



Considering Test Plots?

by Mike Bakker CCA-ON

Test Plots – Why bother? Sure, it can slow down planting and harvest but it will provide some very useful information to make real world farm decisions.

As growers wrap up 2017 and move into meeting season and planning mode for 2018, one of the biggest things growers want and need to see are trial results from the past year. As farm size grows, there is an increasing number of growers that don't want to slow down planting to conduct on farm trials. This is unfortunate given the fact that the larger sized growers could stand to benefit from conducting some type of on-farm trials. The biggest reason for this is that trials done by manufactures can be limited in scope due to resources and budget constraints. Ultimately, getting on farm research done and conducting trials can be very easy and is getting even easier with increased automation of today's farm equipment.

When a grower looks to setup a trial on the farm, how the trial is designed and put into the field is just as important as the yield numbers at harvest. In my experience in building and implementing trials, the set-up can have huge impacts on the value of the trial and how useful the data from the trial is.

The first step for any trial is to have a suitable location. Choose a field that has consistent soil properties and existing nutrient levels. Even the flattest fields can have slight variations in soil and nutrients levels. Whatever can be done to minimize these fluctuations will help to increase the value of the test. Also make sure the field has the same previous crop. If a field was cut into half the previous year, a corn-corn rotation can have a different result than a soybean-corn rotation; especially when looking at fertilizer and fungicides treatments. Next is to look at plot size. You want to make sure it is large enough for good data collection but not so large that you're looking at differences in entire farms.

Once you have decided where the trial will be and how big, it's time to get into action. When putting out a trial make sure to keep a good set of records for it. These will ultimately make it easier to get good data collected from the trial. A trial record should always include key things like, where the trial is located, planting date,

conditions when the product was applied, rates the product was applied and crop stage. Be sure to use physical field stakes and/or flags to mark treatments in case of a data crash or a sudden lapse in memory. Flags are inexpensive and can save a lot of time and effort at the end of the season. Some retailers/manufactures may supply flags so they can visit the trial all season long. Keeping good notes through the growing season can be valuable information to have as well as yield data.

So, now that the trial has been initiated, planted and watched through the season it is time to think about harvest. This is where trial design and record keeping will pay-off as it makes it easier to calculate the area and size of the trial which will translate into good data. Yield collection can be as easy as a yield monitor result or, even better, a grain cart equipped with scales can make yield collection easier with less variation. This is also where those previously placed stakes and flags come in handy as data flow from the sprayer/planter is sometimes misplaced before the combine gets to the field. Good harvest data will validate all the work done in season.

Many times there is a positive result and changes can be implemented in the farm operation. Sometimes there is a negative result and this is where record keeping is valuable to help determine the cause of this negative result. Also, it's good to try things a few years in a row to be sure the effect was not due to a random weather event or other conditions beyond your control. Doing different replications of a trial can minimize issues and increase confidence in a product.

Trials are critical for increasing yields and making your farm operation better and more efficient. Without generating good trial data, it becomes difficult to identify new technologies and understand if these products work within your farming operation. New data technologies being implemented on farms is only going to make it easier.

For copies of this article and a complete catalogue of previously published columns, check our website www.ccaontario.com under the "Communications" tab.



Mike Bakker is the Canadian Business Manager for Helena products. Helena is a major fertilizer manufacture and crop input supplier in the United States and is #2 on the CropLife 100.

There are over 600 Certified Crop Advisers (CCA) in Ontario. Each CCA has demonstrated their knowledge about Ontario crop production by passing the required exams and achieving international competency standards as set by the International CCA Program. In addition, they have the crop advisory experience, the education, the commitment to continuing education and have signed a comprehensive code of ethics, which places the grower's interests first.

This industry driven program helps ensure that Ontario crop producers are well served by those providing their crop production advice. This article was written by one of those CCA's.