



PRELIMINARY

Monsanto Biotechnology Trait Acreage: Fiscal Years 1996-2009^d
Updated: June 24, 2009

In millions of acres

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009F
CORN														
Single-Trait Acres														
U.S. Roundup Ready corn trait ²	0.0	0.0	0.9	2.1	2.6	3.4	5.6	6.9	8.3	10.9	11.1	14.0	11.8	11-12
U.S. YieldGard Corn Borer traits ³	0.0	2.3	11.4	15.4	14.6	14.3	18.2	17.1	21.5	16.0	9.5	5.4	1.7	<1
U.S. YieldGard Rootworm trait	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.1	0.9	0.7	0.2	0.0	0.0
U.S. Roundup Ready stacked w/ Non-Monsanto Traits ^{4,2}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.3	9.1	16.3	20-21
Total U.S. Single-Trait Acres	0.0	2.3	12.3	17.5	17.2	17.7	23.8	24.4	30.9	28.3	22.6	28.7	29.9	31-34
Roundup Ready corn trait – other markets	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.2	0.4	1.3	2.1	2.9	2-3
Argentina YieldGard Corn Borer traits					0.3	0.9	1.4	2.1	2.4	3.6	3.3	4.5	2.0	2-3
Brazil YieldGard Corn Borer traits														1-2
YieldGard Corn Borer traits – other markets	0.0	0.0	0.0	0.6	0.8	1.1	1.6	1.6	1.9	2.6	3.2	3.6	4.2	2-3
Total WW Single-Trait Acres	0.0	2.3	12.3	18.2	18.4	19.9	27.0	28.4	35.4	34.9	30.4	38.9	39.0	38-45
Double-Trait Acres														
U.S. YieldGard Corn Borer/Roundup Ready ²	0.0	0.0	0.0	0.0	0.1	1.2	2.2	5.1	8.0	11.1	12.6	15.5	11.0	5-6
U.S. YieldGard Rootworm/Roundup Ready ²	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.0	1.9	1.7	0.5	<1
U.S. YieldGard Plus (corn borer/rootworm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.6	1.3	0.3	<1
Total U.S. Double-Trait Acres	0.0	0.0	0.0	0.0	0.1	1.2	2.2	5.1	8.7	13.0	16.1	18.5	11.9	5-6
Argentina YieldGard Corn Borer/Roundup Ready													0.2	2-3
YieldGard Corn Borer/Roundup Ready – other markets	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.7	1.0	2-3
Total WW Double-Trait Acres	0.0	0.0	0.0	0.0	0.1	1.2	2.3	5.2	8.9	13.2	16.4	19.2	13.1	9-12
Triple-Trait Acres														
U.S. YieldGard Plus/Roundup Ready ^{2,8}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	5.8	17.6	29.1	32-33
Total U.S. Triple-Trait Acres	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	5.8	17.6	29.1	32-33
YieldGard Plus/Roundup Ready ^{2,8} - other markets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	<1
Total WW Triple-Trait Acres	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	5.8	17.7	29.4	32-34
Total Monsanto Trait Acres: Corn														
Total Absolute U.S. Corn Trait Acres⁵	0.0	2.3	12.3	17.5	17.3	18.9	26.0	29.5	39.6	42.6	44.5	64.8	70.9	68-73
Total Absolute WW Corn Trait Acres⁵	0.0	2.3	12.3	18.2	18.5	21.1	29.3	33.6	44.3	49.4	52.6	75.8	81.5	79-91
Trait-Specific Summaries⁶														
Total U.S. YieldGard Corn Borer traits	0.0	2.3	11.4	15.4	14.7	15.5	20.4	22.2	29.5	29.3	29.5	39.8	42.2	38-39
Total U.S. YieldGard Rootworm traits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.8	4.1	10.0	20.8	30.1	32-33
Total U.S. Roundup Ready traits	0.0	0.0	0.9	2.1	2.7	4.6	7.8	12.0	17.0	24.8	32.7	57.9	68.8	69-70
Total U.S. Corn Traits	0.0	2.3	12.3	17.5	17.4	20.1	28.2	34.6	48.3	58.2	72.2	118.5	141.0	139-142



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COTTON														
Single-Trait Acres														
U.S. Roundup Ready cotton trait	0.0	0.6	2.1	3.8	4.6	5.1	5.2	4.5	3.3	3.1	2.4	0.9	0.3	<1
U.S. Roundup Ready Flex cotton trait	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.1	1.3	<1
U.S. Bollgard cotton trait	1.8	2.0	2.0	2.0	1.1	0.5	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0
U.S. Bollgard II cotton trait	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
U.S. Bollgard II stacked w/ Non-Monsanto Traits ⁴	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	<1
U.S. Roundup Ready Flex stacked w/ Non-Monsanto Traits ⁴	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	<1
U.S. Roundup Ready stacked w/ Non-Monsanto Traits ³	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	<1
Total U.S. Single-Trait Acres	1.8	2.6	4.0	5.8	5.6	5.6	5.5	4.8	3.6	3.2	2.9	2.1	2.0	<1
Roundup Ready cotton trait – other markets	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.6	0.7	0.6	<1
Indian Bollgard cotton trait	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.3	3.1	8.4	13.2	12.7	7-8
Indian Bollgard II cotton trait	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	4.5	10-11
Bollgard and Bollgard II cotton traits – other markets	0.0	0.1	0.2	0.3	0.5	0.7	0.5	0.3	0.4	0.5	0.7	0.5	0.4	<1
Total WW Single-Trait Acres	1.8	2.8	4.3	6.1	6.1	6.3	6.2	5.5	5.5	7.0	12.8	17.7	20.2	17-20
Double-Trait Acres														
U.S. Bollgard I/Roundup Ready	0.0	0.1	0.7	2.4	4.1	5.6	4.8	5.3	7.2	7.0	6.1	3.3	2.0	<1
U.S. Bollgard III/Roundup Ready	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.7	0.8	0.3	0.1	<1
U.S. Bollgard III/Roundup Ready Flex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.9	3.5	4-5
Total U.S. Double-Trait Acres	0.0	0.1	0.7	2.4	4.1	5.6	4.8	5.4	7.4	7.7	8.6	6.5	5.7	4-6
Bollgard I/Roundup Ready - other markets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	<1
Bollgard III/Roundup Ready or Roundup Ready Flex - other markets	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.4	0.2	0.2	<1
Total WW Double-Trait Acres	0.0	0.1	0.7	2.4	4.1	5.6	4.9	5.5	7.5	8.1	9.1	6.8	6.0	4-6
Total Monsanto Trait Acres: Cotton														
Total Absolute U.S. Cotton Trait Acres⁵	1.8	2.7	4.8	8.2	9.7	11.2	10.3	10.2	11.1	10.9	11.5	8.6	7.7	3-6
Total Absolute WW Cotton Trait Acres⁵	1.8	2.8	5.0	8.5	10.1	11.9	11.1	11.0	13.0	15.1	21.9	24.6	26.2	20-25
Trait-Specific Summaries⁶														
Total U.S. Roundup Ready trait	0.0	0.7	2.8	6.2	8.6	10.7	10.0	9.9	10.7	10.8	9.3	4.5	2.6	1-2
Total U.S. Roundup Ready Flex trait	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.0	4.9	4-5
Total U.S. Bollgard trait	1.8	2.1	2.7	4.4	5.1	6.1	5.1	5.6	7.5	7.1	6.1	3.3	2.0	<1
Total U.S. Bollgard II trait	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.7	2.6	3.3	3.9	3-4
Total U.S. Cotton Traits	1.8	2.8	5.5	10.6	13.7	16.8	15.1	15.6	18.5	18.6	20.1	15.1	13.4	8-12



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SOYBEANS														
Single-Trait Acres														
U.S. <i>Roundup Ready</i> soybean trait	1.2	7.9	29.1	40.5	45.0	54.8	60.0	63.6	67.2	66.4	71.7	61.2	72.5	73-74
U.S. <i>Roundup Ready 2 Yield</i> soybean trait														1-2
Argentine <i>Roundup Ready</i> soybean trait ⁷	0.0	0.5	4.0	13.6	17.0	22.7	27.1	29.9	31.8	34.6	37.2	39.4	38.7	41-42
Brazilian <i>Roundup Ready</i> soybean trait	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	12.3	19.4	26.1	28.5	34-35
<i>Roundup Ready</i> soybean trait – other markets	0.0	0.0	0.0	0.3	0.6	0.6	1.0	1.6	2.5	5.8	5.6	6.9	7.8	7-8
Total Monsanto Trait Acres: Soybeans														
Total Absolute U.S. Soybean Trait Acres⁵	1.2	7.9	29.1	40.5	45.0	54.8	60.0	63.6	67.2	66.4	71.7	61.2	72.5	73-74
Total Absolute WW Soybean Trait Acres⁵	1.2	8.4	33.1	54.4	62.6	78.1	88.1	95.1	108.9	119.1	133.9	133.6	147.5	156-161
CANOLA														
Single-Trait Acres														
U.S. <i>Roundup Ready</i> canola trait	0.0	0.0	0.0	0.2	0.7	0.9	0.9	0.7	0.6	0.6	0.5	0.6	0.6	<1
Canadian <i>Roundup Ready</i> canola trait	0.0	0.5	2.8	4.9	4.3	4.0	4.0	5.5	5.7	6.1	5.1	6.8	7.2	6-7
Total Monsanto Trait Acres: Canola														
Total Absolute U.S. Canola Trait Acres⁵	0.0	0.0	0.0	0.2	0.7	0.9	0.9	0.7	0.6	0.6	0.6	0.6	0.6	<1
Total Absolute WW Canola Trait Acres⁵	0.0	0.5	2.8	5.1	5.0	4.9	4.9	6.2	6.3	6.7	5.6	7.4	7.8	7-8
ALL CROPS														
Total Absolute Monsanto Trait Acres⁵	3	14	53.4	86.5	96.5	118.3	135.3	150.8	176.6	194.6	214.0	241.4	263.0	261-284
Total Absolute U.S. Monsanto Trait Acres⁵	3.0	12.9	46.2	66.4	72.7	85.8	97.2	104.0	118.5	120.5	128.3	135.2	151.7	143-152

¹ Years presented are based on Monsanto's fiscal year, which begins Sept. 1 and closes Aug. 31. Traits are those developed and marketed by Monsanto, which are sold in Monsanto's branded seed and licensed to other seed companies.

² Roundup Ready corn includes traits tolerant to *Roundup* branded agricultural herbicides including *Roundup Ready* Corn 2

³ Monsanto no longer includes Bt11, the first generation of the *YieldGard* corn borer trait

⁴ Monsanto trait acre sold as part of a double- or triple-stacked combination with other competitive trait(s).

⁵ Absolute acres represent the total number of acres with at least one trait.

⁶ "Trait-Specific Summaries" represent total acres by trait, regardless of the combination they are sold in (single, double, triple). The totals are reflected in the "Total Monsanto Trait Acres."

⁷ All *Roundup Ready* soybean trait acres in Argentina are currently non-paying.

⁸ Includes *YieldGard VT Triple* and *YieldGard Plus* with *Roundup Ready* Corn 2