

GROWERTALKS

Growers Talk Production

2/1/2021

Molecular Cooking in the Greenhouse

Albert Grimm

When I need to blow off steam I go to my kitchen. Cooking is my stress relief. My mother taught me how to cook with scarcity methods. Recipes were optional, as it was often difficult to get ingredients. We had to work with what was available, and we had to learn how each component contributed to texture and flavor of the food. We used our hands because we needed to adjust ingredients until everything touched and felt just right. Cooking recipes work fine under ideal conditions, but in my kitchen, I'm more interested in WHY certain ingredients work together to create something tasty with whatever's at hand.

In the greenhouse, too, I loathe production recipes. They may work nine times out of 10, but unless we know WHY they work, we haven't much of a chance to fix things when they don't. We must understand the contribution of each ingredient—such as temperature, light or nutrition—and the interaction between these ingredients before we can make meaningful adjustments, which lead to improved outcomes.

In greenhouse production, we repeat what works and we don't repeat what doesn't work. This is the principle behind every growing recipe, but we shouldn't think of this as mere trial-and-error learning. The problem with doing so is that we don't find out what doesn't work until we try and fail, and if we fail often enough, it becomes very costly.

I developed a strict discipline to ask myself the question "Why?" whenever I make any growing decisions. I also make a point of explaining my decisions to our management and to junior growers because this self-imposed need to teach and explain forces me to think even deeper about every method I apply. I cannot explain a decision to others unless I can explain it to myself. Consequently, I force myself to learn, research and deepen my understanding of the underlying science until a sense of comprehension sets in. Credible answers usually require much more than a quick Google search. It may take some long and difficult reading, maybe even a university textbook, before the puzzle comes together and the lightbulb goes on inside my head.

This might be a strange concept for you: Why would anybody voluntarily work through a textbook? In one's spare time, nonetheless? Most of us spent years at school trying to minimize our textbook exposure to no more than what's critically necessary for the passing of exams. This is the result of the convenient little hypocrisy where we tell ourselves that we attend college for an education. Really, we just want to pass our exams and get a paper that gets us a job with a fancy title and good pay. By the time we realize that we didn't extract our tuition money's worth of knowledge and education from our teachers, it's usually too late.

Luckily, though, with the right motivation, we all have the same access to all the learning materials and in-depth information as we had when we were students. Even if you never went to college, there's nothing that keeps you from purchasing textbooks and working through them and learning more science from them than you ever thought you'd want to know. Once you step beyond the realm of recipes and plunge headlong into the deep waters of

science, you become a knowledge-motivated learner rather than an exam-motivated student.

Robert Pirsig wrote in his masterpiece on education, "Zen and the Art of Motorcycle Maintenance": "Motivation of this sort, once it catches hold, is a ferocious force, and [you] won't stop with routine information. Science is going to come within your sphere of interest because you see that you need it. [Such education] will be the real thing." **GT**

Albert Grimm is head grower for Jeffery's Greenhouses in St. Catharines, Ontario, Canada.