

Cartels patent bio-tech advances to stifle food R&D and production

by Colin Lowry

Biotechnology and genetic engineering offer the potential for producing more and better quality food to feed a growing world population. However, under the banner of the “free market,” giant food cartels are privatizing research advances that used to be considered part of the public domain, and are thereby restricting both individual farmers and entire nations from reaping the benefits of these technologies.

Over the past 10 years, consolidation of the food production chain has increased, with the most powerful cartel companies dictating what food is grown and who will be allowed to receive it. The newest weapon used by the cartel companies to achieve control of the food chain is the industrial plant patent. By patenting genetically modified plants, along with the technology to create them, the cartels are restricting the use of new technology, and, through licensing agreements, can directly control or eliminate farmers who resist being “vertically integrated.”

Under the new system of new patents and licenses on crops, the right of farmers to save seed to replant or exchange seed with other farmers has been taken away. The cartels can even stop Federal government agencies like the Agricultural Research Service of the U.S. Department of Agriculture (USDA), from conducting research on crops in areas for which the companies hold broad patents. The latest round of huge mergers, and the buyouts of small biotechnology companies by the cartels, are largely driven by the desire to get control of the most recent patents and licenses, in order to squeeze out competitors’ access to technology, and to ensure that new discoveries will be under the cartels’ thumb.

How could this happen?

In order to understand how any of this is possible, we need to look briefly at the major patent and legal decisions.

The first time any plants were given protection as intellectual property was under the 1930 Plant Patent Act (PPA). This act was designed to protect nurseries and breeders who produced mainly ornamental plants, such as asexually reproduced flowers, and some fruits. The Plant Patent Act did not offer the more strict protection of an industrial patent, but it did protect specific varieties that were created and claimed by the inventor, by restricting others from marketing his variety.

The 1930 act specifically prohibited the patenting of any food crop plants, recognizing that these patents could threaten the food supply.

In 1970, the first version of the Plant Variety Protection Act (PVPA) was introduced, which greatly expanded protection to all plants that were distinct and new. This was not a patent, but merely a certificate, which for the first time gave protection to specific varieties of crop seeds for the first time, for periods of up to 25 years. Under the PVPA of 1970, farmers and breeders could save and replant protected seed, resell it, and carry out research using it.

In 1980, the U.S. Supreme Court made a landmark decision in *Diamond v. Chakrabarty*, ruling that living organisms could be patented. The decision allowed the patenting of genetically engineered microbes, which opened the door to the patenting of any life form.

In 1985, the U.S. Patent Office ruled that plants could now be protected under the powerful industrial patent. The industrial patent does not have any exemptions for farmers or for research, so any use of a patented plant or seed without specific license from the patent holder would be considered violation of the patent. This patent decision is the basis for the new weapon to control agricultural production and research that the cartels have pushed to the limit.

In 1994, the PVPA was amended in accordance with the regulations under the General Agreement on Tariffs and Trade. The changes to the act made it illegal for farmers to resell or exchange any seed of protected crops. The GATT agreement also forces the developing nations to recognize the patents and protections on plants and living organisms held by other GATT member countries. This allows the cartels to deny developing countries’ farmers access to advanced biotechnology, and instead forces them to pay huge licensing fees to use any patented seeds.

Current cartel policies: the case of Monsanto

There are two dominant aspects of current policy, practiced by the cartel companies. The first is to lock up as much new biotechnology as possible in patents and licenses. The second is to control the inputs and outputs along the entire food production chain, from the chemicals used, to the seeds,



Cartel companies like Cargill crawl out from under their “free market” rock to force farmers—and even whole countries—to use only their patented seed, under conditions they dictate.

to the processors and marketers. The use of broad patents on crops and the technology to create genetically engineered plants has served to further both of the identified policy aspects.

The recent interpretation of industrial plant patents has allowed the companies to violate farmers’ rights, and push the legal envelope in protecting their patents. The case of agro-chemical cartel giant Monsanto’s licensing agreements to farmers is an excellent case in point.

Monsanto has marketed a new transgenic soybean that is resistant to the herbicide Roundup, which it also produces. The new beans do offer excellent yields when used in conjunction with this herbicide, as compared to other standard lines. However, Monsanto has created a licensing agreement that the farmer must sign in order to plant this new soybean. The agreement states that the farmer cannot save seed to replant for the next year, nor can he give or sell the soybean seed to anyone. He also must use only Monsanto’s Roundup herbicide on the crop, and he must allow Monsanto inspection teams to visit his farm for three years after initial purchase. The new soybean seeds are more expensive than standard bred lines, but they also come with a licensing fee, of \$5 more per bag, just to use the technology. This outrageous license which results from Monsanto’s patent, also allows Monsanto to sue the farmer for unlimited damages for any breach of the contract, which would be considered a violation of the patent law. No other company has yet created such a licensing agree-

ment as bad as Monsanto’s.

Another case involves new pest-resistant cotton, marketed by Monsanto, which holds a patent on all types of genetically engineered cotton, no matter how it is made. This broad patent recently was overturned, but it already caused significant damage to research in this area. The new pest-resistant cotton also will produce higher yields under conditions where crop pests are a problem. The average per-acre cost of standard bred cotton seed is \$ 6-8, while the new transgenic cotton seed costs \$12 per acre. But, the licensing agreement adds another \$32 per-acre fee, just to access the technology. Once again, the same conditions that applied to soybeans also apply here, robbing the farmer of his rights, and reducing him to the status of a “bio-serf.”

The licensing agreements on specific technologies related to a single new crop variety often involve a complex web of companies, which all end up under the control of the cartel. For example, the new transgenic Bt Corn, which resists the corn borer pest by expressing a bacterial protein that stops worms from feeding, is marketed by the company Pioneer Hybrid, but the licenses on this variety and its creation involve 16 different companies, with 38 licenses. The current trend is that, as discoveries are made in the field of genetic engineering of plants by scientists working for small companies, the large cartel firms buy them out, in order to control the technology, often at very high costs, ranging in the hundreds of millions of dollars.

Monsanto and other giants, such as the new company Novartis, the result of the merger of pharmaceutical firms Ciba-Geigy and Sandoz, have been buying up seed companies at a swift clip in the last five years. Novartis is also a leader in the bio-medical realm, and has been involved in locking up new technologies in that area, such as the \$295 million buyout of Genetic Therapy, Inc., which holds patents on gene therapy techniques. The agro-chemical cartel companies are spending huge amounts to buy out small companies just to get access to patents and licenses, which is causing the cartel titans to go further into debt, in turn feeding the consolidation and merger frenzy all the more.

All of these developments, of course, spell disaster for the independent farmer. With the cartels in control of biotechnologies that could produce higher crop yields, the farmer either is forced to become integrated and completely controlled by the cartel, or is left to go bankrupt; this is especially true now that there are almost no price supports or safety net in the wake of the 1996 Farm Bill. Frito-Lay, which is a major buyer and processor of corn, has cut out one-third of its suppliers over the last three years—cutting the farmers who were not

producing corn from the exact seed variety marketed by a company in which Frito-Lay has financial interests. In the case of the major crops, the goal of the cartels is to own both ends of the production cycle, and unfortunately, they seem to be succeeding.

Agricultural biotechnology research

Over the past 100 years, government-sponsored research in agriculture has produced the majority of important advances in developing new crop varieties, and methods to increase yield. All of the long-term research in plant germ plasm, genetic studies of specific plants, and resistance to disease and pests, has been carried out using government funding. The Agricultural Research Service of the USDA is the agency that is mainly responsible for releasing the new discoveries gained from government research to farmers and breeders. The purpose of the Agricultural Research Service, to get scientific discoveries out to the public for the benefit of the nation's agriculture, has been attacked and subverted by the cartels, especially since 1985.

Traditionally, the ARS would announce a new discov-

The cartels control key links in your food chain

It is no exaggeration to state that the world's food chain, from seedstock, to field, to processing, to your table, is now dominated by a few commodities cartels of companies, with only the notable exceptions of the domestic markets of China, India, and very few other nations. Only about two dozen companies are involved. The food cartels parallel the cartels that control fuel, such as oil, gas, and coal; or minerals and metals, including ores, gold and silver, diamonds, and other strategic resources. Many of their proprietary names have become synonymous with the word monopoly: Royal Dutch Shell, British Petroleum, Anglo American Corp., Rio Tinto Zinc. The food and farm cartel companies are equally powerful, although, because of brand-names, some are less well known:

Grain: Cargill, Continental, ADM-Töpfer, Bunge & Born, Louis Dreyfus, Pillsbury-Grand Metropolitan

Meat: IBP, ConAgra, Cargill, National Farms

Dairy: Kraft-Philip Morris, Nestlé, Unilever

Sweeteners: Archer Daniels Midland, Tate & Lyle, Cadbury

Beverages: Grand Metropolitan-Guinness (in the process of merging), Seagram, CocaCola, PepsiCola

Produce: Chiquita International

Seeds: Pioneer Hybrid, Cargill, Novartis, Monsanto.

At the center of the web of these strategic commodities cartels are London-based finance and political interests, with subsidiaries in Switzerland and the Netherlands, regardless of where any company may officially have its headquarters. *EIR* has published detailed histories and profiles of these companies, under the rubric of "House of Windsor" networks (see "Food Control as a Strategic Policy," Dec. 8, 1995; and "Hungry People Need Food, Not Free Market Economics," Dec. 6, 1996).

The 1970s marked a turning point in the shift away from food policies based on national interest and anti-trust protection of public interest, and the turn toward strategic food control. The key policy point was the Dec. 10, 1974 secret document, National Security Study Memorandum 200, commissioned by U.S. Secretary of State Henry Kissinger, that called for the use of food as a foreign policy weapon, especially against named "overpopulated" nations.

More recently, in the frenzied speculation on stock markets, and in derivatives and futures trading, vast amounts of "smart money" are leaving these intensely risky arenas, and taking up positions at strategic control points in commodities. As the physical economies of nations deteriorate, these financial control networks, backed up by the World Trade Organization, the International Monetary Fund, and related agencies, are making killer profits from strategic control over necessities, and attempted control over principles of science itself.

ery—for example, they had developed a new wheat variety that could resist disease—and would distribute the new variety to farmers, breeders, and companies, which would ensure its dissemination throughout the nation’s agriculture. In this system, no one could claim exclusive rights to market any plant or seed that was released by ARS, nor could he or she patent it.

Today, we see quite a different picture.

Since 1985, higher plants can be patented. Also, the new Plant Variety Protection Act of 1994 allows the right to exclusively market crop seed varieties. Under the current conditions, ARS can no longer just freely release any new discovery. Instead, it usually has to license the new type of seed, or the plant itself. What happens then, is that cartel companies bid on the right to market the new seed, and they will pay a small part of the profits they make as a one-time fee to the ARS. The new, government-researched plant then comes under the exclusive control of the highest-bidding cartel company. At present, ARS can only release to the general public new varieties of plants that are not considered major crops, in which the cartels have very little interest.

The USDA agricultural research programs have also been seriously damaged by the issuance of broad industrial plant patents to private companies. Many of these types of patents hold rights to the scientific technologies and methods used to create a wide variety of genetically engineered plants. Under this system, the USDA and any other government research agencies are prohibited from conducting research in the domain covered by the patent. So, either the companies allow the USDA to do research in their patent area by forcing them to pay licensing fees, or they lock up the area from further research.

Take the example of Monsanto, again. Monsanto had a patent on all genetically engineered soybeans, no matter by what method they were made. The cartel firm’s holding of this patent, meant that the USDA had to drop any of its research programs in soybeans that used any genetic approach, or had to “invent around” the patent. This kind of scenario happens all the time, according to sources at the USDA, where private patents have been forcing USDA to go around them, or to drop entire areas of research. Fortunately, many of the USDA-sponsored scientists are quite adept at inventing around patents, and do come up with alternative approaches that lead to new discoveries. Nonetheless, even these new discoveries have a hard time making it to the farmers, without the cartels undermining the government effort, by means of the “free market.”

While several of the broadest patents, such the ones Monsanto had on all genetically engineered soybeans and cotton, are being restricted through legal battles, the companies are still submitting the broadest patent claims possible. The U.S. Patent Office has been overwhelmed by claims on organisms and specific genes, and will often grant these patents without examining the impact on research, because the Patent Office

budget has been cut, and the office itself lacks sufficient, experienced staff in the area of biological patents.

The USDA, too, has been hit by budget cuts for many years, and the Agricultural Research Service has a flat budget for the next five years; i.e., any new research they propose can be funded only by making cuts in existing research programs. This has left the agency scrambling to get funding for research from the private sector through cooperative agreements. The USDA has had cooperative research agreements for many years, most of them intergovernmental, with developing nations.

However, as budget cuts have deepened, most of the USDA’s cooperative research agreements are now with private companies, giving the cartels another nice way to control and pirate the fruits of government research.

All of the company cooperative agreements focus on short-term projects, usually resulting in a marketable or patentable plant or technology. None of the short-term results would be possible without the decades-long research projects that the ARS of the USDA carries out. The private companies can put up amounts ranging from a few million dollars to hundreds of millions to use the USDA scientific infrastructure to create a new plant variety, or technology, for them. In these cooperative agreements, the private company usually ends up with the patent or exclusive license to market any product resulting from the USDA’s research. The USDA gets very little in return from the companies, and, often, discoveries made by the USDA scientists are patented by the private sector, which patents then restrict the USDA from future research.

None of the cartel companies are supporting long-term germ plasm and other crop research. The USDA funding for these projects is being cut back every year, while the cartels are gaining more exclusive control over agricultural research, pushing it to a short-term, market-driven perspective, since they do not really have the infrastructure, nor the desire, to carry out the needed longer-term projects.

The concern of many in the Agriculture Department is that the genetic diversity of crops will decrease, with reliance on only a few patented transgenic varieties, which, like a monoculture, could be wiped out by an emerging disease. Moreover, any halt to long-term research projects will have devastating consequences, robbing the nation—and our nation’s trading partners—of the ability to deal with crises in agriculture, as well as hampering the continued progress which has made it possible to grow greater amounts of food using the same amount of land.

Threats to the developing sector nations

The cartel’s general policy with regard to the developing sector is to stop these nations from developing, using the World Trade Organization and its predecessor, GATT, as their enforcer. Specifically, the 1994 GATT agreements make the cartel company patents on plants and seeds legally binding

in developing sector nations.

Cargill has been pressing for intellectual property rights for its seeds in India, and has created an intense backlash among farmers who see the cartel's use of the GATT agreements as efforts to enslave them in a colonial system. Cargill marketed sunflower seeds and corn with promises of high yields in India, but when these were grown by local farmers, the actual yields were disastrously low, because the seeds were developed for other climate and soil conditions. Claiming private property rights for their seed, Cargill violated Indian law, which requires that any seed marketed in India be submitted to the government's seed bank.

Cargill also gave to the Indian Council on Agricultural Research seed samples that produced good yields, but then sold some different seeds to farmers, using the claims validated by the council on the first seed varieties. Cargill also ignored recommendations by the council on which varieties were best suited to different Indian regions, promoting only one variety of sunflower and corn for use throughout the whole country. In 1992, when farmers got very low yields with these seeds, they directed their protest against Cargill, burning the files and the seed samples of the local Cargill office in 1992.

The next year, Cargill began building a seed-processing plant in India near Bellary, which the angry farmers' group demolished before its completion. Cargill decided to rebuild, but first surrounded the site with a fortress of high stone walls and guard towers, and pressured the local police to provide a large security force to protect them. The arrogant Cargill then refused to pay the local police the large bill for the extra security. Cargill's actions in India lead one to believe the cartel still thinks India is nothing but a colony under British Army occupation.

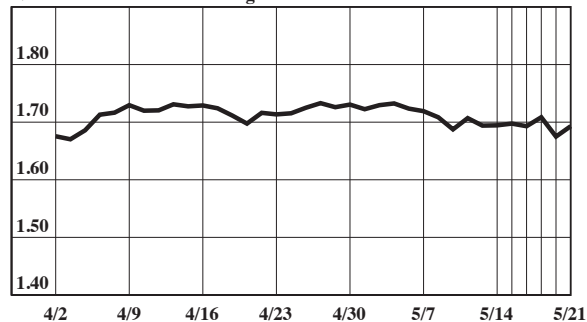
The cartel companies also deploy patents to prevent developing countries from using bio-engineered crops for export into the large American and European markets. Broad patents on all genetically engineered coffee that is made using a specific method are held by Escagenetics Corp. This patent deprived Ethiopia of using the technology on any coffee crop that would be exported to the United States. This cartelized strangulation of the "free market," is still getting worse, and more and more developing nations are being denied access to new technology.

Finally, another interesting new phenomenon is the cartels' "bio-prospecting" (which clearly gives the lie to heartfelt appeals to protect "biodiversity"). In these cases, a cartel company will go into the Third World rain forests or jungles, to find plants that are used by the local peoples for medicinal purposes. The companies then take the plants back to the United States, and submit plant patent claims, which give them exclusive rights over the use of that plant in the United States. In this way, should any particular plant offer new prospects for medical treatments, the cartel companies will have chokehold control over them.

Currency Rates

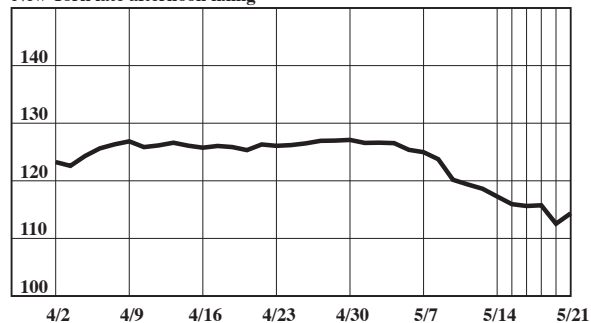
The dollar in deutschemarks

New York late afternoon fixing



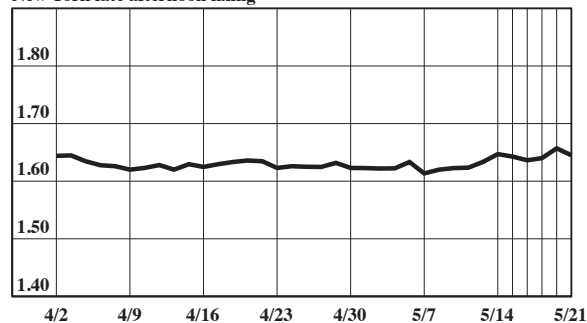
The dollar in yen

New York late afternoon fixing



The British pound in dollars

New York late afternoon fixing



The dollar in Swiss francs

New York late afternoon fixing

