

References

1. Tudi M, Daniel Ruan H, Wang L, et al (2021) Agriculture Development, Pesticide Application and Its Impact on the Environment. *Int J Environ Res Public Health* 18:1112. <https://doi.org/10.3390/ijerph18031112>
2. Mahmood I, Imadi SR, Shazadi K, et al (2016) Effects of Pesticides on Environment. In: *Plant, Soil and Microbes*. Springer International Publishing, Cham, pp 253–269
3. Cooper J, Dobson H (2007) The benefits of pesticides to mankind and the environment. *Crop Protection* 26:1337–1348. <https://doi.org/10.1016/j.cropro.2007.03.022>
4. Aktar W, Sengupta D, Chowdhury A (2009) Impact of pesticides use in agriculture: their benefits and hazards. *Interdiscip Toxicol* 2:1–12. <https://doi.org/10.2478/v10102-009-0001-7>
5. Zare S, Behzadi M, Tarzanan M, et al (2015) The impacts of pesticides on the health of farmers in Fasa, Iran. *Electron Physician* 7:1168–1173
6. Damalas C, Koutroubas S (2016) Farmers' Exposure to Pesticides: Toxicity Types and Ways of Prevention. *Toxics* 4:1. <https://doi.org/10.3390/toxics4010001>
7. Costanzini S, Teggi S, Bigi A, et al (2018) Atmospheric Dispersion Modelling and Spatial Analysis to Evaluate Population Exposure to Pesticides from Farming Processes. *Atmosphere (Basel)* 9:38. <https://doi.org/10.3390/atmos9020038>
8. Butler Ellis MC, van den Berg F, van de Zande JC, et al (2017) The BROWSE model for predicting exposures of residents and bystanders to agricultural use of pesticides: Comparison with experimental data and other exposure models. *Biosyst Eng* 154:122–136. <https://doi.org/10.1016/j.biosystemseng.2016.09.002>
9. Figueiredo DM, Vermeulen RCH, Jacobs C, et al (2022) OBOMod - Integrated modelling framework for residents' exposure to pesticides. *Science of The Total Environment* 825:153798. <https://doi.org/10.1016/j.scitotenv.2022.153798>
10. Lebeau F, Verstraete A, Stainier C, Destain M-F (2011) RTDrift: A real time model for estimating spray drift from ground applications. *Comput Electron Agric* 77:161–174. <https://doi.org/10.1016/j.compag.2011.04.009>
11. Butler Ellis MC, Miller PCH (2010) The Silsoe Spray Drift Model: A model of spray drift for the assessment of non-target exposures to pesticides. *Biosyst Eng* 107:169–177. <https://doi.org/10.1016/j.biosystemseng.2010.09.003>
12. Fujimoto A, Satow T, Kishimoto T (2016) Simulation of spray distribution with boom sprayer considering effect of wind for agricultural cloud computing analysis. *Engineering in Agriculture, Environment and Food* 9:305–310. <https://doi.org/10.1016/j.eaef.2016.04.001>
13. European Commission (2022) Population Density. In: *EC Eurostat*. <https://ec.europa.eu/eurostat/databrowser/view/tps00003/default/table>. Accessed 5 Jun 2023

14. Koninklijk Nederlands Meteorologisch Instituut (2017) Uurwaarnemingen. <https://daggegevens.knmi.nl/klimatologie/uurgegevens>. Accessed 6 Jun 2023
15. Pohjankukka J, Pahikkala T, Nevalainen P, Heikkonen J (2017) Estimating the prediction performance of spatial models via spatial k-fold cross validation. *International Journal of Geographical Information Science* 31:2001–2019. <https://doi.org/10.1080/13658816.2017.1346255>
16. Isaaks EH, Srivastava RM (1989) *An introduction to Applied Geostatistics*. Oxford University Press, Oxford
17. Li J, Heap AD, Potter A, Daniell JJ (2011) Application of machine learning methods to spatial interpolation of environmental variables. *Environmental Modelling & Software* 26:1647–1659. <https://doi.org/10.1016/j.envsoft.2011.07.004>
18. Hengl T, Nussbaum M, Wright MN, et al (2018) Random forest as a generic framework for predictive modeling of spatial and spatio-temporal variables. *PeerJ* 6:5518. <https://doi.org/10.7717/peerj.5518>
19. Sekulić A, Kilibarda M, Heuvelink GBM, et al (2020) Random Forest Spatial Interpolation. *Remote Sens (Basel)* 12:1687. <https://doi.org/10.3390/rs12101687>
20. Betzek NM, Souza EG de, Bazzi CL, et al (2019) Computational routines for the automatic selection of the best parameters used by interpolation methods to create thematic maps. *Comput Electron Agric* 157:49–62. <https://doi.org/10.1016/j.compag.2018.12.004>