On-Farm Experimentation Community Info No. 28

May 15, 2023

On-Farm Experimentation Community (OFE-C)

International Society of Precision Agriculture (ISPA)

#OFE2023

Stay on top of the latest information for the 2nd Conference on Farmer-Centric On-Farm Experimentation, which will take place in a virtual format on Dec. 5-7 2023, by visiting the conference webpage: https://www.gofen.org/ofe2023/

Relevant papers

Catalogna, M., Dunilac Dubois, M. and Navarrete, M., 2022. *Multi-annual experimental itinerary: an analytical framework to better understand how farmers experiment agroecological practices*. Agronomy for Sustainable Development, 42(2), p.20. Read the paper here.

Farhangi, H., Mozafari, V., Roosta, H.R., Shirani, H. and Farhangi, M., 2023. *Optimizing growth conditions in vertical farming: enhancing lettuce and basil cultivation through the application of the Taguchi method*. Scientific Reports, 13(1), p.6717. Read the paper here.

Van Rooyen, A.F., Bjornlund, H. and Pittock, J., 2021. *Beyond fertilizer for closing yield gaps in sub-Saharan Africa*. Nature Food, 2(10), pp.756-757. Read the paper here.

Digital tools for OFE

In this video, you can see the demonstration of the field region analysis tool in the Climate FieldView platform that can be very helpful for On-Farm Experimentation. If you watch from about 15:00 to about 21:00, the speaker provides a very good example of how a tool like this can facilitate the work of farmers in their experimentation. Granular AgStudio offers a similar tool called Treatment Analysis. This poste is not endorsing the Climate FieldView or Granular platforms. It rather shows that interesting digital tools for OFE exist.

Inspiring from other sectors

Observational studies are seldom used in agronomy. However, in medical science, it proves to be a powerful complement to randomized control trials (RCT). Gaudino et al. (2020) explain "*Observational studies provide important information on temporal trends in disease prevalence or in the adoption of surgical techniques. They can successfully evaluate the association of patient characteristics with outcomes and are key to develop and validate risk models. Observational studies tend to have greater external validity than RCTs, as they enroll a more heterogeneous population and measure the results of surgical interventions in the "real-world" outside of the highly controlled setting of RCTs (examining effectiveness rather than efficacy).*" On-farm experimentation is a research and development philosophy that explores the use of observational research in agronomy.

This letter was prepared by Louis Longchamps, co-chair of the ISPA OFE Community

Should you have something to share with the Community or the Community leaders, let us know here.