Take Part in On-Farm Research

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The University of Nebraska–Lincoln produces a lot of research, but many farmers wonder if researchers will work on their farm. The Nebraska On-Farm Research Network provides an opportunity to conduct research on your farm. As we all know, farming operations vary drastically from one end of the state to the other. Farm management strategies, tillage practices, crop selection, climate, soil type, topography, etc., will vary depending on your location. This variation makes it difficult to test research results in one or two locations, and on-farm research can be that important link between the research and the application.

On-farm research involves using your land, your equipment, your practices and the products you apply to learn how a product or practice would directly affect your farming operation. The network is quite simply a collaboration of growers from across Nebraska working with Nebraska Extension faculty to conduct on-farm research and share results. Extension faculty will help with the project selection, design, statistics and final data analysis to assist you in the research process.

The first step in participating in on-farm research is to identify the right research questions. For many questions, the answer may already be available and proven, so analyze your situation or visit with your local Extension educator about potential studies.

A few common examples are: corn and soybean planting population studies, cover crops, seed treatments, and many others. When evaluating your question, ask yourself if you have field sites, equipment and resources to appropriately test the question.

The primary costs to the operator are the time it takes to implement the trial and gather data. The foundation of on-farm research is doing the research within your typical operation, so yield monitors and precision ag tools greatly improve the ease of conducting the research. Another cost may be when the product or practice tested does not enhance yield or profitability and you do not receive a return on your investment. This cost, however, would be greater if the product were used over your entire field or farming operation.

Site selection is another important component. The productivity of a field can vary significantly from one edge to the other due to soil type, slope, previous history, etc. A uniform treatment comparison site with the same moisture, soil and slope would be ideal; however, this is hard to find. This is where the power of replication, randomization and statistics come into play.

The experiment layout is designed to address the field variability and give you confidence that yield differences are due to the product or practice tested. Once the research project is designed and the site is selected, it is time to conduct the research.

Data collection is a key element of on-farm research. It is important to think about what data you need to collect before you conduct your study. Planting and harvest dates, hybrids, varieties, plant populations, chemical applications, rainfall/irrigation, etc., are all data you would typically record. Additional data to collect may include photos, root, digs, pond and/or node counts, soil or water samples for moisture, weed damage, weed/insect pressure or other data important to your research question. Data recorded throughout the season allow you to better interpret the data once the harvest is finished. Yield data collected during harvest is very important and should be done according to your research design. Harvest weights can be collected with a calibrated weigh wagon or yield monitor.

Once the data is collected, Extension will help analyze the results. Statistical analysis of the data will give you confidence in your data and research findings. Statistics will allow you to take into account the occurrence of a random variable and manage the outcome of what would "normally" happen. Statistical analysis will give you a probability of getting similar results in another year or field.

If you are interested in joining the On-Farm Research Network, contact Tyler at the Nebraska Extension office in Lancaster County office at 402-441-7180.

Poor pond management may result in algae problems, limiting the pond’s aesthetic value and its ability to support aquatic life.

How Ponds Work

Most Nebraska ponds are man-made. Ponds need to have good water quality, favorable aquatic habitat and proper management in order to develop and maintain the goals for use. Given that a pond is properly constructed, good pond management includes:

• controlling aquatic weeds and algae
• controlling terrestrial weeds
• controlling nutrient inputs
• enhancing food availability for fish
• harvesting (controlled) to maintain the balance of predator and prey populations
• preventing situations that may cause fish kills

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