

GMO grass that 'escaped' defies eradication, divides grass seed industry



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After more than a decade of unsuccessful efforts to eradicate the genetically modified grass it created and allowed to escape, lawn and garden giant [Scotts Miracle-Gro](#) now wants to step back and shift the burden to Oregonians.

The federal government is poised to allow that to happen by relinquishing its oversight, even as an unlikely coalition of farmers, seed dealers, environmentalists, scientists and regulators cry foul.

The altered grass has taken root in Oregon, of all places, the self-professed [grass seed capital of the world](#) with a billion-dollar-a-year industry at stake. The grass has proven hard to kill because it's been modified to be resistant to Roundup, the ubiquitous, all-purpose herbicide.

The situation is particularly tense in [Malheur County](#), where Scotts' altered grass has taken root after somehow jumping the Snake River from test beds in Idaho.

"Imagine I had a big, sloppy, nasty Rottweiler, and you lived next door in your perfectly manicured house," said Bill Buhrig, an Oregon State University extension agent in Malheur County. "Then I dump the dog in your backyard, I take off and now it's your problem."

The battle pits farmer against farmer, regulator against regulator, seller against buyer. Scotts spokesman Jim King insists the company has done its part and significantly reduced the modified grass's territory. The U.S. Department of Agriculture, which for 14 years had refused to deregulate the controversial grass on environmental concerns, suddenly [reversed course](#) last fall and signaled it could grant the company's request as early as this week.

Many find the prospect alarming. The Oregon and Idaho departments of agriculture oppose deregulation, as does U.S. Fish and Wildlife, which predicted commercialization of the grass could drive endangered species to extinction.

"We don't understand the ecological or the economic impact of this," said Katy Coba, former director of the Oregon Agriculture Department. "We need to figure out the extent of the contamination."

Some growers and dealers fear it's only a matter of time before the altered seed reaches the Willamette Valley, the heart of Oregon's grass business.

"That would be a catastrophic event for Oregon's grass seed industry," said [Don Herb](#), a Linn County seed dealer. "We don't need Scotts or others to put our industry at risk."

Many international buyers will not buy genetically modified products, citing potential safety concerns. Some countries ban them outright. It was just three years ago that some Asian buyers suspended purchases of Northwest wheat after traces of genetically modified strains were detected.

The modified grass has so far been confirmed only in Jefferson and Malheur counties, where it escaped earlier field trials. But The Oregonian/OregonLive has learned that the altered grass has already been grown in the valley. Scotts confirmed that it conducted small-scale field tests in Gervais and Corvallis in the 2000s.

A new and improved grass

Genetic modification dates back to the 1970s and really took hold in agriculture in the 1990s and 2000s. The ability to alter a plant's genes offered the promise of species that are more productive, more resistant to disease, even immune to herbicides.

Today, more than 90 percent of U.S. soybeans, cotton and corn are genetically engineered.

Scotts hoped gene modification would help it revolutionize the front yard. It invested \$100 million to develop a better, more sustainable grass in the 1990s and 2000s largely through the new technology. In partnership with Monsanto, it created a type of creeping bentgrass unaffected by Roundup.

The initial target market was the golf course industry, King said. Creeping bentgrass is commonly used on greens and tees because it can survive being mowed down practically to the dirt. "It was incredibly attractive to the golf industry," King said. "Creeping bentgrass is probably as good a playing surface as you'll ever find in the northern U.S. But it's also really subject to infestation from other grasses."

The allure of the new grass was simple: Golf course greens keepers could use a single herbicide -- Roundup -- to kill everything but the desired bentgrass.

Scotts launched field trials throughout the country, including in Canyon County, Idaho, and Jefferson County, Oregon.

The "escape"

On two occasions in August 2003, hot afternoon winds whipped through the fields north of Madras, scattering the modified seed for miles, including into the Crooked River National Grasslands. Signs of the altered grass were found 13 miles away from the test fields, according to federal documents.

The timing couldn't have been worse for Scotts. It had sought the blessing of the U.S. Department of Agriculture just the year before to sell the altered seed commercially.

It was an extraordinary request. Scotts' grass was one of the first genetically modified perennials. Unlike annual food crops, perennials typically survive the cold months and can expand via its seeds and the shoots it sends out. Its tiny seed is easily propelled by wind, water and hungry birds.

In 2007, the agriculture department fined Scotts **\$500,000** for allowing the escape and held Scotts responsible for controlling and eradicating the engineered grass.

Then came news the grass had spread further.

In 2010, significant patches of altered grass were found along irrigation canals in Malheur County. No one is quite sure how or when it got there, though it's believed to have come from a test field in nearby Parma, across the Idaho border. The seed somehow jumped the Snake River and has established itself intermittently from the tiny town of Adrian, north to Ontario and beyond to the Malheur River's junction with the Snake, a total distance of nearly 30 miles.

The runaways weren't Scotts' only problem. U.S. Fish and Wildlife determined that commercialization of the modified grass could actually **"jeopardize the continued existence"** of two endangered plant species and would "adversely modify" critical habitat of other endangered species, including Fender's Blue Butterfly, found only in the Willamette Valley.

There were other unexpected developments. Scientists from Oregon State University and the Environmental Protection Agency found that the modified grass had crossed with feral grasses, passing along its Roundup resistance.

Controversial deal

As chair of the **Malheur County Weed Board**, Jerry Erstrom has become an outspoken player at the center of the Scotts controversy. The Vale native is a retired Bureau of Land Management employee and still grows hay.

Erstrom says he learned in February 2016 that Scotts had reached a deal with the U.S. Department of Agriculture six months before. Scotts was abandoning its plan to commercialize its altered grass. The waning popularity of golf had convinced Scotts their grass was no longer a viable product, King said.

Erstrom had reason to worry. He sells his hay largely to foreign buyers, who won't hesitate to find another supplier if there's any sign of genetically modified material. But what really got Erstrom riled was this \$2.8 billion-a-year corporation **planning to phase out** its lead role in the effort to eradicate the grass.

"Instead, they want the good people of Malheur County to clean up their mess," he said.

That will not come cheap. In its 2014 10-K filing to the U.S. Securities and Exchange Commission, Scotts "recognized \$2.0 million in additional ongoing monitoring and remediation expense for our turfgrass biotechnology program." King said the company's been spending about \$250,000 a year to control the grass.

King contends Scotts has agreed to remain involved in the cleanup for 10 years. But for the latter seven years, Scotts is required only to operate an informational website on how to deal with its grass.

There were other curious developments. Though it was abandoning efforts to commercialize the grass, Scotts still wants it deregulated. And the federal agency, which had refused for 14 years to sign off the new grass, suddenly seemed eager to do so.

Dr. Michael Firko, deputy director of the Animal and Plant Health Inspection Service, a department within the U.S. Department of Agriculture, said Scotts's decision not to bring the grass to market changed the equation. ""Based on the 2002 petition, we were anticipating hundreds of thousands of acres of (the altered grass) on golf courses across the country."

In a move that shocked some in Malheur County's conservative agricultural community, Erstrom called in the **Center for Biological Diversity**, a fierce environmental group with an office in Portland best known for its work on endangered species issues. Erstrom hired Lori Ann Burd, director of the center's environmental health program, as his personal attorney.

Scotts countered by bringing in Paulette Pyle, former director of Oregonians for Food and Shelter, a pro-herbicide agriculture lobbying group. Pyle, who declined to be interviewed, warned local residents against getting involved with the environmental group, said Erstrom and others.

Dan Anderson, a Malheur County rancher and official with the Oregon Farm Bureau, said the presence of the environmental group escalated tensions. He said the spread of the grass has been blown out of proportion by the critics.

It's true, the altered grass's range now stretches for nearly 30 miles he said. But the plants are widely dispersed. "If you take every bentgrass in the county, you could put it on one quarter acre," he said.

As for Burd, she confirmed her group is considering suing the U.S. Department of Agriculture over its handling of the altered grass and is highly critical of both the agency and Scotts. She said she's skeptical that Scotts actually will end its effort to sell the new grass. Even if it does, Scotts' patent on the technology expires in 2023, potentially paving the way for someone else to pick up

the effort.

Firko, of the USDA, defended the agency's handling of the case. "I think we did a great job getting the commitments we did from the company," he said.

The contamination factor

In a Kansas City federal courtroom last year, Midwest corn growers launched a massive class-action lawsuit against **Syngenta AG**, claiming the company's genetically modified corn contaminated their fields of non-GMO corn, costing them billions of dollars in international sales.

Similar **shock waves** reverberated through the Northwest wheat industry in 2013 when Asian buyers temporarily suspended purchases after genetically modified grain was detected in locally produced wheat. Officials were at a loss to explain how the contamination occurred.

In 2011, Bayer Crop Science **paid \$750 million** to settle similar complaints filed by Southern U.S. rice growers. In 2006, trace amounts of the genetically modified Liberty Link rice, developed by Bayer but at the time not approved for human consumption, were found in U.S. long-grain rice stocks.

As consumers make their own decisions about genetically modified agricultural products, it is farmers dealing in non-GMO crops that claim the biggest financial losses due to inadvertent contamination.

Until Scotts' modified grass, Oregon's grass seed industry was a GMO-free zone, a great comfort to the many European and Asian customers who refused to buy genetically altered products. At the same time, Scotts was an important customer and partner for many of the state's 1,500 growers.

Herb, owner of OreGro Seeds Inc., called upon state regulators and lawmakers to protect the industry. "We need to get out in front of this," he said. "This is an invasive weed that in my opinion you can't control."

Many international buyers will not buy genetically modified products, citing potential safety concerns. Some countries ban them outright. It was just three years ago that some Asian buyers suspended purchases of Northwest wheat after traces of genetically modified strains were detected.

Jefferson County grass seed growers have already been dealing with contamination. The altered grass has at times sprouted in their fields of Kentucky bluegrass, requiring them to implement laborious seed cleaning processes.

Mike Weber, of **Central Oregon Seeds** in Madras, said local growers jumped at the chance to try growing the new grass. Scotts was and is a long-time customer and trusted partner. "The growers were enthused," Weber said. "Maybe we rushed into things. If you asked us now whether we would ever want to get involved again in production of a GMO seed crop? The answer would be no. No way."

Herb said the state needs to do what the feds refused to do: declare Scotts' altered grass a plant pest and take steps to eradicate it once and for all.

Carol Mallory-Smith is a weed scientist at Oregon State University who's been monitoring the new grass since its initial plantings. It was Mallory-Smith who first confirmed the altered grass had established in Malheur County.

As the issue began to heat up last year, she returned to Jefferson and Malheur counties to see for herself. She found the altered grass in both sites in just hours, which reinforced her view that while Scotts has decreased the number of plants, they are still present in significant volume.

"It was an "aha" moment," she said. She followed up with a letter to the U.S. Department of Agriculture urging the agency not deregulate the grass, one of hundreds to do so.

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"I always had the opinion that if they released it they would not be able to contain it."

+ 5 following photos

-- Jeff Manning

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GMO Creeping Bentgrass that 'Escaped' Defies Eradication, Divides Grass Seed Industry By Jeff Manning, The Oregonian, Sunday January 8, 2017



1. Another day dawns in western Oregon's Linn County, grass seed capital of the world. Some players in the industry fear a genetically modified grass on the loose in Oregon could hurt their business. (Photo: Jeff Manning)



2. Scotts Miracle-Gro, led by CEO Jim Hagedorn, developed the altered bentgrass. With 2016 sales in excess of \$2.8 billion, Scotts is a giant of the agriculture and home garden business. (Photo by Stephen Webster/The Forbes Collection/Contour by Getty Images)



3. Don Herb stands in front of his seed processing plant near Lebanon (Linn County). His industry would suffer significant damage if the genetically modified grass finds its way to the Willamette Valley. (Photo: Jeff Manning)



4. The genetically modified creeping bentgrass is resistant to the herbicide Roundup. It established along irrigation canals in eastern Oregon's Malheur County. (Photo courtesy Carol Mallory-Smith)



5. The genetically altered bentgrass escaped test fields in central Oregon's Jefferson County and established miles away, including in the Crooked River National Grassland, near the Crooked River Gorge. (Photo: Jeff Manning)