

Monsanto Seeds Unleash Unintended Consequences Across U.S. Farms

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Soybeans stand in a field during harvest in Princeton, Illinois.

Photographer: Daniel Acker/Bloomberg

There's just something about the herbicide dicamba that's always made it hell on soybean and cotton crops.

So for decades, the industry marketed it for use on grassy species, wheat and sod and the like, and other farmers mostly had to steer clear. Then, in 2005, Monsanto Co. hatched a two-point plan: First it would engineer soybeans and cotton to make them dicamba-resistant; next it would create a special variant of the pesticide less likely to waft off to where it isn't welcome.

Part one of the plan is done. The seeds are in the market. The second part is not -- and that's a big problem. Some farmers growing the new seeds seem to be enjoying the sense of invincibility it's given them. Despite state and federal prohibitions, they've taken to spraying dicamba, and the stuff has been drifting all over the U.S. heartland. For folks like Landon Hayes, who grows earlier-generation soybeans in Campbell, Missouri, the consequences have been costly. He says 500 acres of his crops were damaged this summer by stray wisps of dicamba. And now he feels compelled to buy the engineered Monsanto seeds to avoid injury next season.

“They knew that people would buy it just to protect themselves,” Hayes says. “You’re pretty well going to have to. It’s a good marketing strategy, I guess. It kind of sucks for us.”

Dicamba-Misuse Complaints

Christi Dixon, a Monsanto spokeswoman, calls suggestions it orchestrated the situation “absolutely false.” The company took “extensive steps,” she says, to remind growers that applying dicamba to the new Xtend-brand plant lines would be illegal.

The U.S. Environmental Protection Agency has approved the herbicide for more than 12 crops, but never during the summer-growing season on cotton and soybeans. Monsanto is waiting for EPA approval of its enhanced dicamba, a chemical it’s never manufactured before. The EPA may issue its decision before the end of the year and, if it gives the okay, regulations for the product’s safe use on cotton and soybeans.

In the meantime, Missouri has received 117 complaints alleging dicamba misuse afflicting more than 42,000 acres, according to an EPA [compliance advisory](#). Farmers can face fines of \$1,000, a penalty [some lawmakers](#) hope to increase. Nine other states from Illinois to Texas are investigating claims too.

‘Public Outcry’

In Arkansas, dicamba drift has been such a pest that a proposal’s in the works to boost maximum fines to \$25,000 from \$1,000 and bar nearly all dicamba-product use near row crops. “There’s a lot of public outcry even though there’s not a lot of formal complaints,” says Susie Nichols, a manager in the pesticide division of the Arkansas State Plant Board. “People don’t want to turn on their neighbors, but they still want something done.”

The problem may get worse as Monsanto aims to increase sales of Xtend soybeans 50-fold in the next few years. “If the EPA doesn’t do something, that means every farmer needs to buy Xtend to protect themselves from their neighbor,” says Jonas Oxgaard, an analyst at Sanford C. Bernstein & Co.

Monsanto created Xtend to prolong the usefulness of its Roundup Ready system. For two decades, farmers have relied on Roundup herbicide, using it so widely for so long that some weeds evolved to survive it. So the company decided to tweak the system with enhanced seeds

and dicamba. Xtend cotton hit the market last year, and the soybeans debuted this year.

VaporGrip Formula

The company is counting on rapid adoption of Xtend to boost earnings in its seed and pesticide units. It sold about 3 million acres of the cotton and 1 million acres of the soybeans this year, and expects the soybeans to rise to 15 million in 2017 and 55 million by 2019. As dicamba-resistance is added to other crops, the technology may eventually be on 250 million acres, Monsanto told investors Aug. 17.

The recipe for the new dicamba includes something called VaporGrip, which is supposed to reduce volatility; the problem with existing formulations is that the chemicals can vaporize off plants on warm days, making the herbicide vulnerable to drift. The chemical company BASF SE is working on something similar to VaporGrip.

Jason Birdsong says he noticed dicamba trauma last month at his farm in Giles County, Tennessee, in the form of twisted, seedless soybean pods across 70 acres. Before, he hadn't planned on paying a premium of \$5 to \$10 an acre for Xtend -- any extra spending during a time of falling food prices, which is putting pressure on farmers, has to be carefully weighed. But now Birdsong is reconsidering.

One Goof

“It don't take but one goof like we had this year, and then I think it'll pay to have that protection,” he says. “If this dicamba thing catches on, I'm sure we're just going to ride that wagon.”

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Soybean and cotton farmers can buy Xtend to fend off dicamba, but growers of fruit, vegetable and other such crops don't have that option, says Steve Smith, the agriculture director at Red Gold, the world's largest closely held canned-tomato processor and chairman of the Save Our Crops Coalition. The group is petitioning the EPA to classify the coming products from Monsanto and

..... BASF as “restricted use status,” which would require they be dispensed by certified pesticide applicators.

While the new dicamba sprays may be less turbulent, Smith figures they’ll probably still have some wafting issues, and even a little dicamba can go a long way. “It’s like getting run over by an SUV rather than an 18-wheeler,” he says. “It doesn’t really matter if you’re dead.”