CURRICULUM VITAE

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Academic qualifications

PhD: Weed Science

MSc: Weed Science

BSc: Agronomy and Plant Breeding

Research interests

- Herbicide resistance
- Mechanisms of herbicide resistance in weeds
- Chemical Control
- Integrated weed management

Selected research projects

- Efficacy of some grass and broadleaf herbicides tankmixes on weed control in wheat
- Collecting, screening and mapping of herbicide-resistant grass weeds in wheat fields
- Evaluating the efficiency of Lumax (mesotrione + s-metolachlor + terbuthylazine, 53.75% SE) as post-emergence herbicide for weed control in sugarcane
- Evaluation of the efficiency of pre-emergence herbicide Jiuron (Diuron, 80% WP) on weed control of sugarcane fields

- Evaluation of the Efficacy of two new herbicides in control of corn weeds
- Study on the efficacy of Sakura (Pyroxasulfone WG 85%) on weed control of wheat Fields
- Evaluating the efficacy of imazapic (SL 40%) and new formulation of metribuzin (SC 48%) herbicides for controlling weeds in sugarcane
- Survey of resistance of winter grass weeds to the commonly used graminicides of broadleaf crops
- Abundance, diversity and distribution of the mutations conferring resistance to ACCase-inhibiting herbicides in problematic grass weeds of wheat fields
- Abundance, diversity and distribution of the mutations conferring resistance to ALS-inhibiting herbicides in problematic grass weeds of wheat fields
- Investigating planting date and stale seedbed technique in weed management of winter oilseed rape fields

Selected publications

Sasanfar, H., E. Zand, M. H. Zamani, E. Keshtkar, A. Joumi. (2021). Resistance of the problematic grass weeds to some commonly used herbicides in canola (*Brassica napus* L.) fields in three provinces of Iran. Iranian Journal of Weed Science. 17(2): 72-98. 10 10.22092/ijws.2021.353147.1383 (In Persian with English Abstract).

Sasanfar, H., E. Zand, M. Jamali, P. Sabeti, P. Sharifiziveh, E. Keshtkar, M. H. Zamani. (2021). The efficacy of mesotrione+nicosulfuron (OD 10.5%) and bentazon+MCPA (SL 46%), two new herbicides, in comparison with some commonly used herbicides in the control of broad-leaved weeds of corn. Iranian Journal of Weed Science. 17(2): 27-44. 10.22092/IJWS.2021.343429.1372 (In Persian with English Abstract).

Adim, H., L. Fahmideh, B. A. Fakheri, H. Najafi Zarrini, H. Sasanfar. Comparative analysis of proteome in herbicides susceptible and resistant winter wild oat (*Avena ludoviciana* Durieu) biotypes using iTRAQ technique. Iranian Journal of Weed Science. 17(2): 45-63. 10.22092/ijws.2021.353237.1385 (In Persian with English Abstract).

Molaei Mogbeli, Nasrin., S. A. Hosseini, E. Mamnoei, H. Sasanfar. (2022). The first report of winter wild oat (*Avena ludoviciana*)

accessions'sresistance to clodinafop-propargyl herbicide in south of Kerman. Iranian Journal of Weed Science. (In Press).

Alizade, S., E. Keshtkar, A. M okhtasi-Bidgoli, H. Sasanfar, J. C. Streibig. (2021). Effect of drought stress on herbicide performance and photosynthetic activity of *Avena sterilis* subsp. *ludoviciana* (winter wild oat) and *Hordeum spontaneum* (wild barley). Weed Research. 61: 288-297. 10.1111/wre.12477
(In Persian with English Abstract).

Zamani, M. H., E. Keshtkar, E. Zand, H. Sasanfar. (2021). Monitoring the resistance status of canarygrass (*Phalaris minor*) accessions to some commonly used herbicides in wheat fields of five provinces in Iran. Iranian Journal of Weed Science. 17(1): 111-121. 10.22092/ijws.2020.343119.1371 (In Persian with English Abstract).

Mirzaei, M., E. Zand, H. sasanfar. (2021) Evaluation of the efficacy of clodinafop-propargyl and mesosulfuron+iodosulfuron+mefenpyr-diethyl in *Avena Ludoviciana* Durieu. control under hard water and adjuvants conditions. Iranian Journal of Weed Science. 17(1): 123-133. 10.22092/ijws.2020.351206.1374 (In Persian with English Abstract).

Alizade, S., E. Keshtkar, A. M okhtasi-Bidgoli, H. Sasanfar, J. C. Streibig. (2020). Effect of water deficit stress on benzoylprop-ethyl performance and physiological traits of winter wild oat (*Avena sterilis* subsp. *ludoviciana*). Crop Protection. 137, 105292. 10.1016/j.cropro.2020.105292

Keshtkar, E., R. Abdolshahi, H. Sasanfar, E. Zand, R. Beffa, F. E. Dayan and P. Kudsk. (2019). Assessing fitness costs from a herbicide resistance management perspective: A review and insight. Weed Science. 67:137–148. doi: 10.1017/wsc.2018.63.

Khalil Tahmasbi, B., M. T. Alebrahim, E. Zand, H. Sasanfar, R. De Prado. (2019). Response of paraquat, diquat and glyphosate resistant willowherb (*Epilobium ciliatum* Raf.) to some different alternative herbicides. Iranian Journal of Weed Science. 15(2): 15-28. 10.22092/IJWS.2019.1502.02 (In Persian with English Abstract).

Tokasi, S., E. Kazerooni Monfared, B. Yaghoubi, M. Oveisi, H. Sasanfar, H. Rahimian Mashhadi and H. Müller-Schare. (2017). First report of Ambrosia psilostachya from Iran: An invasive plant species establishing in coastal area of Gilan province (N Iran). Rostaniha 18(2): 222–226 .

Sasanfar, H., E. Zand, M. A. Baghestani, M. J. Mirhadi and M. B. Mesgaran. (2017). Cross-resistance patterns of winter wild oat (*Avena ludoviciana)* populations to ACCase inhibitor herbicides.

Phytoparasitica. 45(3): 419-428. https://doi.org/10.1007/s12600-017-0587-9

Sasanfar, H., M. Rastgoo, E. Zand, A. Bagheri and M. H. Rashed Mohassel. (2016). Role of Ile-2041-Asp in conferring high-level resistance to clodinafop-propargyl in winter wild oat (*Avena ludoviciana*) populations. Iranian Journal of Weed Science. 12(2): 133-150. (In Persian with English Abstract).

Benakashani, F., E. Zand, M. R. Naghavi and H. Sasanfar. (2014). Mutations in acetyl-CoA carboxylase enzyme, mechanism of cross resistance in wild oat (*Avena ludoviciana* Deuri.) biotypes to ACCase inhibitor herbicide. Iranian Journal of Weed Science. 9(2): 179-190. (In Persian with English Abstract).

Shimi, P., R. Poorazar, F. Ghezeli and H. Sasanfar. (2014). Efficiency of two commercial forms of clopyralid at different doses in controlling canola weeds. Iranian Journal of Weed Science. 9(2): 145-153. (In Persian with English Abstract.(

Zand, E., A. Razmi, F. Benakashani, N. Nezamabadi, J. Gharakhloo and H. R. Sasanfar. (2013). Using CAPS and dCAPS methods to detect some mutations that cause resistance to acetyl coenzyme a carboxylase inhibiting herbicides in wild oat (*Avena ludoviciana*). Iranian Journal of Weed Science. 9(1): 79-91. (In Persian with English Abstract).

Zand, E., M. A. Baghestani, H. Alizadeh, H. Rahimian Mashhadi, H. R. Sasanfar, S.Babaei, P. Shimi, M. Montazeri, M. Minbashi Moeini, M. R. Mousavi, J. Gherekhloo, F. Meighani, M. Abdollahian, A. Moradi and M.Rastgoo. (2013). An audit for weed science in Iran during the years 2009 and 2010. Iranian Journal of Weed Science. 9(1): 1-13. (In Persian with English Abstract.(

Vasheghani Farahani, M., S. Vazan, H. Najaf and H. R. Sasanfar. (2012). A study on reduced dosages effect of imazethapyr at different phenology stages of soybean (*Glycine max*) on cocklebur (*Xanthium strumarium*). Iranian Journal of Weed Science. 8(1): 17-26. (In Persian with English Abstract).

Sasanfar, H. R., E. Zand, M. A. Baghestani and M. J. Mirhadi. (2009). Resisitance of wild oat (*Avena ludoviciana*) populations to clodinafop-propargyl herbicide in Fars province. Environmental Science. 7(1): 109-118. (In Persian with English Abstract).

Sasanfar, H. R., E. Zand, M. A. Baghestani and M. J. Mirhadi.)2009(. Resistance of winter wild oat (*Avena ludoviciana*) populations to pinoxaden in Fars province. Iranian Journal of Weed Science. 5: 1-13. (In Persian with English Abstract).

Sasanfar, H. R. and E. Zand. (2009). Herbicide resistance weeds management in cropping system. Zeytoon. 196. 1-13. (In Persian with English Abstract).

Conference papers:

Sasanfar, H. E. Zand, N. Nezamabadi, M. A. Baghestani, E. Keshtkar, M. H. Zamani. (2021). Consequences of herbicides ban on weed management in Iran and the world. 9th Iranian Weed Science Congress 16&17 Nov-2021-Tehran.

Sasanfar, H., E. Zand, M. H. Zamani, E. Keshtkar, A. Joumi, M. Yazdi. (2021). Resistance of winter wild oat (*Avena s terilis* subsp. *ludoviciana* Durieu.) to acetyl coenzyme A carboxylase inhibitors in canola (*Brassica napus* L.) fields. 9th Iranian Weed Science Congress 16&17 Nov-2021-Tehran.

Sasanfar, H., E. Zand, E. Keshtkar, M. H. Zamani, A. Joumi, S. Jabari. (2021). Cross-resistance of annual ryegrass (*Lolium rigidum* Gaudin) to ACCase inhibitor herbicides used in canola fields .9th Iranian Weed Science Congress 16&17 Nov-2021-Tehran.

Sasanfar, H., E. Zand, E. Keshtkar, M. H. Zamani, A. Joumi, Bartali Ghalandar. Evaluation of resistance of littleseed canarygrass (*Phalari minor* Retz.) to commonly used graminicides in rapeseed (*Brassica napus* L.) .9th Iranian Weed Science Congress 16&17 Nov-2021-Tehran.

Zamani, M. H., E. Keshtkar, E. Zand, H. Sasanfar. (2021). Evaluation of resistance of canary grass (Phalaris minor Retz.) weed to clodinafop-propargyl in wheat fields of Ardabil province. 9th Iranian Weed Science Congress 16&17 Nov-2021-Tehran.

Zand, E., S. Soufizadeh, H. Sasanfar1, M. Mirzaei. (2021). The role of weed management in achieving food security. 9th Iranian Weed Science Congress 16&17 Nov-2021-Tehran.

Sabeti, P., E. Zand , H. sasanfar. (2021). Investigating the effectiveness of Bentazon + MCPA to weeds control in corn farms of Kermanshah. 9th Iranian Weed Science Congress 16&17 Nov-2021-Tehran.

Sabeti, P., M. R. karaminejad, E. Zand, M. Minbashi, H. Sasanfar. 9th Iranian Weed Science Congress 16&17 Nov-2021-Tehran.

Abdolahi Lorestani, S., H. Sasanfar, E. Zand, M. Bromandfar, M.shahrooz, A. Eidizadeh. (2021). The effect of pre-emergence application of different doses of diuron (Jiuron, WP 80%) in weed control of sugarcane fields. 9th Iranian Weed Science Congress 16&17 Nov-2021-Tehran.

Adim, H., H. Sasanfar. (2021). Shotgun Proteomic Analysis of herbicide resistance in Oats (*Avena ludoviciana* Durieu). 9th Iranian Weed Science Congress 16&17 Nov-2021-Tehran.

Zand, E., R. Deihimfard and H. Sasanfar. (2017). The importance of big data in weed management. The 7th Iranian Weed Science Congress. 27-29 August, Gorgan, Iran. (In Persian with English Abstract). Key Paper.

Sasanfar, H., M. Rastgoo, E. Zand, A. Bagheri and M. H. Rashed Mohassel. (2016). Diversity of cross-resistance patterns to ACCase-inhibiting herbicides in wild oat (Avena ludiviciana) biotypes. The 7th International Weed Science Congress. 19-25 June, Prague, Czech Republic.

Sasanfar, H. R., E. Zand, M. A. Baghestani and M. Rastgoo. (2015). Patterns of cross-resistance to ACCase-inhibitor herbicides in winter wild oat (*Avena ludoviciana*) populations. 17th European Weed Research Society Symposium. 23-26 June, Montpellier, France.

Sasanfar, H. R., E. Zand, M. A. Baghestani and M. J. Mirhadi. (2010). Survey of cross resistance to acetyl-CoA carboxylase inhibitor herbicides in wild oat (Avena ludoviciana) populations collected from Marvdasht. The 3rd Iranian Weed Science Congress. 17-18 February, Babolsar, Iran. (In Persian with English Abstract).

Zand, E. and H. R. Sasanfar. (2010). Reviewing the status of weed resistance to herbicide in Iran. The Congress on Half a Century of the pesticide Usage in Iran. 2-3 March, Tehran, Iran. (In Persian with English Abstract).

Sasanfar, H. R., E. Zand, M. A. Baghestani and M. J. Mirhadi. (2009). Resistance of wild oat (*Avena ludoviciana* Durieu) populations to clodinafop propargyl herbicide in Fars province. The 5th Iranian Students Congress of Agricultural Sciences and Natural Resources. Rasht, Iran. (In Persian with English Abstract).

Sasanfar, H., M. Rastgoo, E. Zand, A. Bagheri and M. H. Rashed Mohassel. (2017). Ile-2041-Asp mutation endowing high-level resistance to clodinafop-propargyl in Avena ludoviciana populations. Global Herbicide Resistance Challenge 2017 Proceedings. 14-18 May. Denver, Colorado, USA.

Baghestani M. A., E. Zand, H. Sasanfar and Mehdi. Minbashi Moeini. (2016). Response of twenty diff erent Hordeum spontaneum biotypes to two time of application of sulfosulfuron and sulfosulfuron + metsulfuran-methyl. 7th International Weed Science Congress. 19-25 June, Prague, Czech Republic.

Jokar, L., E. Zand. A. R. Pazouki and H. Sasanfar. (2016). Effect of different planting methods on weeds population, corn grain yield

and yield components. 7th International Weed Science Congress. 19-25 June, Prague, Czech Republic .

Meighani, F., M. R. Karaminejad and H. Sasanfar. (2013). Effect of integrated management in follow on controlling field bindweed (Convolvulus arnensis L.). The 5th Iranian Weed Science Congress. 24-26 August, Karaj, Iran. (In Persian with English Abstract).

Norouzi, M., F. Meighani and H. R. Sasanfar. (2013). Tolerance to ACCase inhibitor herbicides in some turf species. The 5th Iranian Weed Science Congress. 24-26 August, Karaj Iran. (In Persian with English Abstract).

Norouzi, M., F. Meighani and H. R. Sasanfar. (2013). The possibility of application of dual-purpose herbicides in five turf species of kentucky bluegrass, red fescue, perennial ryegrass, bermudagrass and asianponysfoot. The 5th Iranian Weed Science Congress. 24-26 August, Karaj, Iran. (In Persian with English Abstract).

Forouzesh, S., E. Zand, M. A. Baghestani, and H. R. Sasanfar. (2013). Investigating the application possibility of some herbicides in different barley (Hordeum vulgar) cultivars. The 5th Iranian Weed Science Congress. 24-26 August, Karaj, Iran. (In Persian with English Abstract).

Vasheghani Farahani, M., S. Vazan, H. Najaf and H. R. Sasanfar. (2012). Response of cocklebur (Xanthium strumarium) to reduced dosags application of Imazethapyer in different growth stages of soybean (Glysin max). The 4th Iranian Weed Science Congress. 6-8 February. Ahvaz, Iran. (In Persian with English Abstract).

Sasanfar, H. R., E. Zand, M. A. Baghestani and M. J. Mirhadi. (2010). Survey of Resistance of wild oat (Avena ludoviciana) populations to pinoxaden herbicide using of seed bioassay method. The 3rd Iranian Weed Science Congress. 17-18 February, Babolsar, Iran. (In Persian with English Abstract).

Sasanfar, H. R., E. Zand, M. A. Baghestani and M. J. Mirhadi. (2010). Rapid evaluation of resistance to sethoxydim herbicide using seed bioassay method in wild oat (Avena ludoviciana) populations. 19th Iranian Plant Protection Congress. 31 July - 3 August, Tehran, Iran. (In Persian with English Abstract).

Hosseinzadeh, M., E. Zand, M. A. Baghestani, M. J. Mirhadi and H. R. Sasanfar. (2010). Estimation of yield loss caused by wild oat (Avena ludoviciana) resistant biotypes in wheat fields of Marvdasht. The 4th Iranian Weed Science Congress. 6-8 February, Ahvaz, Iran. (In Persian with English Abstract).

Books:

Zand, E., H. Rahimian Mashhadi, N. Nezamabadi, H. R. Sasanfar and M. Minbashi Moeini. 2015. Status of Weed Science in Iran and Future Directions. 67-86 pp. In: V.S. Rao, N.T. Yaduraju, N.R. Chandrasena, G. Hassan and A.R. Sharma. Weed Science in the Asian-Pacific Region. An Asian- Pacific Weed Sci. Soc. Public. Indian Soc. Weed Sci., Jabalpur, India. 389 pp.

Zand, E. and H. Sasanfar. 2018. Management of herbicide-resistrant grass weeds in wheat fields. Extension Booklet. Research Institute of Plant Protection Publication. Tehran, Iran. 21 p.

Software and E-publications:

Zand, E. and H. Sasanfar. 2018. Management of herbicide-resistrant grass weeds in wheat fields. Extension Broshure. Research Institute of Plant Protection Publication. Tehran, Iran.

Baghestani, M. A., E. Zand, F. Meighani and H. Sasanfar. (2018). Importance of impurities in assessing the safety of plant protection products (pesticides). Technical Booklet. Iranian Research Institute of Plant Protection Publication. Tehran, Iran. 40 p.

SAS, SigmaPlot and R

Thesis supervised

- Mechanisms of resistance to ACCase-inhibiting herbicides in problematic grass weeds of wheat fields
- Mechanisms of resistance to ALS-inhibiting herbicides in problematic grass weeds of wheat fields

Other achievements