

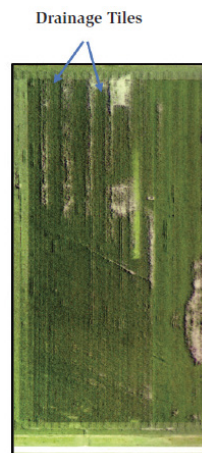
Quick Reference Guide TO STRIP TRIALS

At the Iowa Soybean Association Research Center for Farming Innovation (RCFI), our goal is to deliver innovative research, tools, and technical support to assist farmers. One of the main ways to accomplish these goals is by implementing on-farm replicated strip trials. This guide is meant to be a tool for farmers who are interested in doing research on their own farm, with some general tips and tricks we have learned over the years. While you can use this to develop your own comparisons and trials, our team is one of the best resources you can utilize for research. We are always available to assist you with questions or to design and implement a trial on your farm.

BASICS OF ON-FARM TRIALS

One of the most important points of doing on-farm research is that it is being done on your own fields, with your own equipment. While looking at results from others can give us an idea of different practices and products, the way to truly know what works on your farm is to implement a trial comparison.

Field selection can be very important when designing a trial. Not every field is the same, and what works on one area may not work on another. Consider this, if a field has never experienced white mold, would a product targeting this disease be beneficial on this field? Maybe, but a better choice would be the field that seems to have issues every soybean year.

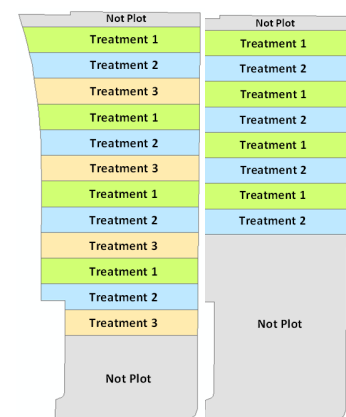


Object 1

Randomize treatments when possible. This isn't always possible to do, but randomizing treatment layouts can also remove variability from field features. Especially where the trial may be located on inconsistent landscape features or possibly line up with tile lines, randomizing the layout can help to reduce some uncertainty. The example in Object 1 shows a trial lined up directly over tile lines.

Field and trial layout is another very important piece in the project design process. Our recommendation has always been to replicate the product or practice a minimum of three times, but more replications are better. This method allows us to remove some of the variability that we might see from the field itself (i.e. landscape features, soils, tile lines, historical management). The other common setup is a split-field design, which we do not recommend due to field characteristics not being equal across the entire field.

Start simple with only two or three comparisons for new farmers. Trials can get very complex, and we find it best to start small and get accustomed to implementing and collecting good data. Additional treatments in a trial can add important information, but it is also another level for mistakes and issues to arise. Object 2 shows a general layout for a two and three treatment trial with four replications.



Object 2

Keep all other management practices consistent.

Think ahead to harvest, make sure to consider how wide your combine is. For soybean, if harvest is going to occur at an angle, strips should be made wide enough to collect data. A rule of thumb when deciding on treatment width is at least two times your combine header width. This ensures that at least one clean pass (no treatment mixing) can be collected. If equipment allows for a prescription, strips could also be established at an angle but may be more complicated to start and complete.

HARVEST DATA

There is time, energy, and cost to setting up a field trial and it's important that all of that is not lost with the combine in the fall. With proper planning and design, harvest should be straight forward but still requires some considerations to complete. Below are a few tips to help ensure data is accurate and beneficial to answering the questions we posed.

- To avoid calibration issues, only use one combine to harvest the trial area
- Attempt to harvest the entire trial in a single day
- Make sure the combine lines up with the treatment strips (see below for layout considerations)
- Backup data once it has been collected
- Analyze the data on your own, or send it to one of the RCFI Field Agronomist to assist in the process



ADDITIONAL TIPS AND TRICKS

Don't over complicate your trial comparisons, sometimes this can lead to making the overall project too complicated to glean any useful information.

- Replicate strips, more is better
- Don't be afraid to reach out for assistance
- While weather events can result in a lost trial, these can also result in additional trial opportunities
- Record all information, including layout and management information
- Keep all other management decisions consistent across the field and trial area. This goes back to keeping trials simple, over-complicating the trial can result in a lost trial

ADDITIONAL RESOURCES

Replicated Strip Trial Individual Field Reports database

Results from all our research from 2005-2022 is available on our website (iasoybeans.com/research/results). Users can filter by crop, year, projects and regions.

ISA Tools

We also have a growing collection of tools developed within ISA. These are available to use on our website (iasoybeans.com) and cover a range of topics from VR Seeding to project level analysis.



Scan this code to view the full Strip Trial Guide



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