

# Who's to Say Whose Bean?

by Jeff Ernsthausen

The ethics of genetic engineering have been debated since DNA was identified in 1953. Since then, genetic engineering has managed to alter the DNA of organisms for a variety of purposes, from cows with increased growth hormones, to cats that do not produce allergenic dander. In recent years, with the predicted completion of the human genome project just years away, the debate has increasingly focused on issues like stem-cell research and the morality of altering of human DNA.

In the farming community, the debate has taken a different direction. Increasingly convinced of the safety of genetically modified foods, farmers in the last decade have faced an entirely different dilemma: who controls the rights to genetically altered plants? Does a farmer have the right to plant a seed that he has grown, or does the company who engineered the seed have a right to deny him such use?

The world's largest agricultural firm, Monsanto, maker of herbicides from Round-Up to Agent Orange, has filed suit against over 90 farmers since 1997, claiming that they illegally used its Round-Up ready crops. The plants contain a modified gene that allows it to withstand the popular herbicide. Doing so allows a farmer to weed a field in a matter of hours by simply spraying the chemical across the land.

Farmers across the country are well aware of this option when planting their fields. Today, nearly 85 percent of soybean crops in this country are genetically modified. Monsanto, far and away the market leader in producing the herbicide resistant seeds for those fields, charges farmers \$6.50 an acre to use its product. However, like record companies, Monsanto claims its revenue is being skimmed by technology pirates. Far from employing the advanced technology of the 21st century to do this, farmers like Homan McFarling and brothers John and Paul Mayfield are employing an age-old technique: replanting fields with seeds from the previous year.

How does Monsanto make its case? In 1998, both McFarling and the Mayfield brothers signed contracts with the company that allowed them to plant their fields with the herbicide resistant plants. In the contract, the company stipulates that individuals and organizations may not save seeds from year to year, unless they wish to continue to pay the fee. When the farmers did so without alerting the company, Monsanto learned of their violation within a few seasons and handed them lawsuits.

Monsanto filed a similar suit against Percy Schmeiser, who never met with nor signed a contract with the company. Schmeiser was reported by one of his neighbors in 1998 for planting Round-Up Ready canola. The neighbor observed that the Saskatchewan farmer's plants did not die when he sprayed them with the herbicide. Schmeiser claims that his field was not, in fact, planted with the seed by intent. He claims that wind carried them and their pollen onto his fields from nearby farms that used the product, and that he was being unfairly sued. The courts disagreed. In 2001, they found him guilty, and ordered him to pay restitution to the company.

Percy's case would be more interesting if the evidence against him was not overwhelming. His field was populated almost entirely by the genetically altered plants, indicating that he knowingly planted them. However, similar suits have been filed against farmers who claimed to have no idea that the crop was in their fields, and that they had no practical way to find out. The court ruled that it will be farmers' responsibility to detect any of the specimens growing in their fields. It remains to be determined (in a suit filed, interestingly enough, by Schmeiser's wife) who will be responsible for destroying the plants: Monsanto or the farmers themselves. One way or another, large costs are sure to be incurred.

The ramifications of court rulings involving Monsanto in the coming years could be enormous. If the pollen from Monsanto's seed spreads across the Great Plains, a possibility that cannot be prevented by any practical means, it could lead to an oligopoly of companies controlling the entire flow of seeds in this country, as farmers will be unable to replant their own seeds from one year to the next. Conversely, if the company is defeated in any of its suits, an outcome that it has not yet faced, then the tide of genetically engineered food products will almost certainly be stemmed. Companies such as Monsanto, who spend nearly \$400 million a year on research and development of biotechnology, will have no incentive to continue to do research. To some, namely those who favor the use of genetically altered food as a method of solving the epidemic of world hunger, this would be a tragedy. To others, who fear GMO crops as a health risk, it would mark a welcome return to more natural methods of farming.

How will the American public respond to these cases? The natural tendency is to commiserate with the farmers, standing up to the

looming financial giant and its team of lawyers. However, this is not a clear case of right and wrong. Without a history of strict protection of contracts and patents, it is unlikely that the United States would have ever experienced the level of trade required for it to become the world's leading economic power. Individuals and companies are simply not going to spend the time and money to advance technology if they cannot be guaranteed a return on their investment. Monsanto, like any other company, deserves the same protection under the law that any other company would have. If a farmer signs a contract, he is obligated to honor it. The excuse used by many farmers -- that they simply didn't read the fine print indicating that they would have to renew their license -- is simply not an excuse. However, many farmers out there still have not signed contracts or tried to grow Monsanto's seeds. These farmers, should their fields become fertilized by Monsanto's company's seeds, face the potential of costly lawsuits and the possible end of their way of life.

And this all might come to pass simply because of what one genetically modified organism, like all other living things, will naturally do: reproduce.



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