GROWERTALKS

Growers Talk Production

4/30/2025

Trial & Error: A Grower's Guide to Fewer Facepalms

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When it comes to growing trials, there may be a misconception that only large labs or corporate giants have the resources to conduct meaningful research. "Meaningful" is pretty subjective, too.

As a grower, you're probably conducting research and development (R&D) in-house already. After all, growing is applied science! You could be testing a new substrate, exploring plant growth regulators, experimenting with different environments or comparing plant varieties. You may not immediately think of it as R&D, and while it may not be some niche scientific uncertainty or intricate experiment, you're learning something.

Label it as formally or informally as you'd like, we know a good grower is one who continuously challenges, explores and learns. The key is to keep it simple, think practically and approach your trials with a clear plan (easier said than done). I've enjoyed noodling over ideas big and small with our production team over the years and honing our experimenting craft. As the growing season is ever-busier and our "what ifs" hit the production floor this year, I'm reflecting on some of the mistakes and bumps we've encountered in the past. Hopefully, we can help you avoid similar things!

Trial planning: Practicality & focus

My mistake: Not isolating the variable.

It's important to take a step back and think about the focus of your trial, the variables and how you're going to execute. A mistake I've made in the past is variable overload, trying to test too many things at once. It can muddy results and we may not get clear, actionable data. Instead of testing multiple things simultaneously, take it one step at a time.

If you're working with a new PGR, for example, focus on just that. We've made a mistake where multiple products for controlling stretch were tested against one another, but we didn't consider other external factors that could be influencing the results. We tested everything side by side, but failed to include a mutual control group that should have had no PGRs at all. This oversight meant we couldn't fully isolate the products' effects from other potential variables, such as climate or fertigation strategies. "Were the PGRs doing their job … or was it just cold in here?" Of course we can draw some conclusions by comparing the treatments, but our niggling grower brains just want to factor in (or out) all possibilities to develop even more understanding.

Also, consider the complexity and scale of your plans. Is it overkill to do a dozen different rates over a dozen

application times? Are you trialing three pots among 30,000 and expect them to be treated separately? Try to make it as easy as possible to get clean results … your very busy later self will thank you.

Flags, labels, strobe lights: Do what you gotta do

My mistake: "Where did that go …?"

Imagine putting all the effort into sourcing materials, lining everything up, putting the work in, setting things down, eventually seeing some trends … and then things get lost. I've been there. In some of the first substrate trials I ever did, I used stake tags to mark different areas of the bed where I'd added various amendments. The issue? Plants eventually moved and the tags had gone missing. I had no idea which substrate was in which bed and my trial was effectively nullified. One can argue, "Well, if everything blended up looked the same, the treatments were not very effective anyway." Sure, BUT … what about those few nice plants over there? Could those be my long-lost clay trial? Those few larger ones we got throughout … were those the cricket frass amendment? What about those plants over there that straight up died? You're left with even more questions! (And, no, I could not identify cricket poo in a peat/bark mix as much as I wished I could).

Now when we run trials, especially those that are high stakes or high cost, we make sure that every single pot or tray is clearly labeled. In larger-scale trials where it isn't practical to label every single unit, we consider labeling even a percentage so we can find it back in the worst-case scenario of a plant jumble. Without a doubt, labeling is one of the simplest and most effective ways to prevent headaches later on. Don't skimp on this step; it's the difference between success and scrambling.

Write it down & make it accessible

My mistake: "I'll remember that later."

Raise your hand if you've ever had a similar conversation with your peers:
"Remember that test we did five or seven years ago? What did we get out of that?"
"I remember THIS."
"Well, I remember THAT."
"Well, let's try testing it again."
(You can't see me, but I'm flailing my arm over here in British Columbia.)

It's easy to think you can rely on memory to reflect on your progress, but here's the hard truth: your memory will fail you. To avoid this fate, you need a documentation system that works for you. It sounds so dry and administratively cringey, but I promise it's worth it. Start by writing everything down. From the initial plan to the implementation date and subsequent observations, document each step of the process. It doesn't need to be fancy or perfect, it just has to be legible, understandable and easy to find later. Quick notes or photos in a WhatsApp message or Google Doc to record what you're seeing can be a lifesaver (okay, that's a little dramatic, but I'm just that passionate about it). I've started logging photos, videos and observations in one of our company's Slack channels for quick uploading (and comments from peers), then transferring them to a more permanent location like Google Drive for searchable storage later on.

The reason is simple: You don't want to repeat trials or forget important insights. Pictures, feedback and conclusion efforts with peers is invaluable. Without proper documentation, you risk having the lessons learned from one trial go unrecognized—or worse, lost altogether. And trust me, time not spent in writing the important things down means more time and other resources spent likely repeating things down the road. It's one thing to redo trials in efforts to hone the idea, it's another thing altogether to start from scratch.

In-house R&D doesn't have to be complicated, expensive or snooty. Have fun with it, keep learning and don't expect

it to be perfect. With a little planning and a commitment to documenting your results, you can better capture the things you're likely already exploring. You'll also be gaining valuable insights that help drive your operation forward and there's nothing more rewarding than seeing your work and data lead to real improvements in your production … and your bottom line. **GT**

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