

## US courts thwart GM alfalfa and turf grass

US District Court Judge Charles Breyer in San Francisco on March 12<sup>th</sup> imposed a preliminary injunction, in effect revoking the 2005 approval by the US Department of Agriculture (USDA) of a genetically modified (GM)—specifically, Roundup Ready—version of alfalfa. Thus, he told US farmers that they could no longer buy or plant seeds for this crop after March 30<sup>th</sup>, at least pending another hearing set for late



A US district court has told farmers that they cannot buy or plant seeds for a genetically modified version of alfalfa after March 30—the first time approval of a GM crop has been revoked.

in April. Monsanto of St. Louis, which with Forage Genetics International of Nampa, Idaho, markets this version of Roundup Ready alfalfa, says it is “disappointed” with the ruling. More broadly, the ruling is one in a recent series from federal courts and USDA that speak not only to the volume but also the precarious legal state of current GM crop-related activities.

Breyer’s preliminary injunction marks the first time that approval of a GM crop has been revoked. It follows his decision in this same lawsuit in mid-February that went largely in favor of the Washington-based Center for Food Safety (CFS), one of several activist organizations that brought action against USDA. Breyer then concluded that USDA had failed to abide by federal environmental laws when it approved Roundup Ready alfalfa in 2005 without preparing a full environment impact statement. His ruling in February further said that environmental and economic concerns raised by CFS and other plaintiffs over the risk of GM alfalfa contaminating natural and organic alfalfa are valid, and that the USDA had failed to take the “hard look” at GM alfalfa that federal environmental laws require.

Not so, argues Jerry Steiner, executive vice president for Monsanto, who says that the “extensive regulatory dossier for Roundup Ready alfalfa, combined with farmer stewardship agreements, provides a robust and responsible approach to managing the environmental questions raised by the plaintiffs in this case.” Attorneys representing Monsanto

and Forage Genetics International further say that ample safeguards are in place to protect alfalfa farmers and others against any potential environmental damage from growing Roundup Ready alfalfa.

But for this growing season, the court rulings are proving disruptive to some farmers. “It’s a major setback to have this technology taken away from us,” says Dale Scheps, who operates a 145-cow dairy farm in

Almena, Wisconsin, and had purchased enough Roundup Ready alfalfa seed to plant 35 acres in 2007. “It will needlessly drive up our feed costs because we will have to replace superior quality hay.”

A great deal more is at stake because US farmers plant more than 21 million acres of alfalfa, worth \$8 billion per year. Moreover, US alfalfa exports total nearly \$480 million annually, with about 75% headed to Japan, whose food and agriculture industry remains squeamish about accepting GM imports. On this matter, the court disagreed with the USDA assertion that exports to Japan would not be harmed by deregulating GM alfalfa.

Meanwhile, in an earlier case in February, the US District Court of Washington, DC, mainly favored several environmental groups, including CFS, who brought a lawsuit against USDA officials and Scotts of Marysville, Ohio, over field trials involving genetically engineered turf grasses (*Nat. Biotechnol.* 25, 269, 2007).

Although USDA officials were confronted with the task of preparing that court-mandated environmental impact statement on Roundup Ready alfalfa, they also were issuing environmental assessments and other statements in February and March regarding GM-contaminated rice and also rice and safflower that were modified to produce pharmaceutical products, feed supplements or food additives.

In one of these cases, officials at the USDA Animal and Plant Health and Inspection Service (APHIS) confirmed in February that

they found a GM variety of rice contaminating a non-GM Clearfield 131 (CL 131) rice, which is produced by BASF Agricultural Products of Research Triangle Park, North Carolina. The BASF rice is suspected of being contaminated by one of several versions of LibertyLink rice, which is produced by Bayer CropScience, headquartered in Monheim, Germany. BASF said that it is complying with an order from APHIS halting the distribution and planting of CL 131 rice. Its compliance will lead to sales losses of from \$1 million to \$9 million.

Less tangibly but perhaps as important, this instance marks the third time that US officials found GM rice contaminating conventional rice during the past year. This latest instance led Washington-based Friends of the Earth in March to renew its call for a ban on the production of drugs in food crops grown outside. Thus the environmental campaign group criticized USDA for granting preliminary approval to the commercial produc-

tion of GM pharmaceutical rice containing human genes and warned of the “potentially devastating consequences if pharmaceutical crops end up on consumers’ plates.”

That warning was in response to environmental assessments issued in February by APHIS officials, who provisionally approved open-field testing of several pharma crops. One involves Ventria of Sacramento, California, and its plans to grow GM varieties of rice on thousands of acres in Kansas. Those rice varieties are engineered to express human proteins, including lactoferrin, lysozyme or serum albumin. The other environmental assessment is for SemBioSys Genetics of West Sacramento, California, which plans to grow on test plots in the state of Washington safflower that is engineered to produce carp growth hormone, which is intended for use in aquaculture.

The Ventria environmental assessment is renewing concerns about GM rice varieties contaminating traditionally bred rice, says

Bill Freese of CFS in Washington, referring to the CL 131 case among others from past growing seasons. “These cases highlight the laxity of USDA, and suggest to us that [officials] shouldn’t approve field trials on such a scale.”

In a similar vein in February, the Rice Producers of California in Colusa called for a three- to five-year moratorium on growing commercial-scale GM rice because of the risk to growers in the state of losing exports of conventional rice worth \$200 million annually. Meanwhile, the environmental assessment for the SemBioSys safflower is “very scant on details [and] this is a big step backward,” Freese says. “It’s mind-boggling because USDA made a big point of the importance of transparency.” Another group, Food & Water Watch, also in Washington, calls the USDA conclusions about safflower “unreasonable due to the absence of scientific study” about the potential impact of carp growth hormone on wild birds and animals.

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