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FOOD SAFETY

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A New View of U.S. Agriculture

State-by-state factsheets on top agricultural commodities, organic sales, and regulations on genetically engineered foods





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US map illustration by:

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Introduction

Genetically engineered soy has grown to dominate U.S. soy acreage, and gene altered corn accounts for about half of the nation's crop.¹ Food ingredients from these two crops, like corn syrup and soybean oil, are found in hundreds if not thousands of processed foods in American supermarkets.² This situation has led some to conclude that the U.S. is one vast landscape of gene-spliced crops and foods.

But in fact, the vast majority of foods produced in the U.S. are not gene altered. Since the first genetically engineered (GE) crop was marketed in 1994, only four major crops –cotton and canola in addition to soy and corn – have succeeded as GE varieties. In that time, commercialized varieties of GE potatoes and tomatoes were pulled from the market when Americans refused to buy them, and concerns from American consumers, farmers and food companies have helped keep GE wheat, rice, and sugar beets off the market.

In addition, while the federal government maintains its largely hands-off policy regarding gene food regulation, many state and local governments have taken steps to control the spread of GE food. Nearly half of U.S. states have enacted one or more statewide or local regulations to protect consumers, farmers, and/or the environment from the risks of GE foods. States and localities have taken actions that range from requiring GE seed labels to banning GE fish to banning all GE crops outright. Despite the biotechnology industry's propaganda, genetically engineered foods are not a national inevitability in the U.S.

In fact, polls consistently show that Americans have the same concerns about GE foods as people around the world. More than a dozen polls and surveys in the last ten years have found that Americans overwhelmingly want labels on GE foods, and most would avoid eating them if they were labeled.³ When the U.S. Food and Drug Administration commissioned several focus groups to determine American views on GE food, their report found that:

“[T]here was strong consensus as to what the major worry was--unknown long-term health consequences that might be associated with the technology but which cannot be anticipated based on current science or knowledge... Virtually all participants said that bioengineered foods should be labeled as such... participants wanted to know whether the food was a product of biotechnology because they were concerned about the potential for unknown long-term effects of the technology, in particular health effects.”⁴

More recently, a 2005 poll by the Pew Initiative on Food and Biotechnology found that just 25% of Americans favor the introduction of GE foods into the U.S. food supply.⁵

¹ USDA/NASS Acreage report. Released June 30, 2005.

² Associated Press, “Americans clueless about gene-altered foods: Few aware of how many genetically modified products they eat, study finds,” March 23, 2005. The article cites an estimate by the Grocery Manufacturers of America that roughly 75 percent of U.S. processed foods contain some GE ingredient(s).

³ See http://www.truefoodnow.org/home_polls.html

⁴ FDA “Report on Consumer Focus Groups on Biotechnology,” October 20, 2000, online at <http://www.cfsan.fda.gov/~comm/biorpt.html>

⁵ The Mellman Group, Inc. and Public Opinion Strategies, Inc., as commissioned by the Pew Initiative on Food and Biotechnology, “Public Sentiments About Genetically Modified Food: November 2005 Update,” online at <http://pewagbiotech.org/research/2005update>.

The chart that follows looks at individual states, providing information on various aspects of their agricultural industry based on government-collected data. It features the state's top agricultural commodities, and the percentage which is produced with genetically engineered varieties. For many states, none of their top agricultural products are genetically engineered. The chart also ranks states according to how much organic agriculture they produce relative to total U.S. organic production and, perhaps more revealing, they are also ranked according to how much of the state's agricultural industry is organic. In addition to this numeric data, the charts also include state legislation or regulations that seek to control the production or use of GE food.

When looked at together, this information constructs a new picture of U.S. agriculture. For example:

- **California** ranks #1 in U.S. organic agricultural sales, producing nearly 40% of all organics sold in the nation. The state has banned GE fish from its waters and 5 California counties and cities have declared themselves "GMO-free" zones. The state also enacted the Rice Certification Act of 2000, which established strict rules for the introduction of any new rice varieties of "commercial impact." Since GE rice is unwanted around the world and contamination from the GE variety could devastate California's rice exports, passage of this law was seen as a pre-emptive strike against commercial GE rice cultivation in the state.
- **Massachusetts** ranks #1 in the percentage of its agricultural industry producing organics, and none of its top commodities are genetically engineered. Also, a number of towns have called on the state's United States Senators and Congressional Representatives to support legislation that imposes a national moratorium on cultivation of GE crops.
- **Alaska** has taken significant steps to protect its \$300 million a year fishing industry, which is nearly 6 times Alaska's agricultural sales, as the state has enacted a ban on GE fish, and also requires labeling of all GE fish and fish products.
- **Arkansas** ranks near the bottom in organic agriculture and over 90% of the state's soybeans and cotton are grown from GE varieties. However, the state has enacted the Arkansas Rice Certification Act which, like California's law, essentially pre-empts potential commercial GE rice cultivation and also sets up a regulatory framework for rice varieties of commercial impact. Rice is an \$800 million industry in Arkansas, over half of which is exported. Facing widespread international rejection of GE foods, the Act keeps this important industry from losing its major markets.

The federal government's inaction has not stopped state and local authorities, consumers, farmers, and other concerned citizens from defending themselves against GE foods. The data in this report shows the successful grassroots efforts to control the spread of GE food, and demonstrates that non-GE foods are still the rule, and not the exception in the U.S.

Alabama

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	45
1. Broilers	58.7	11.8	2,406,976	0%	Organic as % of US organic ag sales state ranking:	44
2. Cattle and calves	11.4	1.0	469,323	0%		
3. Chicken eggs	7.0	5.4	287,956	0%		
4. Greenhouse/nursery	6.4	1.7	263,092	0%	Total value of organic sales (\$1000):	186
5. Cotton	4.7	3.6	193,535	n/a		
All commodities		1.7	4,103,235			
Legislation and regulations controlling GMOs:					State legislation restricting local control of GMOs: None	

Alaska

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	50
1. Greenhouse/nursery	27.6	0.1	14,630	0%	Organic as % of US organic ag sales state ranking:	50
2. Hay	7.4	0.1	3,910	0%*		
3. Dairy products	5.3	0.0	2,822	0%		
4. Potatoes	4.2	0.1	2,250	0%*	Total value of organic sales (\$1000):	0
5. Cattle and calves	2.7	0.0	1,413	0%		
All commodities		0.0	52,987			
Legislation and regulations controlling GMOs:					State legislation restricting local control of GMOs: None	
<p>GE Fish Labeling: Bill (SB25) passed requiring that “food is conspicuously labeled to identify the fish or fish product as a genetically modified fish or fish product...” <i>Alaska Stat. §17-20-040 (2005)</i> http://www.legis.state.ak.us/folhome.htm</p> <p>Aquaculture Ban: Alaska Fish and Game statutes state that “a person may not grow or cultivate finfish in captivity or under positive control for commercial purposes.” Since the statute bans all finfish, this would include GE fish. <i>Alaska Stat. §16.40.210 (1990)</i> http://www.legis.state.ak.us/folhome.htm</p>						

Arizona

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	20
1. Cattle and calves	25.1	1.6	770,066	0%	Organic as % of US organic ag sales state ranking:	25
2. Lettuce	19.2	28.5	589,896	0%		
3. Dairy products	18.6	2.1	570,381	0%	Total value of organic sales (\$1000):	3,410
4. Cotton	6.3	3.6	194,309	n/a		
5. Hay	3.6	2.5	111,420	0%*		
All commodities		1.3	3,065,603			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	SB1282 Passed 4/22/05

Arkansas

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	47
1. Broilers	41.4	13.4	2,731,300	0%	Organic as % of US organic ag sales state ranking:	46
2. Rice	12.2	46.8	808,021	0%		
3. Soybeans	11.6	4.2	766,264	92%	Total value of organic sales (\$1000):	136
4. Cattle and calves	8.4	1.2	555,145	0%		
5. Cotton	7.0	8.6	464,672	96%		
All commodities		2.7	6,604,400			
Legislation and regulations controlling GMOs:						
<p>GE Rice Regulation: The Arkansas Rice Certification Act (HB2574) regards rice with “characteristics of commercial impact.” These characteristics include those “that may adversely affect the marketability of rice in the event of commingling with any other rice [and]...that cannot be identified without the aid of specialized equipment or testing.” The Act allows the State Plant Board to prohibit or place restrictions on the “selling, planting, producing, harvesting, transporting, storing, processing, or other handling” of such rice. <i>Ark. Code Ann. §2-15-201 to 2-15-208 (2005)</i> http://www.arkleg.state.ar.us/ftproot/acts/2005/public/act1238.pdf</p>						
					State legislation restricting local control of GMOs:	None

California

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales	8
1. Dairy products	16.9	19.6	5,365,992	0%	Organic as % of US organic ag sales state ranking:	1
2. Greenhouse/nursery	10.5	21.2	3,328,147	0%		
3. Grapes	8.7	91.5	2,758,467	0%	Total value of organic sales (\$1000):	149,137
4. Almonds	6.9	100.0	2,200,055	0%		
5. Cattle and calves	5.1	3.5	1,633,740	0%		
All commodities		13.2	31,835,183			

Legislation and regulations controlling GMOs:

GE Fish Ban: Bill (SB245) passed which states that “in the waters of the Pacific Ocean that are regulated by this state, it is unlawful to spawn, incubate, or cultivate any...transgenic fish species.” *Cal. [Fish & Game] Code §15007 (2003)*

<http://www.leginfo.ca.gov/calaw.html>

GE Rice Regulation: The Rice Certification Act of 2000 (HB2622) regulates rice that has “characteristics of commercial impact.” This is defined as characteristics that “may adversely affect the marketability of rice in the event of commingling with other rice and may include, but are not limited to, those characteristics that cannot be visually identified without the aid of specialized equipment or testing, those characteristics that create a significant economic impact in their removal from commingled rice, and those characteristics whose removal from commingled rice is infeasible.” The Act provides for regulation and potential certification of such rice varieties. *Cal. [Food & Agric.] Code § 55000 to 55108 (2000)*

<http://www.leginfo.ca.gov/calaw.html>

County GMO Ban: Measure H passed by voters (March 2004) in Mendocino County which states that “it shall be unlawful for any person, firm, or corporation to propagate, cultivate, raise, or grow genetically modified organisms in Mendocino County.” (*Measure has yet to be codified*)

<http://www.gmofreemendo.com/>

County GMO Ban: Marin County voted for a measure which states that “it is unlawful for any person or entity to cultivate, propagate, raise or grow genetically modified organisms in Marin County.” (2004)

<http://www.smartvoter.org/2004/11/02/ca/mrn/meas/B/>

County GMO Ban: Trinity County passed Ordinance No. 1284 which states that “it is unlawful for any person to propagate, cultivate, raise, or grow genetically engineered organisms in Trinity County.” *Chpt 8.25 of County Code (2004)*

<http://www.trinitycounty.org/>

City GMO Ban: An Arcata City ordinance states that “it is unlawful for any person, partnership, corporation, firm or organization of any kind to sell, distribute, propagate, cultivate, raise or grow seeds or crops of genetically engineered organisms in the City of Arcata...” *Ordinance No. 1350 (2004)*

<http://www.environmentalcommons.org/arcata-ordinance-1350-final.pdf>

City GMO Ban: Point Arena passed Ordinance No. 193 which states that “it is unlawful for any person, partnership, corporation, firm or organization of any kind to sell, distribute, propagate, cultivate, raise or grow seeds, whole plants, or crops of genetically modified organisms in the City of Point Arena” *Chpt 8.25 of City Code (2004)*

<http://www.environmentalcommons.org/Point-Arena-Ordinance.pdf>

State legislation restricting local control of GMOs: **None**

Colorado

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	<i>Organic as % of all state ag sales state ranking:</i>	14
1. Cattle and calves	60.8	7.1	3,342,808	0%	<i>Organic as % of US organic ag sales state ranking:</i>	8
2. Dairy products	6.2	1.3	343,281	0%		
3. Corn	5.2	1.3	285,378	n/a	<i>Total value of organic sales (\$1000):</i>	12,516
4. Greenhouse/nursery	5.0	1.8	276,427	0%		
5. Hogs	3.7	1.4	206,057	0%		
All commodities		2.3	5,501,155			
Legislation and regulations controlling GMOs:						
<p>City GMO Restriction: In the City of Boulder it is illegal to plant GMOs on public land. The City controls approximately 40,000 acres, making it the largest land owner in the area.</p>						
State legislation restricting local control of GMOs:						None

Connecticut

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	<i>Organic as % of all state ag sales state ranking:</i>	7
1. Greenhouse/nursery	44.3	1.5	233,011	0%	<i>Organic as % of US organic ag sales state ranking:</i>	28
2. Dairy products	12.7	0.2	67,124	0%		
3. Chicken eggs	8.7	0.9	45,944	0%	<i>Total value of organic sales (\$1000):</i>	2,822
4. Aquaculture	3.2	1.9	16,725	0%		
5. Corn, sweet	2.0	1.3	10,664	0%		
All commodities		0.2	526,580			
Legislation and regulations controlling GMOs:						
<p>State legislation restricting local control of GMOs:</p>						
State legislation restricting local control of GMOs:						None

Delaware

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	48
1. Broilers	73.5	3.4	686,458	0%	Organic as % of US organic ag sales state ranking:	49
2. Soybeans	4.8	0.2	45,083	n/a		
3. Corn	4.7	0.2	44,292	n/a	Total value of organic sales (\$1000):	8
4. Greenhouse/nursery	3.6	0.2	33,980	0%		
5. Dairy products	2.3	0.1	21,488	0%		
All commodities		0.4	933,843			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	None

Florida

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	24
1. Greenhouse/nursery	23.8	10.4	1,628,672	0%	Organic as % of US organic ag sales state ranking:	15
2. Oranges	14.3	62.5	980,309	0%		
3. Cane for sugar	8.0	55.1	549,669	0%	Total value of organic sales (\$1000):	5,913
4. Tomatoes	7.3	24.3	500,472	0%*		
5. Cattle and calves	6.5	0.9	443,145	0%		
All commodities		2.8	6,843,731			

Legislation and regulations controlling GMOs:

GE Fish Regulation: Under the broad mandate to regulate state aquaculture, the Division of Aquaculture within the Florida Department of Agriculture and Consumer Services created a Transgenic Aquatic Species Task Force. Under the Best Management Practices (BMPs) rule, “certified aquaculturists must apply to and receive from the FDACS, Division of Aquaculture, written authorization prior to culturing any transgenic aquatic species.” Aquaculturists must comply with the BMPs in order to receive an Aquaculture Certificate of Registration. *Aquaculture Best Management Practices Rules, January 2005 (Note: To date, the Task Force has approved only one transgenic fish: the Glofish)*
<http://www.floridaaquaculture.com/publications/BMP%20Rule-Manual112805.pdf>

Bt Cotton Geographic Restriction: Under current EPA regulations, the agency has “imposed sale and distribution restrictions on *B.t.* cotton in Florida, restricting its use to those sites North of Tampa (Route 60).” This is due to potential gene flow into the wild cotton species found in that area. *Biopesticides Registration Action Document for the Bacillus thuringiensis (Bt) Plant-Incorporated Protectants*, October 15, 2001
http://www.epa.gov/pesticides/biopesticides/pips/bt_brad.htm

State legislation restricting local control of GMOs:	HB1717 Passed 5/6/2005
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Georgia

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	44
1. Broilers	46.8	14.0	2,857,580	0%	Organic as % of US organic ag sales state ranking:	37
2. Cotton	8.0	9.0	487,410	95%		
3. Cattle and calves	6.5	0.8	395,833	0%	Total value of organic sales (\$1000):	671
4. Chicken eggs	6.5	7.4	394,223	0%		
5. Peanuts	5.7	41.7	347,700	0%		
All commodities		2.5	6,107,025			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	SB87 Passed 2/18/2005

Hawaii

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	3
1. Greenhouse/nursery	17.2	0.6	94,525	0%	Organic as % of US organic ag sales state ranking:	18
2. Pineapples	14.5	100.0	79,934	0%		
3. Cane for sugar	11.9	6.6	65,429	0%	Total value of organic sales (\$1000):	4,801
4. Macadamia nuts	7.3	100.0	40,115	0%		
5. Coffee	4.1	100.0	22,365	0%		
All commodities		0.2	549,830			
Legislation and regulations controlling GMOs:						
<p>Bt Cotton Geographic Restriction: Under EPA regulations, "current Agency restrictions in Hawaii preclude the sale and use of <i>B.t.</i> cotton for commercial planting [on the islands]." This is due to potential gene flow into the wild cotton species found in those areas. <i>Biopesticides Registration Action Document for the Bacillus thuringiensis (Bt) Plant-Incorporated Protectants</i>, October 15, 2001 http://www.epa.gov/pesticides/biopesticides/pips/bt_brad.htm</p>						
					State legislation restricting local control of GMOs:	None

Idaho

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	6
1. Dairy products	31.2	5.0	1,358,400	0%	Organic as % of US organic ag sales state ranking:	2
2. Cattle and calves	24.4	2.2	1,059,388	0%		
3. Potatoes	11.6	21.2	503,034	0%*	Total value of organic sales (\$1000):	25,328
4. Wheat	7.6	4.5	332,091	0%		
5. Hay	6.1	6.0	265,042	0%*		
All commodities		1.8	4,349,253			
Legislation and regulations controlling GMOs:						
<p>GMO Restriction: Idaho Plant Pest Act of 2002 (HO448) passed, which states that “the shipment, introduction into or release within this state of any plant pest, biocontrol agent, or genetically engineered plant or plant pest, or any other organism which may directly or indirectly affect the plant life of this state as an injurious pest, parasite or predator of other organisms, or any arthropod, is prohibited, except under permit issued by the Department [of Agriculture].” Idaho Code Ann. §22-2016 http://www3.state.id.us/cgi-bin/newidst?sctid=220200016.K</p>						
					State legislation restricting local control of GMOs:	HB38 Passed 3/23/2005

Illinois

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	40
1. Corn	42.5	18.6	4,121,224	36%	Organic as % of US organic ag sales state ranking:	31
2. Soybeans	30.3	16.0	2,944,989	81%		
3. Hogs	10.6	7.2	1,027,628	0%	Total value of organic sales (\$1000):	1,778
4. Cattle and calves	5.0	1.0	486,612	0%		
5. Dairy products	3.2	1.1	308,819	0%		
All commodities		4.0	9,708,304			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	None

Indiana

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	43
1. Corn	29.6	8.0	1,786,401	26%	Organic as % of US organic ag sales state ranking:	35
2. Soybeans	27.0	8.9	1,632,248	89%		
3. Hogs	12.2	5.1	738,470	0%	Total value of organic sales (\$1000):	851
4. Dairy products	8.1	1.8	490,646	0%		
5. Chicken eggs	4.8	5.5	291,947	0%		
All commodities		2.5	6,043,191			
Legislation and regulations controlling GMOs:						
<p>Seed Contract Restriction: Bill (HB1119) passed which states that “a seed contract may not give ... a seed supplier or an agent of a seed supplier the right to enter real property owned or occupied by the farmer to acquire samples [for testing] of the crop grown from the seed or any other plant growing on the real property unless” specific conditions, such as written notification, are met. <i>Ind. Code §15-4-13 (2002)</i> http://www.in.gov/legislative/ic/code/title15/ar4/ch13.html</p>						
					State legislation restricting local control of GMOs:	HB1302 Passed 3/25/2005

Iowa

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	23
1. Corn	28.8	19.0	4,220,252	60%	Organic as % of US organic ag sales state ranking:	6
2. Hogs	25.9	26.5	3,801,018	0%		
3. Soybeans	19.7	15.7	2,887,238	91%	Total value of organic sales (\$1000):	13,333
4. Cattle and calves	14.5	4.5	2,124,600	0%		
5. Dairy products	4.2	2.3	620,052	0%		
All commodities		6.1	14,652,946			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	HF642 Passed 4/6/2005

Kansas

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	38
1. Cattle and calves	59.4	11.9	5,643,895	0%	Organic as % of US organic ag sales state ranking:	29
2. Wheat	11.7	15.1	1,115,680	0%		
3. Corn	8.8	3.7	831,885	63%	Total value of organic sales (\$1000):	2,320
4. Soybeans	5.6	2.9	531,004	90%		
5. Hogs	4.0	2.6	379,048	0%		
All commodities		3.9	9,502,727			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	HB2341 Passed 4/1/2005

Kentucky

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	27
1. Horses/mules	23.0	81.8	950,000	0%	Organic as % of US organic ag sales state ranking:	27
2. Broilers	16.7	3.4	690,932	0%		
3. Cattle and calves	15.0	1.3	620,650	0%	Total value of organic sales (\$1000):	2,987
4. Tobacco	10.2	27.8	421,694	0%*		
5. Soybeans	9.0	2.0	372,216	n/a		
All commodities		1.7	4,126,185			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	None

Louisiana

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	<i>Organic as % of all state ag sales state ranking:</i>	46	
1. Cane for sugar	14.9	33.2	331,220	0%	<i>Organic as % of US organic ag sales state ranking:</i>	47	
2. Rice	10.9	14.1	243,420	0%*			
3. Cattle and calves	9.2	0.4	205,490	0%	<i>Total value of organic sales (\$1000):</i>	51	
4. Soybeans	9.0	1.1	200,610	n/a			
5. Cotton	8.8	3.6	196,766	95%			
All commodities		0.9	2,225,803				
<i>Legislation and regulations controlling GMOs:</i>							
						State legislation restricting local control of GMOs:	None

Maine

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	<i>Organic as % of all state ag sales state ranking:</i>	4
1. Dairy products	19.7	0.4	109,260	0%	<i>Organic as % of US organic ag sales state ranking:</i>	21
2. Potatoes	16.6	3.9	92,126	0%*		
3. Chicken eggs	11.1	1.2	61,408	0%	<i>Total value of organic sales (\$1000):</i>	4,113
4. Greenhouse/nursery	7.5	0.3	41,322	0%		
5. Aquaculture	6.8	4.2	37,385	0%		
All commodities		0.2	553,830			

Legislation and regulations controlling GMOs:

GE Seed Regulation: Bill (HP952) passed which states that “the manufacturer or seed dealer of the genetically engineered plants, plant parts or seeds shall provide written instructions to all growers on how to plant the plant parts, seeds or plants and how to grow and harvest the crop to minimize potential cross-contamination.” *Me. Rev. Stat. Ann. tit. 7, §1052 (2001)*
<http://janus.state.me.us/legis/statutes/7/title7sec1052.html>

GE Labeling: Bill (SP569) passed which states that “a label may be placed on any food, food product or food ingredient offered for sale in the State designating that food, food product or food ingredient as free of or made without recombinant deoxyribonucleic acid technology, genetic engineering or bioengineering...The rules must allow any food 1% or less of which consists of genetically engineered ingredients to be labeled as free of genetically engineered ingredients.”

Law further states that “if a manufacturer, distributor, processor, wholesaler or retailer falsely labels or advertises any food, food product or food ingredient offered for sale in the State as free of or made without recombinant deoxyribonucleic acid technology, genetic engineering or bioengineering, the food, food product or food ingredient is misbranded...” *Me. Rev. Stat. Ann. tit. 7, §530-A (2001)*
<http://janus.state.me.us/legis/statutes/7/title7sec530-A.html>

Milk Labeling: The Department of Agriculture, Food, and Rural Resources sets out criteria for the State of Maine Quality Trademark on milk and milk products in the Code of Maine Rules. A licensed user of the label must have submitted “a sworn statement stating that the milk producer has not used recombinant bovine somatotropin (rBST) in the previous 60 days, does not possess, and does not intend to use (rBST) during the upcoming year.” *01-001 CMR Chapter 136 (1994)*
<http://www.maine.gov/sos/cec/rules/01/001/001c136.doc>

Town GMO Ban: On March 25, 2006 the town of Montville approved a resolution that declared itself a GMO-free zone. “*Montville Bans Genetically Modified Seeds,*” *Bangor Daily News, 27 March 2006*
<http://www.bangornews.com>

State legislation restricting local control of GMOs:	None
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Maryland

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	15
1. Broilers	36.0	3.1	628,406	0%	Organic as % of US organic ag sales state ranking:	23
2. Greenhouse/nursery	20.7	2.3	360,396	0%		
3. Dairy products	11.2	0.7	196,010	0%	Total value of organic sales (\$1000):	3,614
4. Corn	6.9	0.5	120,191	n/a		
5. Soybeans	6.4	0.6	112,155	n/a		
All commodities		0.7	1,743,357			
Legislation and regulations controlling GMOs:						
<p>GE Fish Ban: Bill (HB189) passed which states that “the Department [of Natural Resources] may not issue a permit for the raising of a transgenic species or a genetically altered species, unless the permit limits the aquaculture operation to waters of the State that do not flow into any other body of water; and the aquaculture operation is constructed in a manner that assures that transgenic or genetically altered stocks are precluded from entering any other waters or contaminating other aquatic species of the State.” <i>Md. Code Ann., [Nat. Res.] §4-11A-02 (2001)</i> http://mlis.state.md.us/cgi-win/web_statutes.exe</p>						
State legislation restricting local control of GMOs:						None

Massachusetts

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	1
1. Greenhouse/nursery	35.4	0.9	146,398	0%	Organic as % of US organic ag sales state ranking:	13
2. Cranberries	15.1	29.1	62,378	0%		
3. Dairy products	12.4	0.2	51,275	0%	Total value of organic sales (\$1000):	7,837
4. Corn, sweet	4.1	2.0	16,965	0%		
5. Apples	3.3	0.8	13,456	0%		
All commodities		0.2	413,954			
Legislation and regulations controlling GMOs:						
<p>Currently, 7 towns have passed resolutions voicing opposition to GMOs and calling on the state’s US Senators and Congressional Representatives to support legislation regulating GMOs.</p>						
State legislation restricting local control of GMOs:						None

Michigan

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales <i>state ranking:</i>	18
1. Dairy products	23.7	3.7	1,020,380	0%	Organic as % of US organic ag sales <i>state ranking:</i>	14
2. Greenhouse/nursery	14.1	3.9	609,209	0%		
3. Corn	10.6	2.1	458,050	40%	Total value of organic sales (\$1000):	7,019
4. Soybeans	9.8	2.3	422,684	76%		
5. Cattle and calves	6.1	0.6	262,757	0%		
All commodities		1.8	4,312,320			
Legislation and regulations controlling GMOs:						
<p>GE Fish Restriction: Bill (SB226) passed which states that “unless authorized by a permit issued by the department...a person shall not knowingly release or allow to be released into this state [a genetically engineered fish or a nonnative fish]...that is not naturalized in the location of release.” <i>2003 Mich. Pub. Acts No. 270 (effective March 2004)</i> http://www.legislature.mi.gov/documents/2003-2004/publicact/htm/2003-PA-0270.htm</p> <p>GE Fish Restriction: Bill (SB229) passed which states that “...each genetically engineered variant of an aquaculture species shall be considered a distinct aquaculture species. A genetically engineered variant of an aquaculture species is not included on the list of approved aquaculture species ... unless specifically identified ...A genetically engineered organism that is a variant of an aquaculture species is not covered by an aquaculture research permit...” <i>2003 Mich. Pub. Acts No. 272 (effective March 2004)</i> http://www.legislature.mi.gov/documents/2003-2004/publicact/htm/2003-PA-0272.htm</p>						
					State legislation restricting local control of GMOs:	None

Minnesota

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	25
1. Corn	18.7	8.2	1,827,809	66%	Organic as % of US organic ag sales state ranking:	11
2. Hogs	17.6	12.0	1,724,512	0%		
3. Soybeans	16.8	9.0	1,648,271	83%	Total value of organic sales (\$1000):	8,330
4. Dairy products	13.6	4.9	1,336,334	0%		
5. Cattle and calves	10.1	2.1	989,285	0%		
All commodities		4.1	9,794,912			
Legislation and regulations controlling GMOs:						
<p>GMO Regulation: Bill (H2212) passed which is meant to “establish permits for the release of certain genetically engineered agriculturally related organisms to protect humans and the environment from the potential for significant adverse effects of those releases.” <i>Minn. Stat. §18F.01 to 18F.13 (1994)</i> http://www.revisor.leg.state.mn.us/bin/getpub.php?pubtype=STAT_CHAP&year=current&chapter=18F</p>						
<p>GE Pesticide Regulation: Minnesota statutes state that “a person may not use, distribute, or conduct release experiments with a genetically engineered pesticide in any amount in the state until it is registered under this section.” It further states that “the commissioner may issue an experimental genetically engineered pesticide product registration if the commissioner determines that the applicant has adequately demonstrated that the proposed release does not have the potential for unreasonable adverse effects on the environment.” <i>Minn. Stat. §18B.285 (1991)</i> http://www.revisor.leg.state.mn.us/bin/getpub.php?pubtype=STAT_CHAP&year=current&chapter=18b</p>						
					State legislation restricting local control of GMOs:	None

Mississippi

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	42
1. Broilers	47.2	9.4	1,930,412	0%	Organic as % of US organic ag sales state ranking:	38
2. Cotton	12.9	9.7	526,497	96%		
3. Soybeans	9.6	2.1	393,188	96%	Total value of organic sales (\$1000):	649
4. Aquaculture	6.8	31.0	276,971	0%		
5. Cattle and calves	4.8	0.4	196,129	0%		
All commodities		1.7	4,089,158			
Legislation and regulations controlling GMOs:						
<p>GE Fish Regulation: Bill (H0336) passed which states that “an aquaculturist shall obtain a cultivation and marketing permit for cultured aquatic products produced from...any aquatic plants or animals which have been genetically modified or are to be genetically modified by means other than breeding and crossbreeding.” <i>Miss Code Ann. §79-22-9 (2000)</i> http://www.sos.state.ms.us/pubs/mscode</p>						
State legislation restricting local control of GMOs:						None

Missouri

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	41
1. Soybeans	20.3	6.4	1,183,646	89%	Organic as % of US organic ag sales state ranking:	34
2. Cattle and calves	19.4	2.4	1,131,621	0%		
3. Corn	13.5	3.5	787,566	55%	Total value of organic sales (\$1000):	979
4. Hogs	10.7	4.3	623,260	0%		
5. Dairy products	5.1	1.1	298,808	0%		
All commodities		2.4	5,818,727			
Legislation and regulations controlling GMOs:						
State legislation restricting local control of GMOs:						None

Montana

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	
1. Cattle and calves	49.3	2.3	1,104,387	0%	Organic as % of US organic ag sales state ranking:	22
2. Wheat	25.3	7.7	565,647	0%		
3. Barley	5.6	18.4	124,839	0%	Total value of organic sales (\$1000):	3,847
4. Hay	3.9	2.0	86,794	0%*		
5. Sugar beets	2.5	4.4	56,244	0%*		
All commodities		0.9	2,238,979			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	None

Nebraska

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	
1. Cattle and calves	52.6	13.1	6,196,896	0%	Organic as % of US organic ag sales state ranking:	20
2. Corn	21.6	11.5	2,543,705	69%		
3. Soybeans	10.9	7.0	1,280,621	91%	Total value of organic sales (\$1000):	4,145
4. Hogs	6.5	5.3	761,953	0%		
5. Wheat	1.8	3.0	217,810	0%		
All commodities		4.9	11,779,728			
Legislation and regulations controlling GMOs:						
<p>GE Pesticide Regulation: Bill (LB588) passed, known as the Pesticide Act, with the intent “to regulate, in the public interest, the labeling, distribution, storage, transportation, use, application, and disposal of pesticides for the protection of human health and the environment.” The act defines a biological control agent as “any living organism applied to or introduced into the environment that is intended to function as a pesticide against another organism” and further classifies it as a pesticide, to be regulated by the Act. Genetically engineered B.t. crops fall within the definition of “biological control agent.” <i>Neb. Rev. Stat. §2-2622 to §2-2654 (1993)</i> http://srvwww.unicam.state.ne.us/legislature/legaldocs/Statutes/CHAP02</p>						
					State legislation restricting local control of GMOs:	None

Nevada

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	35	
1. Cattle and calves	52.6	13.1	6,196,896	0%	Organic as % of US organic ag sales state ranking:	24	
2. Corn	21.6	11.5	2,543,705	n/a			
3. Soybeans	10.9	7.0	1,280,621	n/a	Total value of organic sales (\$1000):	3,613	
4. Hogs	6.5	5.3	761,953	0%			
5. Wheat	1.8	3.0	217,810	0%			
All commodities		4.9	11,779,728				
Legislation and regulations controlling GMOs:					State legislation restricting local control of GMOs:		None

New Hampshire

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	5	
1. Greenhouse/nursery	36	0.4	60,819	0%	Organic as % of US organic ag sales state ranking:	33	
2. Dairy products	31.3	0.2	52,923	0%			
3. Apples	4.5	0.4	7,618	0%	Total value of organic sales (\$1000):	1,154	
4. Cattle and calves	4.1	0.0	7,001	0%			
5. Corn, sweet	3.1	0.6	5,292	0%			
All commodities		0.1	168,871				
Legislation and regulations controlling GMOs:					State legislation restricting local control of GMOs:		None

New Jersey

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	36
1. Greenhouse/nursery	42.5	2.3	368,546	0%	Organic as % of US organic ag sales state ranking:	43
2. Horses/mules	12.6	9.4	109,000	0%		
3. Blueberries	5.3	15.4	45,630	0%	Total value of organic sales (\$1000):	222
4. Dairy products	3.7	0.1	32,308	0%		
5. Chicken eggs	3.3	0.5	28,912	0%		
All commodities		0.4	866,719			
Legislation and regulations controlling GMOs:					State legislation restricting local control of GMOs: None	

New Mexico

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	29
1. Dairy products	39.0	3.7	1,000,224	0%	Organic as % of US organic ag sales state ranking:	32
2. Cattle and calves	37.0	2.0	948,659	0%		
3. Hay	5.0	2.9	127,680	0%*	Total value of organic sales (\$1000):	1,576
4. Pecans	3.5	27.2	88,920	0%		
5. Greenhouse/nursery	2.3	0.4	59,873	0%		
All commodities		1.1	2,564,863			
Legislation and regulations controlling GMOs:					State legislation restricting local control of GMOs: None	

New York

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	10	
1. Dairy products	53.4	7.1	1,950,144	0%	Organic as % of US organic ag sales state ranking:	7	
2. Greenhouse/nursery	10.4	2.4	378,415	0%			
3. Apples	4.7	9.7	172,860	0%	Total value of organic sales (\$1000):	12,920	
4. Cattle and calves	3.5	0.3	127,331	0%			
5. Hay	3.3	2.7	120,252	0%*			
All commodities		1.5	3,653,431				
Legislation and regulations controlling GMOs:					State legislation restricting local control of GMOs:		None

North Carolina

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	28	
1. Hogs	25.3	14.5	2,078,800	0%	Organic as % of US organic ag sales state ranking:	17	
2. Broilers	24.9	10.0	2,041,785	0%			
3. Greenhouse/nursery	11.4	5.9	932,871	0%	Total value of organic sales (\$1000):	5,365	
4. Tobacco	7.6	40.8	620,085	0%*			
5. Turkeys	5.5	15.0	448,812	0%			
All commodities		3.4	8,210,497				
Legislation and regulations controlling GMOs:					State legislation restricting local control of GMOs:		None

North Dakota

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	26
1. Wheat	26.3	14.6	1,075,122	0%	Organic as % of US organic ag sales state ranking:	26
2. Cattle and calves	18.1	1.6	738,975	0%		
3. Soybeans	13.1	2.9	536,619	89%	Total value of organic sales (\$1000):	3,262
4. Corn	6.6	1.2	269,265	n/a		
5. Sugar beets	5.9	19.0	240,853	0%*		
All commodities		1.7	4,090,864			
Legislation and regulations controlling GMOs:						
<p>GE Seed Inspection: Bill (SB2235) passed which states that “the commissioner shall establish procedures for inspecting, analyzing, and verifying the genetic identity or physical traits of seeds or crops. The procedures must address the compilation of all necessary documentation and other administrative functions.” <i>N.D. Cent. Code § 4-42 (2001)</i> http://www.legis.nd.gov/cencode/t04c42.pdf</p>						
<p>Seed Collection Restriction: Bill (HB1442) which states that “before a person holding a patent on a genetically modified seed may enter upon any land farmed by another for the purpose of obtaining crop samples to determine whether patent infringement has occurred, the person holding the patent: Shall notify the agriculture commissioner in writing of the person's belief that a patent infringement has occurred and include facts from the allegation; shall notify the farmer in writing of the allegation that a patent infringement has occurred and request written permission to enter upon the farmer's land; and must obtain the written permission of the farmer.” <i>N.D. Cent. Code § 4-24-13 (2001)</i> http://www.legis.nd.gov/cencode/t04c24.pdf</p>						
					State legislation restricting local control of GMOs:	SB2277 Passed 3/16/2005

Ohio

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales <i>state ranking:</i>	
1. Soybeans	22.4	6.6	1,220,297	77%	21	
2. Corn	18.8	4.6	1,024,109	18%		
3. Dairy products	13.8	2.7	751,980	0%	Organic as % of US organic ag sales <i>state ranking:</i>	
4. Greenhouse/nursery	10.8	3.8	589,124	0%	16	
5. Hogs	7.4	2.8	402,719	0%		
All commodities		2.3	5,459,380			
					Total value of organic sales (\$1000):	5,616
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	HB66 Passed 6/30/2005

Oklahoma

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales <i>state ranking:</i>	
1. Cattle and calves	46.7	5.0	2,362,342	0%	49	
2. Hogs	12.2	4.3	615,411	0%		
3. Broilers	10.8	2.7	547,096	0%	Organic as % of US organic ag sales <i>state ranking:</i>	
4. Wheat	10.5	7.2	528,314	0%	48	
5. Dairy products	4.3	0.8	218,575	0%		
All commodities		2.1	5,054,570			
					Total value of organic sales (\$1000):	12
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	HB1471 Passed 4/18/2005

Oregon

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales <i>state ranking:</i>	13
1. Greenhouse/nursery	25.8	6.1	951,452	0%	Organic as % of US organic ag sales <i>state ranking:</i>	9
2. Cattle and calves	13.8	1.1	508,910	0%		
3. Dairy products	9.7	1.3	359,520	0%	Total value of organic sales (\$1000):	9,933
4. Hay	7.1	6.0	262,327	0%*		
5. Ryegrass	5.5	100.0	204,557	0%		
All commodities		1.5	3,691,554			
Legislation and regulations controlling GMOs:						
<p>GE Fish Ban: Oregon Administrative Rules states that “the Department [of Fish and Wildlife] shall not authorize the release of transgenic fish into locations where such fish may gain access to wild fish populations.” <i>Or. Admin. Rules 635-007-0595 (2004)</i> http://arcweb.sos.state.or.us/rules/OARS_600/OAR_635/635_007.html</p>						
<p>Bentgrass Control Area: The department of agriculture, under the Oregon Administrative Rules, established “a control area...in Jefferson County to regulate the production of bentgrass. This control area is designed to provide physical separation between varieties of bentgrass produced using techniques of modern biotechnology and conventionally bred varieties with which they might cross-pollinate.” The rule prohibits using processing equipment for both GE and conventional bentgrass and restricts GE bentgrass to the control area unless shipped in sealed containers. <i>Or. Admin. Rules 603-052-1240 (2002)</i> http://arcweb.sos.state.or.us/rules/OARS_600/OAR_603/603_052.html</p>						
					State legislation restricting local control of GMOs:	None

Pennsylvania

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	16
1. Dairy products	36.4	6.5	1,768,976	0%	Organic as % of US organic ag sales state ranking:	10
2. Cattle and calves	9.5	1.0	459,569	0%		
3. Greenhouse/nursery	8.8	2.7	425,464	0%	Total value of organic sales (\$1000):	8,808
4. Mushrooms, agaricus	7.8	58.7	380,994	0%		
5. Chicken eggs	7.0	6.4	339,676	0%		
All commodities		2.0	4,859,336			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	HB2387 Passed 11/29/2004

Rhode Island

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	9
1. Greenhouse/nursery	64.5	0.3	41,155	0%	Organic as % of US organic ag sales state ranking:	41
2. Corn, sweet	5.9	0.5	3,762	0%		
3. Dairy products	5.4	0.0	3,434	0%	Total value of organic sales (\$1000):	270
4. Potatoes	1.8	0.0	1,124	0%*		
5. Cattle and calves	1.5	0.0	938	0%		
All commodities		0.0	63,825			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	None

South Carolina

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	<i>Organic as % of all state ag sales state ranking:</i>	32
1. Broilers	27.3	2.6	521,884	0%	<i>Organic as % of US organic ag sales state ranking:</i>	36
2. Greenhouse/nursery	15.6	1.9	297,997	0%		
3. Turkeys	9.7	6.2	185,280	0%	<i>Total value of organic sales (\$1000):</i>	746
4. Cattle and calves	7.6	0.3	145,504	0%		
5. Tobacco	6.0	7.6	115,004	0%*		
All commodities		0.8	1,909,099			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	None

South Dakota

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	30
1. Cattle and calves	33.6	3.5	1,639,061	0%	Organic as % of US organic ag sales state ranking:	30
2. Corn	19.5	4.3	949,749	83%		
3. Soybeans	16.8	4.5	820,587	95%	Total value of organic sales (\$1000):	2,239
4. Wheat	8.8	5.8	426,961	0%		
5. Hogs	7.6	2.6	371,000	0%		
All commodities		2.0	4,877,484			

Legislation and regulations controlling GMOs:

Seed Collection Restriction: Bill (SB179) passed titled “An Act to regulate sampling procedures for verification of transgenic seed use.” It states that “before a person holding a patent on transgenic seed may enter upon any land farmed by another for the purpose of obtaining crop samples to determine whether patent infringement has occurred, the person holding the patent” must provide written notification and receive permission of the farmer. *S.D. Codified Law § 38-1-44 through 38-1-50 (2001)*
<http://legis.state.sd.us/statutes/DisplayStatute.aspx?Statute=38-1&Type=StatuteChapter>

Alfalfa Restriction Agreement: Following discussions between the South Dakota Department of Agriculture, South Dakota State University, and Monsanto, the following language was added to the Roundup Ready® alfalfa technical use guide: “In geographies where conventional common alfalfa seed production is intermingled with forage production and the agronomic conditions (climate and water/irrigation availability) are such that forage alfalfa is allowed to stand and flower late in the season, Roundup Ready alfalfa must be harvested at or before 10% bloom to minimize potential pollen flow from hay to common alfalfa seed production.” The company also sent a statement to the Department stating: “Any determination to pursue patent enforcement shall be made only in circumstances where evidence clearly points to a deliberate infringement.” *S.D. Dept. of Ag. Press Release (2006)*
<http://www.state.sd.us/news/showDoc.aspx?i=7325>

State legislation restricting local control of GMOs:	SB152 Passed 2/25/2005
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Tennessee

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	37
1. Cattle and calves	20.1	1.1	514,388	0%	Organic as % of US organic ag sales state ranking:	39
2. Broilers	17.2	2.2	439,604	0%		
3. Soybeans	11.0	1.5	282,763	n/a	Total value of organic sales (\$1000):	637
4. Greenhouse/nursery	10.6	1.7	272,509	0%		
5. Cotton	8.8	4.2	225,093	n/a		
All commodities		1.1	2,561,984			
Legislation and regulations controlling GMOs:						
State legislation restricting local control of GMOs:						None

Texas

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	22
1. Cattle and calves	48.4	16.9	7,989,786	0%	Organic as % of US organic ag sales state ranking:	5
2. Cotton	9.4	28.6	1,546,320	63%		
3. Broilers	8.6	7.0	1,424,520	0%	Total value of organic sales (\$1000):	15,183
4. Greenhouse/nursery	8.4	8.8	1,388,443	0%		
5. Dairy products	5.9	3.6	975,718	0%		
All commodities		6.8	16,498,398			
Legislation and regulations controlling GMOs:						
State legislation restricting local control of GMOs:						HB2313 Passed 6/17/2005

Utah

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	<i>Organic as % of all state ag sales state ranking:</i>	34	
1. Cattle and calves	34.4	0.9	431,201	0%	<i>Organic as % of US organic ag sales state ranking:</i>	40	
2. Dairy products	20.0	0.9	250,415	0%			
3. Hogs	12.4	1.1	155,103	0%	<i>Total value of organic sales (\$1000):</i>	437	
4. Hay	9.2	2.6	114,710	0%*			
5. Greenhouse/nursery	5.9	0.5	73,726	0%			
All commodities		0.5	1,253,154				
<i>Legislation and regulations controlling GMOs:</i>							
						State legislation restricting local control of GMOs:	None

Vermont

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales <i>state ranking:</i>	2
1. Dairy products	74.6	1.6	433,823	0%	Organic as % of US organic ag sales <i>state ranking:</i>	12
2. Cattle and calves	8.3	0.1	48,238	0%		
3. Greenhouse/nursery	4.6	0.2	26,895	0%	Total value of organic sales (\$1000):	8,136
4. Hay	2.7	0.4	15,746	0%*		
5. Maple products	2.3	35.9	13,650	0%		
All commodities		0.2	581,773			
Legislation and regulations controlling GMOs:						
<p>GE Seed Labeling: Bill (H.777) passed which states that “for all seed containing genetically engineered material the label or labeling shall specify the identity and relevant traits or characteristics of such seed, plus any requirements for their safe handling, storage, transport, and use, the contact point for further information and, as appropriate, the name and address of the manufacturer, distributor, or supplier of such seed.” Additionally, “for seeds sold in Vermont which contain genetically engineered material, the manufacturer or processor distributing such seed in Vermont shall report annually...regarding sales during the previous calendar year.” <i>Vt. Stat. Ann. tit. 6, §644 (2004)</i> http://www.leg.state.vt.us/statutes/sections.cfm?Title=06&Chapter=035</p> <p>Additionally, 83 towns have passed resolutions against GMOs. See http://www.gefreevt.org for map and information.</p>						
					State legislation restricting local control of GMOs:	None

Virginia

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	19	
1. Broilers	22.0	2.9	590,172	0%	Organic as % of US organic ag sales state ranking:	19	
2. Cattle and calves	11.8	0.7	317,677	0%			
3. Dairy products	11.5	1.1	308,417	0%	Total value of organic sales (\$1000):	4,306	
4. Greenhouse/nursery	8.7	1.5	232,453	0%			
5. Turkeys	6.8	6.1	182,855	0%			
All commodities		1.1	2,684,393				
Legislation and regulations controlling GMOs:					State legislation restricting local control of GMOs:		None

Washington

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	11	
1. Apples	19.5	64.0	1,142,105	0%	Organic as % of US organic ag sales state ranking:	4	
2. Dairy products	14.6	3.1	857,010	0%			
3. Cattle and calves	9.3	1.1	543,427	0%	Total value of organic sales (\$1000):	20,326	
4. Wheat	8.9	7.1	521,898	0%			
5. Potatoes	7.7	19.1	453,268	0%*			
All commodities		2.4	5,868,196				
Legislation and regulations controlling GMOs:					State legislation restricting local control of GMOs:		None
<p>GE Fish Ban: In the Washington Administrative Code, an aquatic farmer must have a valid marine finfish aquaculture permit for any fish rearing program but it states that “the use of transgenic fish (as defined by the actual transfer of genetic material from one species to another) is prohibited.” <i>Wash. Admin. Code 220-76-100 (2003)</i></p> <p>http://apps.leg.wa.gov/WAC/default.aspx?cite=220-76-100</p>							

West Virginia

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	31
1. Broilers	36.9	0.8	155,848	0%	Organic as % of US organic ag sales state ranking:	45
2. Cattle and calves	20.7	0.2	87,386	0%		
3. Chicken eggs	7.6	0.6	32,325	0%	Total value of organic sales (\$1000):	176
4. Dairy products	7.5	0.1	31,515	0%		
5. Turkeys	7.0	1.0	29,702	0%		
All commodities		0.2	422,871			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	SB580 Passed 4/16/2005

Wisconsin

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	12
1. Dairy products	53.7	13.5	3,687,749	0%	Organic as % of US organic ag sales state ranking:	3
2. Cattle and calves	11.7	1.7	800,703	0%		
3. Corn	9.7	3.0	668,997	46%	Total value of organic sales (\$1000):	20,828
4. Greenhouse/nursery	3.5	1.5	237,404	0%		
5. Soybeans	3.5	1.3	236,901	84%		
All commodities		2.8	6,864,150			
Legislation and regulations controlling GMOs:						
<p>GMO Release Notification: State statutes titled "Notice of release of genetically engineered organisms into the environment" sets up requirements for regulated releases, including proper notification of the Department of Agriculture. <i>Wis Stat. §146.60 (1989)</i> http://www.legis.state.wi.us/rsb/stats.html</p>						
					State legislation restricting local control of GMOs:	None

Wyoming

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	
1. Cattle and calves	77.5	1.8	855,676	0%	Organic as % of US organic ag sales state ranking:	42
2. Hay	3.9	1.0	43,594	0%*		
3. Sugar beets	2.8	2.4	30,982	0%*	Total value of organic sales (\$1000):	268
4. Hogs	2.6	0.2	28,330	0%		
5. Sheep and lambs	2.5	5.4	27,574	0%		
All commodities		0.5	1,104,702			
Legislation and regulations controlling GMOs:						
					State legislation restricting local control of GMOs:	None

United States

<i>Top 5 agricultural commodities</i>	<i>% of state total</i>	<i>% of US total</i>	<i>Value of receipts (\$1000)</i>	<i>% GE</i>	Organic as % of all state ag sales state ranking:	
1. Cattle and calves		19.6	47,295,573	0%	Organic as % of US organic ag sales state ranking:	-
2. Dairy products		11.3	27,367,857	0%		
3. Corn		9.2	22,198,830	52%	Total value of organic sales (\$1000):	392,813
4. Broilers		8.5	20,446,085	0%		
5. Soybeans		7.6	18,374,576	87%		
All commodities			241,241,402			
Legislation and regulations controlling GMOs:						
<p>Bt Cotton Geographic Restriction: Under current EPA regulations, the agency has “imposed sale and distribution restrictions on <i>B.t.</i> cotton in Florida, restricting its use to those sites North of Tampa (Route 60).” Also, “current Agency restrictions in Hawaii preclude the sale and use of <i>B.t.</i> cotton for commercial planting [on the islands].” This is due to potential gene flow into the wild cotton species found in those areas. <i>Biopesticides Registration Action Document for the Bacillus thuringiensis (Bt) Plant-Incorporated Protectants</i>, Oct 15, 2001 http://www.epa.gov/pesticides/biopesticides/pips/bt_brad.htm</p>						
					State legislation restricting local control of GMOs:	-

Key & Sources for State Factsheets

Top 5 agricultural commodities	% of state total	% of US total	Value of receipts (\$1000)	% GE	Organic as % of all state ag sales state ranking	Organic as % of US organic ag sales state ranking	Total value of organic ag sales (\$1000)
1.	A			B		C	
2.							
3.							
4.							
5.							
All commodities							
Legislation and regulations controlling GMOs:							
							D

A General agricultural data source:
Economic Research Service, United States Department of Agriculture, "State Fact Sheets" (data last updated 8 December 2005)
<http://www.ers.usda.gov/StateFacts/>.

"% of state total" is the given commodity value as a percent of a state's total agricultural sales.

"% of US total" is the given commodity value as a percent of the total US sales of that commodity.

B GE soybean, cotton, and corn data source:
National Agricultural Statistical Services, United States Department of Agriculture, *Acreage Report* (Washington, D.C: USDA, 30 June 2005). <http://usda.mannlib.cornell.edu/reports/nassr/field/pcp-bba/acrg0605.pdf>

"% GE" is the percentage of the commodity that is genetically engineered. For crops, it is the percentage of total acreage planted in a GE variety.

There are currently no GE poultry, cattle or dairy cows on the market. However, those animals may have been given GE feed, and dairy products may have come from cows treated with the GE growth hormone rbGH.

While at least 35 species of GE fish and shellfish have been developed, none are currently on the commercial market. See *The Catch with Seafood* (Washington, D.C: Center for Food Safety, 2005) for more information on GE aquaculture.
<http://www.centerforfoodsafety.org/thecatchwithseafoodaquaculturereport.cfm>

*See "Deregulated GE Crops" for more information regarding specific crops.

C "Organic sales" data source:
National Agricultural Statistical Services, United States Department of Agriculture, "State level data" in 2002 Census of Agriculture, vol. 1 (Washington, D.C: USDA, released June 2004). http://www.nass.usda.gov/census/census02/volume1/us/st99_2_002_002.pdf

"Organic as % of all state ag sales" is a ranking based on the percentage of the state's agricultural sales that are organic.

"Organic as % of US organic ag sales" is a ranking based on the percentage of total US organic agricultural sales produced by that state.

D "State legislation restricting local control of GMOs" data source:
Environmental Commons, "2006 Food Control Legislation Tracker." <http://www.environmentalcommons.org/gmo-tracker.html>

In 2004, following the wave of GE food bans at the regional level (see California and Vermont factsheets for examples), the biotech industry began supporting state legislation that would void these local level bans, pre-empting those citizens' right to defend themselves against GE foods through democratic action.

Federal Regulation of GE Foods:

The current federal system for regulation of GE foods involves three separate programs: the Animal and Plant Health Inspection Service (APHIS) of the US Department of Agriculture (USDA); the Environmental Protection Agency (EPA), which regulates GE pest-resistant crops; and the Food and Drug Administration (FDA) of the US Department of Health and Human Services.

APHIS - In general, new GE crops are considered “regulated materials” and APHIS authorizes and oversees their initial release in experimental field trials. Since the mid-1990s, APHIS has allowed the vast majority of GE field trials to occur with a simple notification system, requiring permits for only a few. Notifications require only the filling out of a short form, while permits require more detailed descriptions, including the genes and confinement methods, and give APHIS a longer period to come to a regulatory decision. Following field trials, the institution can submit a petition to APHIS for nonregulated status of the particular GMO. If the agency grants nonregulated status, it gives up authority to regulate the crop and therefore, no further authorization from the agency is required to grow the crop commercially. As a result, the institution is free to cultivate the GE crop without any additional oversight.¹

EPA - The EPA is responsible for registering and approving GE pest-resistant crops (so far all such crops have been *Bt* crops, engineered with a gene from the bacteria *Bacillus thuringiensis*). The agency uses its authority under the Federal Insecticide, Fungicide, and Rodenticide Act of 1947 (FIFRA), even though this regulation was developed decades ago for new chemicals, not engineered organisms that can reproduce and exchange genetic material in ways never imagined by chemical regulators. The result is a murky regulatory obligation where EPA technically regulates the pesticide, but not the plant itself. In practice, this means it approves field trials and commercial registration, as it does with other pesticides, but does not place use-restriction labels on the commercial seed, unlike the requirement for other pesticides. Instead, the agency relies on seed producers and dealers to ensure regulatory compliance. Without the government inspectors and compliance officials normally involved in pesticide regulation, seed dealers and growers are left with little, if any, oversight.²

FDA - The FDA claims regulatory authority under the 1958 Food Additive Amendment to the Federal Food and Drug Act, passed decades before GE foods even became feasible. Under the Act, the FDA regulates food additives through premarket reviews, with the exception of those substances that are “generally recognized as safe” (GRAS). This exemption from regulation was originally intended for substances with a long history of human consumption, like salt or refined sugar. However, with the development of GE foods, the FDA created a statement of policy in 1992 using those same guidelines from 1958. That document claims that since every plant and animal cell already contains nucleic acid, inserted DNA is not viewed as a safety concern and would most likely be given GRAS status. The agency does note that the proteins, fats, or carbohydrates resulting from DNA insertion might not be GRAS and may need to be evaluated. The FDA continues to recommend consulting with the agency prior to commercial release of new GE foods, although it has yet to finalize a mandatory procedure.³

Deregulated GE Crops:

The National Agricultural Statistical Service of the USDA only keeps data on the production of the major GE crops in the US: cotton, soybeans, and corn. This data is collected only for some states, and has been included in the state factsheets accordingly. There have been other crops that have been granted nonregulated status and are therefore approved for commercial cultivation, however, most of these are grown in small amounts or not at all. Below is a list of all crops that have been granted nonregulated status by APHIS; the number in brackets following each crop represents the number of different gene insertions in that crop that have been granted nonregulated status.⁴ Brief notes on the crop's history and current status are included as available.

Alfalfa (1) In June 2005, Roundup Ready Alfalfa was de-regulated by the USDA to become the first GE alfalfa commercially available. However, final foreign import approval from Japan, Mexico, and Canada, which assures open markets for US alfalfa exporters and is necessary for full unrestricted production, was not granted until 2006. This reduced the adoption rate of the alfalfa last year in states like California and Washington that export a lot of alfalfa. For its first summer on the market, Monsanto released approximately 1 million pounds of seed, which were planted on about 75,000 acres or 3% of total US alfalfa acreage.⁵ For the summer of 2006, the company hopes to release approximately 4 million pounds of seed.⁶

Canola/Rapeseed (7) About 90% of the US's canola is produced in North Dakota, of which approximately 75% is Monsanto's Roundup Ready canola (a GE herbicide-resistant variety).⁷

Corn (20) The main GE corn varieties are Bt corn, herbicide tolerant corn, and so-called "stacked" varieties that include both traits. The most widely publicized contamination incident with GE food involved a GE corn from Aventis called StarLink, which was approved only for animal feed due to its potential allergenicity. In 2000, StarLink corn was discovered in processed foods, including taco shells, sparking a nationwide recall. Further testing confirmed seed contamination as well.⁸ Class action lawsuits were later filed on behalf of farmers whose non-StarLink corn was contaminated (settled for \$110 million)⁹ and consumers who said they suffered allergic reactions to the corn (settled for \$9 million).¹⁰

Cotton (11) Like GE corn, most GE cotton varieties are Bt, herbicide tolerant, or so-called "stacked" varieties that include both traits.

Flax (1) The USDA produces "marketing statements" designed to assure foreign markets, many of which prohibit GMOs, that specific commodities from the US are GMO-free. Regarding flaxseed, the agency states that "[t]he United States Department of Agriculture has deregulated one variety of herbicide-tolerant flaxseed; but based upon information supplied by the developer, this variety is not for sale or in commercial production in the United States."¹¹

Papaya (1) In 2005, 53% of the papaya grown in Hawaii (the only state in the US which produces papaya) was the "Rainbow" variety, genetically engineered to resist the papaya ringspot virus.¹² While industry claims that GE papaya "saved" the Hawaiian papaya industry, in fact Hawaiian papaya production in 2005 was at its lowest point since before 1980, and sales were at their lowest point since 1985.¹³

Potato (5) No GE potatoes are currently grown in the US. According to the Executive Vice President of the US Potato Council, the main reason for this is a lack of varieties with useful traits.¹⁴ NewLeaf, a Bt potato, was the first GE crop that Monsanto introduced, but it was a commercial failure and the company discontinued marketing in 2001. It is worth noting that in 2000, McDonald's refused to use the GE potato, which resulted in its suppliers discontinuing cultivation.¹⁵

Rice (2) A marketing statement from USDA regarding GE rice states the following:

"The United States Department of Agriculture has deregulated two varieties of transgenic herbicide-tolerant rice (*Oryza sativa*); but based upon information provided by the developer, these varieties were not available for sale as of October 11, 2005.

"Transgenic rice grown under USDA permit as a regulated article is not in commercial production for use as food or feed. USDA permit conditions require strict confinement procedures which are subject to Federal oversight and enforcement."¹⁶

Soybean (5) 87% of the soybeans grown in the US are herbicide-resistant, making Monsanto's Roundup Ready soybean by far the most widely grown GE crop in the US.¹⁷

Squash (2) Genetically engineered squash acreage is not recorded by any reliable agency. As a result, there are conflicting estimates regarding its prevalence but at best estimate, it is only cultivated in negligible amounts.¹⁸

Sugarbeet (3) While Roundup Ready sugarbeets have been de-regulated by the USDA, none are currently in commercial cultivation. However, various field trials have been planted around the country and the first commercial demonstration is planted in Idaho. At present, the sugarbeet industry is developing seeds specific to various regions with the intention of large-scale introduction within a few years.¹⁹ However, it is unknown how the domestic and international markets will respond to sugar produced from GE sugarbeets.

Tobacco (1) Vector Tobacco has developed a nicotine-free tobacco variety that has been deregulated by the USDA. It is used to produce Quest brand cigarettes. In 2002, the first commercial crop was planted on 5000 acres in Mississippi, Louisiana, Illinois, and Pennsylvania, all states that are not traditional tobacco-growing regions.²⁰ However, according to a company spokesperson, there is no GE tobacco currently in cultivation although the cigarettes are still available for sale.²¹

Tomato (11) No GE tomatoes are currently in cultivation. However, the first commercially grown GE food was Calgene's Flavr Savr tomato, which the company submitted to the FDA for voluntary review in 1989 and marketed briefly beginning in 1994. Ultimately, the tomatoes were a failure, but Flavr Savr set the precedent for future regulatory procedures regarding GE foods.²²

¹ M. Taylor, J. Tick, and D. Sherman, *Tending The Fields: State and Federal Roles in the Oversight of Genetically Modified Crops* (Washington, D.C.: Pew Initiative on Food and Biotechnology, 2004) p 38.

² *Ibid*, p 52.

³ Food and Drug Administration, Department of Health and Human Services, "Statement of Policy: Foods Derived from New Plant Varieties," *Federal Register* 57(104):22984-23004 <http://www.cfsan.fda.gov/~acrobat/fr920529.pdf>.

⁴ *Deregulated crops taken from the database supplied by* Information Systems for Biotechnology, "Crops No Longer Regulated by USDA," *Online Database funded by USDA*, 31 March 2006 <http://www.isb.vt.edu/CFDOCS/biopetitions1.cfm> (4 April 2006).

⁵ B. Curran, "Roundup Ready Alfalfa Approved for Sale in U.S." *Penn State Field Crop News* vol. 05:08, July, 8 2005 <http://fcn.agronomy.psu.edu/2005/fcn0508.cfm#sale>.

⁶ J. Dickrell, "RR Alfalfa Debuts," *Dairy Today* April 2006, http://www.agweb.com/get_article.asp?sigcat=dairy&pageid=126565.

⁷ S. Sankula, G. Marmon, E. Blumenthal, *Biotechnology-Derived Crops Planted in 2004 – Impacts on US Agriculture* (Washington, D.C.: National Center for Food and Agricultural Policy, 2005).

⁸ M. Nestle, *Safe Food: Bacteria, Biotechnology, and Bioterrorism* (Berkeley: University of California Press, 2003); M. Kaufman, "Biotech Critics Cite Unapproved Corn in Taco Shells," *The Washington Post* 18 Sept 2000.

⁹ *For terms of settlement*, see <http://www.non-starlinkfarmerssettlement.com>.

¹⁰ "Modified Corn Lawsuit Is Settled," *New York Times* 8 March 2002.

¹¹ GIPSA, USDA, "Letterhead Statements," 12 September 2005 <http://archive.gipsa.usda.gov/rdd/transgenic_statements.pdf> (6 April 2006).

¹² Hawaii Field Office, National Agricultural Statistical Services, United States Department of Agriculture, "Papaya Acreage Survey 2005 Results," *Online Reports Archive* <http://www.nass.usda.gov/hi/fruit/annpap.pdf>.

¹³ Sean Hao, "Papaya production taking a tumble," *The Honolulu Advertiser*, March 19, 2006.

¹⁴ John Keeling, Executive Vice President and CEO of the National Potato Council, personal communication, 4 April 2006.

¹⁵ S. Kilman, "Monsanto's Genetically Modified Potatoes Find Slim Market, Despite Repelling Bugs," *The Wall Street Journal* 21 March 2001.

¹⁶ GIPSA, USDA, "Letterhead Statements."

¹⁷ Phosphinothricin-tolerant soybeans ("Liberty Link" soybeans) from Aventis have also been deregulated by the USDA, but the company has not sold the crop commercially. National Agricultural Statistical Services, United States Department of Agriculture, *Acreage Report* (Washington, D.C: USDA, 30 June 2005). <http://usda.mannlib.cornell.edu/reports/nassr/field/pcp-bba/acrg0605.pdf>; T. Redick, "Preventing Liability for Genetically Engineered Crops," *Agricultural Management Committee Newsletter* 5(2), <http://www.abanet.org/enviro/committees/agricult/newsletter/mar01/redick.html>.

¹⁸ S. Sankula, G. Marmon, E. Blumenthal, *Biotechnology-Derived Crops Planted in 2004 – Impacts on US Agriculture*; GEO-PIE Project, "Squash and Zucchini," Genetically Engineered Organisms Public Issues Education Project, Cornell Cooperative Extension <<http://www.geo-pie.cornell.edu/crops/squash.html>> (21 April 2006).

¹⁹ Luther Markwart, Executive Vice President of the American Sugarbeet Growers Association, personal communication, 3 April 2006.

²⁰ GEO-PIE Project, "Tobacco," Genetically Engineered Organisms Public Issues Education Project, Cornell Cooperative Extension <<http://www.geo-pie.cornell.edu/crops/tobacco.html>> (21 April 2006).

²¹ Carrie Bloom, Public Relations, Vector Tobacco, personal communication, 28 April 2006.

²² M. Nestle, *Safe Food: Bacteria, Biotechnology, and Bioterrorism*.