

US Patent on New Genetic Technology Will Prevent Farmers from Saving Seed

by C.J.S. (Sid) Taylor

On March 3, 1998 Delta and Pine Land Co.* and the U.S. Department of Agriculture announced that they received US Patent No. 5,723,765 on a new genetic technology designed to prevent unauthorized seed saving by farmers. The patented technology, "Control of plant gene expression" would allow seed companies to control the viability of progeny seed without harming the crop. In other words, the new technology genetically alters the seed so that it will not germinate if re-planted a second time.



The patent is broad, applying to plants and seeds of all species, including both transgenic (genetically engineered) and conventionally-bred seeds. If commercially viable, the patented technology could have far-reaching implications for farmers and the commercial seed industry. If the technology is widely licensed, it could be a boon to the seed industry - especially for companies marketing self-pollinating seeds such as wheat, rice, cotton, soybeans, oats and sorghum. Historically there has been little commercial interest in non-hybridized seeds such as wheat and rice because there is no way for seed companies to control reproduction. If commercially viable, the new technology could mean huge profits in entirely new sectors of the seed industry. For farmers, the patented technology will undoubtedly mean greater dependence on the commercial seed market, and a fundamental loss of control over germplasm. If widely utilized, farmers will lose the age-old right to save seed from their harvest.

Many seed corporations have tried to stop farmers from saving or re-selling proprietary seeds by using intellectual property laws (patents and plant breeders' rights) that make it illegal for farmers to re-use or sell harvested seed (for reproductive purposes). Monsanto**, for example, now requires that farmers sign a licensing agreement that strictly forbids farmers from saving or re-using the company's patented seed. According to a recent article in Progressive Farmer magazine, Monsanto is aggressively enforcing its patents on transgenic soybean seeds, and has recently taken legal action against more than 100 soybean growers who have violated the licensing agreement. (see: <http://www.progressivefarmer.com/today/pffile/savedseed.html>)

The company has even hired Pinkerton investigators (hired police) to identify unauthorized seed-saving farmers.

If Delta and Pineland's new technology successfully prevents farmers from germinating a second generation of seed, then seed companies will gain biological control over seeds that they have heretofore lacked in non-hybrid crops.

Nobody knows exactly how many farmers save seed from their harvest each year. By some estimates, 20% to 30% of all soybean fields in the US Midwest are typically planted with saved seeds; up to 50% of soybeans in the South are planted with farmer-saved seed. Precise statistics are not available, but many North American wheat farmers rely primarily on farm-saved seeds and return to the commercial market once every four or five years.

Impact in the South

A genetic technology designed to prevent farmers from saving seed would have a far greater impact in the South - and that is precisely the market being targeted. Murray Robinson, the president of Delta & Pine

Land, told RAFI (Rural Advancement Foundation International), "We expect it to have global implications, especially in markets or countries where patent laws are weak or non-existent." The company says its new patent has "the prospect of opening significant worldwide seed markets to the sale of transgenic technology for crops in which seed currently is saved and used in subsequent plantings."
(http://biz.yahoo.com/prnews/980303/ms_delta_p_1.html)

Up to 1.4 billion resource-poor farmers in the South depend on farm-saved seed and seeds exchanged with farm neighbors as their primary seed source. A technology that threatens to extinguish farmer expertise in selecting seed and developing locally-adapted strains is a threat to food security and agricultural biodiversity, especially for the poor.

According to USDA spokesman, Willard Phelps, Delta & Pine Land Co. has the option to exclusively license the patented technology that was jointly developed by USDA researchers and Delta & Pine Land. The USDA wants the technology to be "widely licensed and made expeditiously available to many seed companies," said USDA's Phelps. The goal is "to increase the value of proprietary seed owned by US seed companies and to open up new markets in Second and Third World countries," said Phelps.

Melvin J. Oliver, a USDA molecular biologist and primary inventor of the technology, explains why the US government developed a technology that prohibits farmers from saving proprietary seed: "My main interest is the protection of American technology. Our mission is to protect US agriculture, and to make us competitive in the face of foreign competition. Without this, there is no way of protecting the technology [patented seed]." Oliver says that the technology to prohibit seed-saving is still in the product development stage, and is now being tested in cotton and tobacco.

In RAFI's view, the fact that this technology was developed by USDA researchers, with taxpayer funds, should be a real kick in the teeth to US farmers. USDA researchers articulate a greater allegiance to the commercial seed industry than they do to farmers. Publicly-supported plant breeding was once the backbone of US agriculture. Its goal was to deliver superior crop varieties to farmers' fields - not to guarantee seed industry profits. A new technology that is designed to give the seed industry greater control over seeds will ultimately weaken the role of public breeders and reinforce corporate consolidation in the global seed industry (for more information, see RAFI's Communique on The Life Industry.)

Footnotes:

Delta & Pine Land Co. (Scott, Mississippi) is the largest cotton seed company in the world, with 1997 annual sales of \$183 million. Monsanto is a minor shareholder in Delta & Pineland; the two companies have a joint cotton seed venture in China (D&M Intl. LLC).

Monsanto (St. Louis, Missouri) is a major life industry corporation, and the world's second ranking agrochemical corporation. Monsanto's investment and acquisition in seeds and agrochemicals over the past 24 months exceeded (US) \$2 billion. Monsanto's total 1996 revenues were (US) \$9.26 billion.

Thanks to Karen Tuttle from Merry Hill Farm for bringing this to light and asking me to share it with everyone

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Read C.J.S. (Sid) Taylor's follow-up article The Last Harvest.

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