



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

Hardin County Extension News Release

For Further Information Contact:

Mark Badertscher

Agriculture and Natural Resources Extension Educator

Phone – 419-767-6037

E-Mail – badertscher.4@osu.edu

For Immediate Release – May 25, 2022

Making On-Farm Trials Easy

Hardin County – Planting season is upon us and is behind in comparison to last year. Many producers are planning on evaluating input costs and management practices on their farm this season to improve economic efficiency and stay profitable. However, there are some ways to plan on-farm research to get the most accurate data, and therefore make the best decision for your farm.

The first element to establish is what are you trying to find out? Fully understanding the question and goal of the trial is imperative to set up the appropriate treatments. Maybe your question is “What is my most economically effective nitrogen rate?” or “Does this new fungicide increase yield and pay for itself?”. When doing on farm research, consider assessing practices that are critical to the long-term success of the farm.

Once your question is determined, set up the treatments that you desire to observe. This is generally a comparison of your nontreated control or “common practice”, and the new practice or product. For trials that are assessing seeding rates and fertilizer rates, more than two treatments are necessary to determine the optimal rate.

The most important keys for effective research are replication and randomization. A replication is a repetition of a group of treatments and randomization is choosing at random the pattern of the treatments within replications. Both of these elements are important to reduce the effect of field variability skewing results, increase confidence in your data collection, and provides more data throughout the field. Many farmers split the field in half to compare treatments, however this does not account for soil type changes, low spots, hills, etc. Randomization is especially needed to ensure that one treatment is not unknowingly favored over another. We require at least three replications and encourage using four. The digital ag team has some pre-designed layouts in eFields that can be used to build your own study from, and can be found at this link <https://digitalag.osu.edu/efields/get-involved/study-implementation>.

To make your on-farm research process easier, remember to evaluate your equipment and know how many planter, nitrogen applicator, or sprayer passes are needed for the header to collect data. If using more than one pass, taking the combine through the center of two passes can also eliminate treatment carryover, especially in a fungicide or fertilizer treatment. To measure yield accurately use either a weigh wagon, a grain cart with scales, or a calibrated yield monitor.

The information that is collected from on-Farm trials done with Extension educators can be published in our eFields annual report, showcasing on-Farm research done throughout the state, giving producers and educators a platform to share their information. If you are interested in conducting an on-Farm trial this crop year, contact Hardin County OSU Extension Educator Mark Badertscher to help design and assist with your field trial at badertscher.4@osu.edu or 419-767-6037.

Article written by Taylor Dill and Elizabeth Hawkins, OSU Extension-Ag Crops Team and edited by Mark Badertscher, OSU Extension-Hardin County.