area development indifferent genotypes, plant types and planting densities in peanut (*Arachis hypogaeae* L.). Field Crops Research 199: 42–51.
[dx.doi.org/10.1016/j.fcr.2016.09.013](https://doi.org/10.1016/j.fcr.2016.09.013)
 79. Abravan, P., **Soltani, A.**, Majidian, M., Mohsenabadi, G., 2016. Factors limiting canola yield and determining their optimum range by boundary line analysis. IIOAB Journal. 7, 161-167.
 80. Mahamat Hissene, H., Vadez, V., Michelangeli, J., Halilou, O., Ndoeye, I., **Soltani, A.**, Sinclair, T., 2016. Quantifying Leaf Area Development Parameters for Cowpea [*Vigna unguiculata* (L.) Walpers]. Crop sci. 56, 3209-3217.
 81. Kazemi, H., Hassanpour Bourkheili, S., Kamkar, B., **Soltani, A.**, Gharanjic, K., Nazari, N., 2016. Estimation of greenhouse gas (GHG) emission and energy use efficiency (EUE) analysis in rainfed canola production (case study: Golestan province, Iran). Enrgy. 116, 694-700.
 82. Vadez, V., Halilou, O., M. Hissene, H., Sibiry-Traore, P., Sinclair, T., **Soltani, A.**, 2017. Mapping Water Stress Incidence and Intensity, Optimal Plant Populations, and Cultivar Duration for African Groundnut Productivity Enhancement. Front. Plant Sci. 8, 432.
 83. Guiguitant, J., Marrou, H., Vadez, V., Gupta, P., Kumar, S., **Soltani, A.**, Sinclair, T., Ghanem, M., 2017. Relevance of limited-transpiration trait for lentil (*Lens culinaris* Medik.) in South Asia. Field Crops Res. 209, 96–107.
 84. Alimagham, M., **Soltani, A.**, Zeinali, E., Kazemi, H., 2017. Energy flow analysis and estimation of greenhouse gases (GHG) emissions in different scenarios of soybean production (Case study: Gorgan region, Iran). J CLEAN PROD. 149, 621-628.
 85. Schoppach, R., **Soltani, A.**, Sinclair, T., Sadok, W., 2017. Yield comparison of simulated rainfed wheat and barley across Middle-East. AGR SYST. 153, 101-108.
 86. Anagholi, A., S. Galeshi, **A. Soltani.** 2016. Salinity tolerance components and response of Iranian wheat cultivars to NaCl stress. IIOAB Journal. Vol. 7, Suppl. 2, 344-354.
 87. Hajjarpoor, A., Vadez, V., **Soltani, A.**, Gaur, P., Whitbread, A., Babu, D.S., Gumma, M.K., Diancoumba, M., Kholova, J., 2018. Characterization of the main chickpea cropping systems in India using s yield gap analysis approach. Field Crops Res. 223, 93-104.
 88. Hajjarpoor, A., **Soltani, A.**, Zeinali, E., Kashiri, H., Aynehband, A., Vadez, V., 2018. Using boundary line analysis to assess the on-farm crop yield gap of wheat. Field Crops Res., 225, 64-73.
 89. Kazemi, H., Shokrgozar, M., Kamkar, B., **Soltani, A.**, 2018. Analysis of cotton production by energy indicators in two different climatic regions. J. Cleaner Prod. 190, 729-736.
 90. Noorhosseini, S.A., **Soltani, A.**, Ajamnorozi, H., 2018. Modeling the impact of climate change on peanut production on the basis of increasing 2oC

- temperature in future environmental conditions of Guilan province, Iran. *Int. J. Agric. Manag. Devel.* 8(2), 257-273.
91. Pourhadian, H., Kamkar, B., **Soltani, A.**, Mokhtarpour, H., 2018. Evaluation of forage maize yield gap using an integrated crop simulation model-satellite imagery method (case study: four watershed basins in Golestan province). *Archive Agron. Soil Sci.* DOI: 10.1080/03650340.2018.1493579
 92. Tahmasebi, M., Feike, T., **Soltani, A.**, Ramroudi, M., Ha, N., 2018. Trade-off between productivity and environmental sustainability in irrigated vs rainfed wheat production in Iran. *J. Cleaner Prod.* 147, 367-379.
 93. Sciarresi, C., Patrignani, A., **Soltani, A.**, Sinclair, T.R., Lollato, R.P., 2019. Plant traits to increase winter wheat yield in semiarid and subhumid environments. *Agron. J.* 111, 1-13.
 94. Gorjizad, A., Dastan, S., **Soltani, A.**, Ajamnorouzi, H., 2019. Large scale assessment of the production process and rice yield gap analysis by comparative performance analysis and boundary line analysis methods. *Italian J. Agron.* 14: 1174
 95. Sinclair, T.R., **Soltani, A.**, Marrou, H., Ghanem, M., Vadez, V., 2019. Geospatial assessment for crop physiological and management improvements with examples using the Simple Simulation Model. *Crop Sci.* 59: 1-9.
 96. **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. SSM-iCrop2: A simple model for diverse crop species over large areas. *Agric. Syst.* 182: 102855.
 97. **Soltani, A.**, Alimagham, S.M., Nehbandani, A., Torabi, B., Zeinali, E., Zand, E., Ghassemi, S., Vadez, V., Sinclair, T.R., van Ittersum, M.K., 2020. Modeling plant production at country level as affected by availability and productivity of land and water. *Agric. Syst.* 183: 102859.
 98. **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 Secur.* 24: 100351.
 99. Haghshenas, H., **Soltani, A.**, Ghanbari Malidarreh, A., Ajam Norouzi, H., Dastan, S., 2019. Selecting the ideotype of improved rice cultivars using multiple regression and multivariate models. *Archives Agron. Soil Sci.*
<https://doi.org/10.1080/03650340.2019.1658866>
 100. Nehbandani, A., **Soltani, A.**, Taghdisi, R., Dadrasi, A., Alimagham, S.M., 2020. Assessing HC27 Soil Database for Modeling Plant Production. *Int. J. Plant Prod.*
<https://doi.org/10.1007/s42106-020-00114-4>
 101. Nehbandani, A., **Soltani, A.**, Rahemi-Karizaki, A., Dadrasi, A., Nourbakhsh, F., 2020. Determination of soybean yield gap and potential production in Iran using modelling approach and GIS. *J. Integrative Agric.* 19(0): 2-14.
 102. Dadrasi, A., Torabi, B., Rahimi, A., **Soltani, A.**, 2020. Parameterization and Evaluation of a Simple Simulation Model (SSM-iCrop2) for Potato (*Solanum tuberosum* L.) Growth and Yield in Iran. *Potato Res.*,
<https://doi.org/10.1007/s11540-020-09456-y>
 103. Nehbandani, A., **Soltani, A.**, Nourbakhsh, F., Dadrasi, A., 2020. Estimating crop model parameters for simulating soybean production in Iran conditions. *Oilseeds & Fats Crops and Lipids* <https://doi.org/10.1051/ocl/2020057>
 104. Manschadi, A., **Soltani, A.** 2021. Variation in traits contributing to improved use of nitrogen in wheat: Implications for genotype by environment interaction. *Field Crops Res.* 270: 108211

105. Hajjarpoor, Kholov', J., Pasupuleti, J., **Soltani, A.**, Burrridge, J., Degala, S.B., Gattu, S., Murali, T.V., Garin, V., Radhakrishnan, T., Vadez, V., 2021. Environmental characterization and yield gap analysis to tackle genotype-by-environment-by-management interactions and map region-specific agronomic and breeding targets in groundnut. *Field Crops Res.* 267: 108160
106. Manschadi, A.M., Eitzinger, J., Breisch, M., Fuchs, W., Neubauer, T., **Soltani, A.**, 2021. Full Parameterisation Matters for the Best Performance of Crop Models: Inter- comparison of a Simple and a Detailed Maize Model. *Int. J. Plant Prod.* <https://doi.org/10.1007/s42106-020-00116-2>
107. Nehbandani, A., **Soltani, A.**, Hajjarpoor, A., Dadrasi, A., Nourbakhsh, F., 2021. Comprehensive yield gap analysis and optimizing agronomy practices of soybean in Iran. *The J. Agric. Sci (Cambridge)* <https://doi.org/10.1017/S0021859621000241>
108. Nezamzade, E., **Soltani, A.**, Dastan, S., Ajamnoroozi, H., 2020. Factors causing yield gap in rape seed production in the eastern of Mazandaran province, Iran. *Italian J. Agron.* 2020; 15:1280, <https://doi:10.4081/ija.2020.1280>
109. Soltani, E., **Soltani, A.**, Alimaghani, M., Zand, E., 2021. Ecological footprints of environmental resources for agricultural production in Iran: a model-based study. *Env. Sci. Pollution Res.*, <https://doi.org/10.1007/s11356-021-15119-3>
110. Yousefian, M., **Soltani, A.**, Dastan, S., Ajamnoroozie, H., 2021. Yield gap assessment in rice- grown fields using CPA and BLA approaches in northern Iran. *Int. J. Plant Prod.* <https://doi.org/10.1007/s42106-020-00128-y>
111. Kothari, K., Battisti, R., Boote, K.J., Archontoulis, S.V., Confalone, A., Constantin, J., Cuadra, S.V., Debaeke, P., Faye, B., Grant, B., Hoogenboom, G., Jing, Q., van der Laan, M., Silva, E.H.F.M., Marin, F.B., Nehbandani, A., Nendel, C., Purcell, L.C., Qian, B., Ruane, A.C., Schoving, C., Smith, W., **Soltani, A.**, Srivastava, A., Vieira Jr., N.A., Slone, S., Salmeron, M., 2022. Are soybean models ready for climate change food impact assessments? *Eur. J. Agron.* 135: 126482, <https://doi.org/10.1016/j.eja.2022.126482>
112. Dadrasi, A., Torabi, B., Rahimi, A., **Soltani, A.**, Zeinali, E., 2022. Modeling Potential production and yield gap of potato using modelling and GIS approaches. *Ecol. Model.* 471: 110050, <https://doi.org/10.1016/j.ecolmodel.2022.110050>
113. Alasti, O., Zeinali, E., **Soltani, A.**, Torabi, B., 2022. Exploring the current status of barley yield and production gap of Iran. *Eur. J. Agron.* 139: 126547, <https://doi.org/10.1016/j.eja.2022.126547>
114. Sobhani, S.R., Arzhang, P., Soltani, E., **Soltani, A.**, 2022. Proposed diets for sustainable agriculture and food security in Iran. *Sust. Prod. Consum.* 32: 755–764, <https://doi.org/10.1016/j.spc.2022.05.026>
115. Dadrasi, A., Torabi, B., Rahimi, A., **Soltani, A.**, Salmani, F., Nehbandani, A., Nourbakhsh, F., Ullah, Z., 2022. Evaluation of Water Productivity in the Main Areas of Potato Cultivation in Iran. *Potato Res.*, <https://doi.org/10.1007/s11540-022-09603-7>
116. 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. *Env. Sci. Pollution Res.*, <https://doi.org/10.1007/s11356-022-20287-x>
117. Manschadi, A.M., Palka, M., Fuchs, W., Neubauer, T., Eitzinger, J., Oberforster, M., **Soltani, A.**, 2022. Performance of the SSM-iCrop model for predicting growth and nitrogen dynamics in winter wheat. *Eur. J. Agron.* 135: 126487, <https://doi.org/10.1016/j.eja.2022.126487>

And, more than 150 papers in Persian in Iranian research journals.

BOOKS

- Rezaei, A., and **A. Soltani**. 1998. An introduction to applied regression analysis. Isfahan University of Technology Press, Isfahan, Iran, ISBN: 964-6029-51-5, *[in Persian]*.
- Soltani, A.** 2005. Reconsideration in application of statistical methods in agricultural experiments. JDM Press, Mashhad, Iran, ISBN: 9643244134-3, *[in Persian]*.
- Soltani, A.** 2006[second edition]. Application of SAS in statistical analysis. JDM Press, Mashhad, Iran, ISBN: 964324137-8, *[in Persian]*.
- Soltani, A.**, and A. Faraji. 2006. Soil water and plant relationships. JDM Press, Mashhad, Iran, ISBN: 964324135-1, *[in Persian]*.
- Soltani, A.**, 2009. Mathematical modeling in crop plants. JDM Press, Mashhad, Iran, ISBN: 964324188-2, *[in Persian]*.
- Soltani, A.**, and B. Torabi. 2009. Crop modeling: case studies. JDM Press, Mashhad, Iran, ISBN: 964324189-0, *[in Persian]*.
- Soltani, A.** and V. Madah, 2010. Simple applied programs for education and research in agronomy. Iranian Society of Ecological Agriculture, Tehran, Iran, *[in Persian]*.
- Soltani, A.**, and T.R. Sinclair, 2012. Modeling Physiology of Crop Development, Growth and Yield. CAB International, Wallingford, UK.
- Soltani, A.**, and B. Torabi. 2014. Design and analysis of agricultural experiments. JDM Press, Mashhad, Iran, ISBN: 9789643243067, *[in Persian]*.

TEACHING EXPERIENCES

Current courses:

- Sustainable Agriculture (regular for under graduate students)
- Crop Modeling (regular for graduate students)
- Plant Production Ecology (regular for graduate students)
- Ecophysiology of Crop Production (regular for graduate students)

Former courses taught:

- Soil Water and Plant Relationships (undergraduate students)
- Design and Analysis of Agricultural Experiments (undergraduate students)
- Advanced Designs for Agricultural Experiments (undergraduate students)
- Crop Ecology (graduate students)
- Advanced Statistical Methods (graduate students)
- Seed Science and Technology (graduate students)

- Supervisor of >50 M.Sc. and >25 Ph.D. students since 2000.

SERVICE AND PROFESSIONAL MEMBERSHIP

EMPLOYMENT

September 2007-present	Professor, Agronomy Group, Gorgan University of Agricultural Sciences and Natural Resources (GUASNR: www.gau.ac.ir), Gorgan, Iran.
September 2002-September 2007	Associate Professor, Agronomy Group, Gorgan University of Agricultural Sciences and Natural Resources (GUASNR: www.gau.ac.ir), Gorgan, Iran.
September 1999-September 2002	Assistant Professor, Agronomy Group, Gorgan University of Agricultural Sciences and Natural Resources (GUASNR: www.gau.ac.ir), Gorgan, Iran.
September 2004-March 2005	Agricultural Production Systems Research Unit, Toowoomba, Australia (on sabbatical leave); www.apsru.gov.au , www.apsim.info .
August 2010-July 2011	Department of Crop Science, North Carolina State University, Raleigh, the USA (on sabbatical leave); www.ncsu.edu .

SERVICES

2002-present	Review for refereed journals. Manuscripts reviewed for journals such as Agronomy Journal, Field Crops Research, European Journal of Agronomy, Agricultural Systems, Journal of Agronomy and Crop Science, Applied Climatology.
2011-2015	Editorial board, <i>European Journal of Agronomy</i> , the scientific journal of European Society for Agronomy published by Elsevier.
2010-2013	Editorial board and Associate Editor, <i>Agronomy Journal</i> , the scientific journal of American Society of America.
2007-2020	Founder and Editor-in-Chief of <i>Int. J. Plant Prod.</i> (www.ijpp.info); the journal is listed by Thomson-Reuter (ISI), SCIE and is published by Springer since 2018.
2015-2018	Associate Editor-in-Chief of <i>European Journal of Agronomy</i> , the scientific journal of European Society for Agronomy published by Elsevier.
2013-2017	Vice-President for Education and Graduate Studies of

GUASNR

2006-2009	Vice-President for Research and Technology of GUASNR
2002-2006	Head of Agronomy Group of GUASNR
2000-2002	Editor-in-Chief of <i>Journal of Agricultural Sciences and Natural Resources</i> , the scientific journal of GUASNR [<i>in Persian</i>]
2017-2019	A member of Higher Education Commission and head of Agriculture & Natural Resource Committee r of Ministry of Science, Research & Technology

AWARDS

- Selected as Distinguished Researcher of Agriculture in 9th National Festival of Honouring Distinguished Researchers in 2008 – signed by Minister of Science, Research and Technology of Iran.
- Declared as one of Iran's top 20 scientists in Agricultural and Natural Resources Sciences by ISC (www.isc.gov.ir) based on the number of citations.
- Winner of 33rd Khwarizmi International Award: a research award given annually by the president of Iran (https://en.wikipedia.org/wiki/Khwarizmi_International_Award).
- Several university and provincial awards.

LANGUAGES: Persian and English