

Rachel's Environment & Health News

#666 - The Bad Seed

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Monsanto Corporation of St. Louis has been maneuvering for more than a decade to dominate the world's supply of seed for staple crops (corn, soybeans, potatoes) -- a business plan that Monsanto's critics say is nothing short of diabolical. Monsanto says it is just devilishly good business.

Monsanto has spent upwards of \$8 billion in recent years buying numerous U.S. seed companies. As a result, two firms, Monsanto and Pioneer (recently purchased by DuPont), now dominate the U.S. seed business. Monsanto specializes in genetically modified seeds -- seeds having particular properties that Monsanto has patented.

The U.S. government is very enthusiastic about these new technologies. From the viewpoint of U.S. foreign policy, genetically modified seeds offer a key advantage over traditional seeds: because genetically modified seeds are patented, it is illegal for a farmer to retain seed from this year's crop to plant next year. To use these patented seeds, farmers must buy new seed from Monsanto every year. Thus a farmer who adopts genetically modified seeds and fails to retain a stock of traditional seeds could become dependent upon a transnational corporation. Nations whose farmers grew dependent upon corporations for seed might forfeit considerable political independence. The Clinton/Gore administration has been aggressively helping Monsanto promote ag-biotech, bypassing U.S. health and safety regulations to promote new, untested gene-altered products.

A key component of the U.S./Monsanto plan to dominate world agriculture with genetically modified seeds is the absence of labeling of genetically engineered foods. All U.S. foods carry labels listing the ingredients: salt, sugar, water, vitamins, etc. But three separate executive agencies -- U.S. Food and Drug Administration, U.S. Department of Agriculture, and U.S. Environmental Protection Agency -- have ruled that genetically-modified foods deserve an exception: they can be sold without being labeled "genetically modified." This strategy has successfully prevented consumers from exercising informed choice in the marketplace, reducing the likelihood of a consumer revolt, at least in the U.S., at least for now.

Earlier this year, opposition to genetically modified foods exploded in England and quickly spread to the European continent. (See REHW #649.) Burgeoning consumer opposition has now swept into Asia and back to North America. The NEW YORK TIMES reported last week that, "the Clinton Administration's efforts have grown increasingly urgent, in an attempt to contain the aversion to these crops that is leaping from continent to continent." [1]

** Recently Japan -- the largest Asian importer of U.S. food -- passed a law requiring the labeling of genetically modified foods. [1] A subsidiary of Honda Motor Company immediately announced that it will build a plant in Ohio and hire farmers to supply it with traditional, unaltered soy beans. Soy is the basis of tofu, a staple food in Japan.

Subsequently, the largest and third-largest Japanese beer makers, Kirin Brewery and Sapporo Breweries, Ltd., announced that they will stop using genetically modified corn by 2001. Other Japanese brewers are expected to follow suit.

** The Reuters North America wire service reported Sept. 1 that South Korea, Australia, and New Zealand have all now passed laws requiring the labeling of genetically modified foods. Reuters says the U.S. government has publicly protested against such labeling laws and has privately lobbied hard against them, unsuccessfully.

** Grupo Maseca, Mexico's leading producer of corn flour -- recently announced it will no longer purchase any genetically modified corn. Corn flour is made into tortillas, a Mexican staple. Mexico buys \$500 million of U.S. corn each year, so the Grupo Maseca announcement sent a chill through midwestern corn farmers who planted Monsanto's genetically modified seeds. [1] About 1/3 of this year's U.S. corn crop is being grown from genetically modified

seeds.

** Gerber and Heinz -- the two leading manufacturers of baby foods in the U.S. -- announced in July that they would not allow genetically modified corn or soybeans in any of their baby foods. [2] After the baby food announcements, Iams, the high-end pet food producer, announced that it would not purchase any of the seven varieties of genetically modified corn that have not been approved by the European Union. This announcement cut off an alternative use that U.S. farmer's had hoped to make of corn rejected by overseas buyers.

** As the demand for traditional, unmodified corn and soy has grown, a two-price system for crops has developed in the U.S. -- a higher price for traditional, unmodified crops, and a lower price for genetically modified crops. For example, Archer Daniels Midland is paying some farmers 18 cents less per bushel for genetically modified soybeans, compared to the traditional product. [1]

** The American Corn Growers Association, which represents mainly family farmers, has told its members that they should consider planting only traditional, unmodified seed next spring because it may not be possible to export genetically modified corn. [1]

** Deutsche Bank, Europe's largest bank, has issued two reports within the past six months advising its large institutional investors to abandon ag-biotech companies like Monsanto and Novartis. [3] In July, 1998, Monsanto stock was selling for \$56 per share; today it is about \$41, a 27% decline despite the phenomenal success of Monsanto's new arthritis medicine, Celebrex.

In its most recent report, Deutsche Bank said, "...[I]t appears the food companies, retailers, grain processors, and governments are sending a signal to the seed producers that 'we are not ready for GMOs [genetically modified organisms].'"

Deutsche Bank's Washington, D.C., analysts, Frank Mitsch and Jennifer Mitchell, announced nine months ago that ag-biotech "was going the way of the nuclear industry in this country." "But we count ourselves surprised at how rapidly this forecast appears to be playing out," they told the London GUARDIAN in late August. [3]

In Europe, the ag-biotech controversy is playing out upon a stage created by an earlier -- and ongoing -- scientific dispute over sex hormones in beef. [4] About 90% of U.S. beef cattle are treated with sex hormones -- three naturally-occurring (estradiol, progesterone, and testosterone) and three synthetic hormones that mimic the natural ones (zeranol, melengesterol acetate, and trenbolone acetate). Hormone treatment makes cattle grow faster and produces more tender, flavorful cuts of beef.

Since 1995 the European Union has prohibited the treatment of any farm animals with sex hormones intended to promote growth, on grounds that sex hormones are known to cause several human cancers. As a byproduct of that prohibition, the EU refuses to allow the import of hormone-treated beef from the U.S. and Canada.

The U.S. asserts that hormone-treated beef is entirely safe and that the European ban violates the global free trade regime that the U.S. has worked religiously for 20 years to create. The U.S. argues that sex hormones only promote human cancers in hormone-sensitive tissues, such as the female breast and uterus. Therefore, the U.S. argues, the mechanism of carcinogenic action must be activation of hormone "receptors" and therefore there is a "threshold" -- a level of hormones below which no cancers will occur. Based on risk assessments, the U.S. government claims to know where that threshold level lies. Furthermore, the U.S. claims it has established a regulatory process that prevents any farmer from exceeding the threshold level in his or her cows.

In a 136-page report issued in late April, an EU scientific committee

argues that hormones may cause some human cancers by an entirely different mechanism -- by interfering directly with DNA.[5] If that were true, there would be no threshold for safety and the only safe dose of sex hormones in beef would be zero. "If you assume no threshold, you should continually be taking steps to get down to lower levels, because no level is safe," says James Bridges, a toxicologist at the University of Surrey in Guilford, England.[4]

Secondly, the EU spot-checked 258 meat samples from the Hormone Free Cattle program run jointly by the U.S. beef industry and the U.S. Department of Agriculture. This program is intended to raise beef cattle without the use of hormones, thus producing beef eligible for import into Europe. The spot check found that 12% of the "hormone free" cattle had in fact been treated with sex hormones. EU officials cite this as evidence that growth hormones are poorly regulated in the U.S. beef industry and that Europeans might be exposed to higher-than-allowed concentrations if the ban on North American imports were lifted. "These revelations are embarrassing for U.S. officials," reports SCIENCE magazine.[4] Nevertheless, the U.S. continues to assert that its hormone-treated beef is 100% safe.

Thus we have a classic scientific controversy characterized by considerable scientific uncertainty. This particular scientific dispute has profound implications for the future of all regulation under a global free trade regime -- including regulation of toxic chemicals -- because the European Union is basing its opposition to hormone-treated beef on the precautionary principle. The U.S. insists that this precautionary approach is an illegal restraint of free trade.

The EU's position is clearly precautionary: "Where scientific evidence is not black and white, policy should err on the side of caution so that there is zero risk to the consumer," the EU says.[6] The Danish pediatric researcher, Niels Skakkebaek, says the burden of proof lies with those putting hormones in beef: "The possible health effects from the hormones have hardly been studied -- the burden of proof should lie with the American beef industry," Skakkebaek told CHEMICAL WEEK, a U.S. chemical industry publication that is following the beef controversy closely.[6]

It appears that European activists have seized upon hormones in beef, and upon Monsanto's seed domination plan, as a vehicle for opposing a "global free trade" regime in which nations lose their power to regulate markets to protect public health or the environment. The NEW YORK TIMES reports that a Peasant Confederation of European farmers derives much of its intellectual inspiration and direction from a new organization, called Attac, formed last year in France to fight the spread of global free trade regimes.[7] The Confederation has destroyed several McDonald's restaurants and dumped rotten vegetables in others. Patrice Vidieu, the secretary-general of the Peasant Confederation, told the TIMES, "What we reject is the idea that the power of the marketplace becomes the dominant force in all societies, and that multinationals like McDonald's or Monsanto come to impose the food we eat and the seeds we plant."

What began as consumer opposition to genetically-modified seed appears to be turning into an open revolt against the 25-year-old U.S.-led effort to impose free-trade regimes world-wide, enthroning transnational corporations in the process. If approached strategically by ALLIANCES of U.S. activists and their overseas counterparts (and it MUST NOT be viewed as merely a labeling dispute) genetic engineering could become the most important fight in more than a century.

--Peter Montague(National Writers Union, UAW Local 1981/AFL-CIO)

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[1] "Melody Petersen, "New Trade Threat for U.S. Farmers," NEW YORK TIMES August 29, 1999, pgs. A1, A18.

[2] Lucette Lagnado, "Strained Peace: Gerber Baby Food, Grilled by Greenpeace, Plans Swift Overhaul -- Gene-Modified Corn and Soy Will Go, Although Firm Feels Sure They Are Safe -- Heinz Takes Action, Too," WALL STREET JOURNAL July 30, 1999, pg. A1.

[3] Paul Brown and John Vidal, "GM Investors Told to Sell Their Shares," THE GUARDIAN [London] August 25, 1999, pg. unknown.

[4] Michael Balter, "Scientific Cross-Claims Fly in Continuing Beef War," SCIENCE Vol. 284 (May 28, 1999), pgs. 1453-1455.

[5] "Opinion of the Scientific Committee on Veterinary Measures Relating to Public Health; Assessment of Potential Risks to Human Health from Hormone Residues in Bovine Meat and Meat Products." European Commission, April 30, 1999. 139 pgs. The report is available in PDF format from: http://europa.eu.int/comm/dg24/health/sc/scv/out21_en.html .

[6] "Europe's Beef Ban Tests Precautionary Principle," CHEMICAL WEEK August 11, 1999, pg. unknown.

[7] Roger Cohen, "Fearful Over the Future, Europe Seizes on Food," NEW YORK TIMES August 29, 1999, pg. unknown.

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