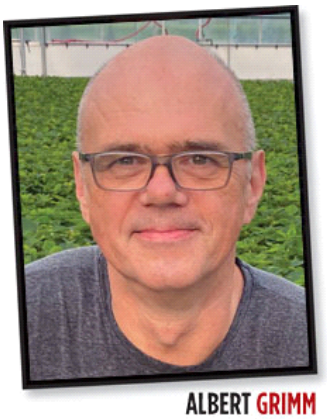
GROWERTALKS

Growers Talk Production

9/30/2025

Fear Not—But Respect!

Albert Grimm



I own a collection of old horticulture textbooks, mostly accumulated from browsing in thrift stores. Some of these books offer a wealth of half-forgotten advice on victory gardening. Others guide the reader through low-cost methods of crop production.

My interest in them has nothing to do with romanticized nostalgia. These books teach me valuable perspectives on why we came to use the methods that we apply today. You can't Google any of this because these books have never been fed into the deluge of data behind AI engines.

The sections on pest control are especially interesting because the problems they describe are the same as today despite generations of development in pesticide technology. Some of the recommendations read like the comment sections in online discussion forums. One author suggested to spray spent crank-case oil from the farm tractor for mite control in fruit trees. I have no doubt that it would have been effective because old motor oil is saturated with polycyclic aromatics and heavy metal compounds—all toxic. Not just for the mites, but also for humans and for the trees.

Growers were resorting to such methods because pests had become increasingly resistant to commercially available products. Lead-arsenate and kerosene were widely used as insecticides. Salts of cadmium and mercury were among the go-to choices for fungicides. Mostly heavy metals ... and not exactly healthy. These were elemental chemicals, so they didn't metabolize or "go away," but accumulated in treated fields. By the mid-1920s, arsenic poisoning from dried fruit had become enough of an issue that Britain threatened to ban all imports unless American farmers established maximum residue limits. During the 1930s, organic agriculture developed as a direct answer to toxicity concerns. Resistance, too, became a buzzword for growers when insects refused to get killed by arsenic. The issues that farmers had to contend with were the same as today.

It was against this backdrop that DDT and Parathion, the first synthetic insecticides, came onto the market. Initially, they were a true blessing for farmers because they had no apparent residual toxicity and they were amazingly effective. With typical human hubris we began to deploy them in exorbitant abundance, whether an application made sense or not. It took less than two decades and we had all but lost these marvelous tools. Their mass deployment had rendered pest populations resistant, while the non-farm environment and the health of exposed humans suffered severe damage. We lost this promising technology not because DDT or other early synthetics were inherently "bad," but because we failed to respect them for what they were: tools to be used properly and in context.

Today, farmers still face the same struggle with pesticide efficacy. During my 45 years in farming, I've experienced the rise and fall of more than half a dozen "silver-bullet" answers to pest control problems (e.g. systemic carbamates, synthetic pyrethroids, benzimidazole fungicides, spinosyns and neonicotinoids), each of which crashed just as rapidly as they rose to fame. With every new iterance of our pest control saga, the non-farming public has grown more apprehensive of our practices. Young growers come into our workplace with a deep fear of pesticides. This is a problem and not just for the reason you may think.

Fear is the wrong approach to pesticides, but so is overconfidence. We quickly lose our fear when we realize that we're still alive and suffer no apparent illness despite years of pesticide use. Fear is then replaced by overconfidence in our ability to control any ill-effects of the products that we use. We still lack the necessary respect—respect for the limitations of pesticide technology. Respect for the public who justifiably fears pesticides. And respect for the fact that there's no such thing as a silver bullet in pest control.

If pest control relies exclusively on a steady stream of new technology, then farmers are forced to cling to one failing solution after another. Instead, we should learn how to work with the complexity and limitations of available control options, and we should use these options with long-term sustainability in mind. If we can develop such respect for the science of pest control, we'll be able to break the cycles of boom and bust, and create true sustainability—both for farmers and for the laymen public. **GT**

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