

**Rice Farmers Face a Biotech Threat to Profit: Genetically engineered grains could end up costing the industry its biggest export customer.**

By PAUL ELIAS The Associated Press  
October 16, 2006

PRINCETON, Calif. — Fourth-generation farmer Greg Massa was in the middle of the rice harvest and he was dirty, angry and depressed.

The price of the gasoline that powers his water pumps and rice harvester has never been more expensive. A late planting season, hot summer and rising expenses had ensured a less-than-stellar harvest, with the U.S. Department of Agriculture forecasting a 13% drop compared with last year.

So the last thing Massa needed was a biotechnology blunder so disastrous that it prompted the rice industry's biggest export customer — Japan — to prohibit some varieties and threaten to ban all U.S. imports.

The European Union is making similar threats because genetically engineered rice continues to turn up on grocery shelves in Europe.

"If that happens, the California industry will evaporate," said Massa as he drove the harvester around his farm about 80 miles north of Sacramento.

He has spent the last three years publicly protesting the growth of genetically engineered rice anywhere and in any quantity. Biotech-averse overseas consumers in Japan, Europe and elsewhere simply won't buy it, he says, even if the crops are approved for U.S. consumption.

The U.S. rice harvest is imperiled by the discovery of small amounts of experimental strains of genetically engineered rice in storage facilities holding crops destined for the food supply.

Bayer CropScience, the German company responsible for the mistake, is still investigating how the experimental rice got into the food supply.

Federal officials say the company's signature genetically engineered rice came from storage bins in Arkansas and Missouri, but they don't know where it was grown.

The rice was genetically engineered by Bayer to be resistant to a weed killer and had never been approved for human consumption. Federal officials and company executives said the strain posed no health threat and was similar to biotech rice that had been approved.

Still, Bayer's blunder has been costly.

Rice futures plummeted by \$150 million immediately after the contamination announcement and biotech-hating European retailers pulled U.S. rice from their shelves. Growers in Arkansas, California, Louisiana, Mississippi, Missouri and Texas filed lawsuits against Bayer for hurting their sales.

Rice exports are worth \$200 million annually to California, which is second only to Arkansas in rice production. Nearly all Japanese imports come from California, which grows mostly short- and medium-grain rice.

Longer-grain rice is grown in the South. In all, the U.S. rice harvest fetches about \$1.8 billion annually.

"It has caused problems in the market," said Grant Lundberg, chief executive of Richvale, Calif.-based Lundberg Family Farms, one of the state's biggest rice growers. "It has given everybody a new perspective on this technology, and it's not positive."

A Bayer spokesman declined to comment other than to say that the company has no plans to commercialize any of its genetically engineered rice because few farmers are interested in growing it.

Rice farmers in Northern California are perplexed that companies and scientists are continuing to experiment with a technology so thoroughly rejected by the market.

Japanese and European consumers have a long-standing aversion to biotechnology products and any changes to their food supply, a fear that harkens back to government mishandling of mad cow disease. Those consumers fear that not enough is known about genetic engineering to guarantee that food is safe.

U.S. trade officials persuaded Japan to lift a ban on imported rice in 1995, but the relationship between U.S. farmers and their best customer is precarious.

Last month, Japan announced it would genetically test every rice shipment entering the country and shut down all U.S. imports if it found any more biotechnology crops. None of the genetically engineered rice at issue has been found in California.

Many rice farmers see it as the last step before the country closes its borders to all U.S. rice.

"There are political forces in Japan that would very much like to see California rice no longer shipped there," said John Hasbrook of Davis-based SunWest Foods Inc., California's largest rice miller.

SunWest has called for legislation banning genetically engineered rice in California.

So-called golden rice was one of the first genetically engineered crops developed and it was aimed at alleviating malnutrition because of its ability to produce vitamin A.

Golden rice contains a gene from the daffodil plant and is unrelated to Bayer's rice, which is engineered with bacteria genes.

Two rice strains that were genetically engineered with bacteria genes to resist weed killer were approved for the U.S. market 14 years ago but never sold because consumers around the world rejected the use of biotechnology on such a food staple.

Still, a few companies continue to tinker with rice genes, arguing that biotechnology can be beneficial to farmers, consumers and the environment.