

1 July 2007 - Current Commercialised GM Crops

Table 1: Genetically Modified Varieties of *Zea mays* (maize and sweet corn)

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(oilseed rape)

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Table 1. Genetically Modified Varieties of *Zea mays* (maize and sweet corn).

Event	Company	Description	35S Promoter	Nos 3'Terminator	Date of environmental approval (country)
Bt176	Syngenta Seeds NatureGard, Maximizer	Insect-resistant (<i>cry1Ab</i>), <i>bla</i> and also non-expressed PAT	Yes	No	1995 (US)
BT11 (X4334CBR, X4734CBR)	Syngenta Seeds Yieldgard	Insect-resistant (<i>cry1Ab</i>) & glufosinate-tolerant (PAT)	Yes	Yes	1996 (US) 2004 (EU)
CBH-351 (StarLink)	Bayer CropScience	Insect-resistant (<i>cry</i>) & glufosinate-tolerant (PAT)	Yes	Yes	1998 (US)
GA21 ¹	Syngenta Roundup Ready	Glyphosate-tolerant (EPSPS)	No	Yes	1997 (US) 2006 (EU)
MON80100	Monsanto	Insect-resistant (<i>cry</i>)	Yes	Yes	1995 (US)
MON802	Monsanto YieldGard	Insect-resistant (<i>Cry1Ab</i>) & glyphosate-tolerant (<i>cp4 epsps</i>), <i>gox</i> and <i>nptII</i> genes	Yes	Yes	1997 (US)
MON810	Monsanto YieldGard	Insect-resistant (<i>Cry1Ab</i>)	Yes	Yes	1995 (US)
MON832	Monsanto Roundup Ready	Glyphosate-tolerant (<i>gox</i> , <i>cp4 epsps</i> and <i>nptII</i>)	Yes	Yes	Not approved (Canada only)
MON863	Monsanto YieldGard	Insect-resistant (<i>cry3Bb1</i> and <i>nptII</i>)	Yes	Yes	2003 (US) 2006 (EU)
MS3 (InVigor)	Bayer CropScience	Male sterility (<i>barnase</i>) & glufosinate-tolerant (<i>bar</i> and <i>bla</i>)	Yes	Yes	1996 (US)
MS6 (InVigor)	Bayer CropScience	Male sterility (<i>barnase</i>) & glufosinate-tolerant (PAT)	Yes	Yes	1999 (US)
NK603	Monsanto Roundup Ready	Glyphosate-tolerant (EPSPS)	Yes	Yes	2000 (US) 2004 (EU)
T25	Bayer CropScience	Glufosinate-tolerant (PAT and <i>bla</i>)	Yes	No	1995 (US)
T25 x MON810	Pioneer Hi-Bred	Glufosinate-tolerant (<i>pat</i>) & insect-resistant (<i>cry1Ab</i>)	Yes	Yes	¹⁰
TC1507 DAS1507	Mycogen/ Pioneer Overseas Corp. Herculex	Insect-resistant (<i>cry1Fa2</i>) and glufosinate-tolerant (PAT)	Yes	No	2001 (US) 2006 (EU)
MON810 x NK603	Monsanto	Stacked insect resistant (<i>cry1Ab</i>) & glyphosate-tolerant (<i>cp4</i>)	Yes	Yes	2004 ² (EU)

¹ Discontinued in 2001 in Canada, Demeke *et al* – Adventitious presence of GMOs, Canadian Grain Commission. 16 August 2005.

Event	Company	Description	35S Promoter	Nos 3'Tterminator	Date of environmental approval (country)
		<i>epsps</i>)			
MON88017	Monsanto	Glyphosate-tolerant (EPSPS) & insect resistant (cry)			2005 (US)
LY038	Monsanto	Enhanced lysine level (cDHDPS)			2006 (US)
MON810 x LY038	Monsanto	Stacked insect resistant (cry) & enhanced lysine level (cDHDPS)	Yes	Yes	¹⁰
MON863 x NK603	Monsanto	Stacked insect resistant (cry) & glyphosate-tolerant (EPSPS)	Yes	Yes	¹⁰
MON863 x MON810	Monsanto	Stacked insect resistant (cry)	Yes	Yes	¹⁰
MON810 x MON863 x NK603	Monsanto	Stacked insect resistant (cry) & glyphosate-tolerant (EPSPS)	Yes	Yes	¹⁰
MON810 x GA21	Monsanto	Stacked insect resistant (<i>cryIAb</i>) & glyphosate-tolerant (<i>epsps</i>)			2005 ¹⁰ (EU)
MON810 x MON88017	Monsanto	Stacked insect resistant (cry) & glyphosate-tolerant (EPSPS)	Yes	Yes	¹⁰
TC1507 x DAS59122-7	Dow AgroSciences & Pioneer Hi-Bred	Stacked insect resistant (cry) & glufosinate-tolerance (PAT)			2006 (Japan)
MIR604	Syngenta	Insect-resistant (cry3A)	No	Yes	2007 (US)

DLL25 (B16) Dekalb Genetics – withdrawn from market, discontinued prior to 2001 season³
 DBT418 Dekalb genetics Bt Xtra - withdrawn from market, discontinued prior to 2000 season¹¹

² This stacked maize hybrid is a product of traditional plant breeding, and is not automatically subject to regulation in all jurisdictions. Certain jurisdictions may request notification in advance of the release of a stacked hybrid, or may request information to conduct an environmental and food safety assessment.

³ Demeke *et al* – Adventitious presence of GMOs, Canadian Grain Commission. 16 August 2005.

Table 2. Genetically Modified Varieties of *Brassica napus* var. *oleifera* (oilseed rape)

Event	Company	Date of environmental approval (country)	Description	Promoter	Other Elements	Traits				Terminators
						Glyphosate resistance		Glufosinate resistance		
						EPSPS	GOX	PAT	BAR	
23-18-17, 23-198	Monsanto	1994 US 1996 Canada	High laureate & myristate canola Laurical canola		BayTE and <i>nptII</i> genes. (modified Thioesterase)	No	No	No	No	
HCN10	Bayer CropScience Innovator, Liberty Link	1995 US 1995 Canada 1997 Japan 2003 Australia	Glufosinate herbicide tolerance		<i>nptII</i>	No	No	Yes	Yes	
GT73, RT73	Monsanto Roundup Ready	1999 US 2003 Australia 1995 Canada Japan 1996	Glyphosate herbicide tolerance	FMV35S	EPSPS	Yes	Yes	No	No	CTP2 CTP1
MS8, Rf3, MS8 x Rf3	Bayer CropScience InVigor	1999 US 2003 Australia 1996 Canada 1998 Japan	Glufosinate herbicide tolerance & fertility restored	plant	<i>Barnase</i> , <i>barstar</i> and <i>bar</i> genes	No	No		Yes	
GS 40/90 Falcon	Bayer CropScience	2004? US	Glyphosate herbicide tolerance	CMV35S		No	No	Yes	Yes	
T45 ⁴	Bayer CropScience Excel, Liberty Link	2004 EU	Herbicide resistance (glufosinate)			No	No	Yes		

Bayer CropScience Oxy 235 – last seed sales in 2001¹²

Bayer CropScience Topas 19/2, MS1/Rf1, and MS1/Rf2 – last seed sales in 2003^{12, 13}

Bayer CropScience HCN92 Liberty Link – last seed sales in 2003⁵

⁴ Biotrade Status - http://www.biotradestatus.com/query_results.cfm

⁵ Demeke *et al* – Adventitious presence of GMOs, Canadian Grain Commission. 16 August 2005.

Table 3. Genetically Modified Varieties of *Glycine max* (soybean)

Event	Company	Date of environmental approval (country)	Promoter	Selectable Markers	Antibiotic Markers		Traits				Terminators	
			P35S	GUS	Amp ^r	NptII	Glyphosate resistance		Glufosinate resistance		T35S	NOS
							EPSPS	GOX	PAT	BAR		
G94-1, G94-19, G168	DuPont Optimum	1997 US 2000 Canada 1999 Japan	Yes	Yes	Yes	No	No	No	No	No	No	Yes
GTS 40-3-2 MON040302	Monsanto Roundup Ready	1994 US 1996 Argentina 1998 Brazil 1995 Canada 1996 Japan 1998 Mexico 2001 Sth Africa 1997 Uruguay	Yes	No	No	Yes	Yes	No	No	No	No	Yes
MON89788	Monsanto	2007 US	Yes	No	No	No	Yes	No	No	No	No	Yes

Table 4. Genetically modified varieties of *Gossypium hirsutum* (cotton)

Event	Company	Description	Genetic elements	Date of approval
BXN TM cotton – 10215-4	Monsanto/Calgene	Oxynil herbicide tolerance	<i>Bxn</i> and <i>nptII</i>	2004 US 1997 Japan
DAS-24236-5 x DAS-21023-5 Wildstrike TM	Dow AgroSciences	Herbicide tolerance (glufosinate) & insect resistance	bar, PAT, cry	2004 US
DAS-24236-5 x DAS-21023-5 x MON88913-8 Widestrike TM	Dow AgroSciences	Herbicide tolerance (glufosinate & glyphosate) and insect resistance	EPSPS, bar, PAT, cry	US ¹²
DAS-24236-5 x DAS-21023-5 x MON1445-2 Wildstrike TM /RoundupReady ^R	Dow AgroSciences	Herbicide resistance	EPSPS	US ⁶
LLCotton25	Bayer CropScience	Herbicide resistance	P35s::bar (PAT)::3' nos	2005 EU 2006 Australia
LLCotton25 x MON15985	Bayer CropScience	Herbicide resistance Insect-resistance	P35s::bar (PAT)::3' nos, cry1A(c)	
MON1445/1698	Monsanto Roundup Ready	Herbicide resistance	<i>cp4 epsps</i> , <i>nptII</i> & <i>aad</i> genes	2004 EU 2003 Australia
MON15985	Monsanto	Insect-resistance	<i>cry1A(c)</i>	2002 Australia
MON1445 x MON15985	Monsanto	Herbicide resistance & insect-resistance	EPSPS & <i>cry1A(c)</i>	2006 Australia
MON531/757/1076	Monsanto	Insect resistance	<i>cry1A(c)</i> , <i>aad</i> and <i>nptII</i> genes	2004 EU 2003 Australia
MON531 x MON1445	Monsanto	Herbicide resistance & insect-resistance	EPSPS & <i>cry1A(c)</i>	2004 EU 2006 Australia
MON88913-8	Monsanto	Herbicide resistance	EPSPS	2006 Australia
MON88913-8 x MON15985	Monsanto	Herbicide resistance & insect-resistance	EPSPS & <i>cry1A(c)</i>	2006 Australia

⁶ This stacked cotton line is a product of traditional plant breeding, and therefore is not automatically subject to regulation in all jurisdictions as are transgenic plants resulting from recombinant DNA technologies.

Table 5. Other genetically modified crop varieties

Crop	Event	Company	Description	Genetic elements	Date of approval
<i>Medicago sativa</i> (lucerne) ⁷	J101, J163 J101 x J163	Monsanto	Herbicide tolerance (glyphosate)	FMV promoter, EPSPS	2005 US
<i>Cucurbita pepo</i> (yellow crook-neck squash)	CZW3	Monsanto (Seminis)	Virus resistance	CMV <i>cp</i> , ZYMV <i>cp</i> , WMV2 <i>cp</i>	1996 US
<i>Cucurbita pepo</i> (yellow crook-neck squash)	ZW20	Monsanto (Seminis)	Virus resistance	ZYMV <i>cp</i> , WMV2 <i>cp</i>	1994 US
<i>Radicchio rosso</i> (chicory)	RM3-3, RM3-4, RM3- 6	Bejo Zaden seeds	Herbicide tolerance (glufosinate) Male sterility	pTA 29, bar, PAT, PSSuAra	1996 Netherlands 1997 US
Carnation	4,11,15,16,66,959A, 988A, 1226A, 1351A, 1400A	Florigene	Altered flower colour, longer shelf life	SuRB, 35S, F3'5'H, DFR	2003 Australia (moved to GMO register 27 March 2007)
<i>Nicotinium tabacum</i> (tobacco)	ITB 1000 OX	Seita	Herbicide tolerance (Oxynil) Male sterility	tNos, RuBisCo SSU promoter, nitrilase	1994 EU (marketing only)
	Vector 21-41	Vector Tobacco Inc.	Nicotine reduced	NtQPT1, nptII	2002 US
<i>Carica papaya</i> (papaya)	Rainbow SunUp	Cornell University	Virus resistance	<i>nptII</i> , <i>gus</i> & <i>CMV/PRV</i> <i>cp</i> genes	1996 US
<i>Lycopersicon esculentum</i> (tomato)	1345-4	DNA Plant Technology Corporation	Delayed fruit ripening	Truncated ACC	1995 US
	B, Da, F (1401F, H282F, 11013F and 7913F)	Zeneca Seeds	Delayed softening	Truncated PG	1995 US
	35 1 N	Agritope Inc.	Delayed fruit ripening	SAMase	1996 US

⁷ US Supreme court ruled a ban on further planting of GM lucerne in May 2007.

Crop	Event	Company	Description	Genetic elements	Date of approval
<i>Linum usitatissimum</i> (Linseed) FP967	CDC Triffid	University of Saskatchewan	Sulfonylurea herbicide tolerance	<i>als, nptII, bla, nos & spc</i> genes	1999 US
<i>Solanum tuberosum</i> (potato)	SEMT15-02 and SEMT15-15 Shepody NewLeaf™ Y potato	Monsanto	Beetle resistance Potato virus Y resistance	<i>cry3A, nptII, aad, & PVY cp</i> genes	1999 US 1999 Canada
	EH92-527-1 (Amflora)	BASF	Amylopectin (starch production industry)	Pnos, nptII, tNos, <i>gbss</i>	2005 US
<i>Beta vulgaris</i> (sugar beet)	H7-1	Monsanto	Herbicide tolerance (Glyphosate)	EPSPS, 35S FMV promoter, rbcS E9, nos	2004 EU 2005 US 2007 Japan
<i>Oryza sativa</i> (rice)	LL601	Bayer CropScience	Herbicide tolerance (glufosinate)	Bar, pat	2006 US