

LEGEND

Pest Management	Increased Yield	Stress Tolerance	Crop Composition
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EARLY DEVELOPMENT		ADVANCED DEVELOPMENT (NEXT 5-7 YEARS)	
Herbicide Tolerance	4 th -Generation Weed Control System (Monsanto)	Herbicide Tolerance	3 rd -Generation Weed Control System (Monsanto)
Herbicide Tolerance	5 th -Generation Weed Control System (Monsanto)	Herbicide Tolerance	Roundup® Hybridization System – RHS I (Monsanto)
Herbicide Tolerance	Next-Generation Herbicide Tolerance (Syngenta)	Herbicide Tolerance	Roundup® Hybridization System – RHS II (Monsanto)
Insect Resistance	4 th -Generation Above-Ground Insect Protection (Monsanto)	Herbicide Tolerance	Enlist™: 2,4-D (Dow AgroSciences)
Insect Resistance	Above-Ground Insect Protection Trecepta® (Monsanto)	Herbicide Tolerance	Glyphosate, Glufosinate (Syngenta)
Insect Resistance	5 th -Generation Above-Ground Insect Protection (Monsanto)	Insect Resistance	SmartStax® PRO (Monsanto)
Insect Resistance	Next-Generation Above-Ground Insect Control Traits (Dow AgroSciences)	Insect Resistance	Below-Ground Insect Control – SmartStax® PRO (Monsanto)
Insect Resistance	Next-Generation Below-Ground Insect Control Traits (Dow AgroSciences)	Insect Resistance	Below-Ground Insect Control – 4 th -Generation CRW (Monsanto)
Insect Resistance	New Modes of Action Coleopteran III (DuPont Pioneer)	Insect Resistance	Next-Generation CRW (Syngenta)
Insect Resistance	New Modes of Action Lepidopteran III (DuPont Pioneer)		
Insect Resistance	Next-Generation Above-Ground Insect Control Traits (Syngenta)		
Pest Management	Biotech Disease Control (Monsanto)		
Increased Yield	Yield & Yield Stability (Dupont Pioneer)		
Increased Yield	2 nd -Generation Higher-Yielding (Monsanto, BASF)		
Increased Yield	Higher-Yielding (Monsanto, BASF)		
Stress Tolerance	DroughtGard® Hybrids Platform Expansion (Monsanto, BASF)		

PEST MANAGEMENT TRAITS

CRW = Corn Rootworm

Enlist™ = Dow AgroSciences herbicide trait providing tolerance to 2,4-D and “FOP” herbicides

“**Early Development**” may include products in their research, discovery and proof of concept phases, as well as early product development.

“**Advanced Development**” products are in late stages of development and have an expected launch date within the next five to seven years, subject to regulatory approvals. Contact individual trait developers for timelines and estimated launch dates.



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Herbicide Tolerance	4 th -Generation Weed Control System (Monsanto)	Herbicide Tolerance	Roundup Ready 2 Xtend™ (Monsanto)
Herbicide Tolerance	5 th -Generation Weed Control System (Monsanto)	Herbicide Tolerance	3rd-Generation Weed Control System (Monsanto)
Insect Resistance	Hemipteran (DuPont Pioneer)	Herbicide Tolerance	Multiple Mode (DuPont Pioneer)
Insect Resistance	Lepidopteran (DuPont Pioneer)	Herbicide Tolerance	HPPDi + Glufosinate (Syngenta, Bayer)
Insect Resistance	Next-Generation Above-Ground Insect Control Traits (Dow AgroSciences)	Herbicide Tolerance	Enlist™: 2,4-D + Glufosinate (Dow AgroSciences)
Nematode Resistance	SCN (Bayer)	Herbicide Tolerance	Enlist E3™: 2,4-D + Glyphosate + Glufosinate (Dow AgroSciences, M.S. Technologies)
Disease Resistance	ASR (DuPont Pioneer)	Herbicide Tolerance	Balance™ GT/LL: Glyphosate + HPPDi + Glufosinate (Bayer, M.S. Technologies)
Fungal Resistance	(BASF)	Herbicide Tolerance	Balance™ GT: Glyphosate + HPPDi (Bayer, M.S. Technologies)
Increased Oil & Improved Meal Value	(DuPont Pioneer)	Herbicide Tolerance/ Insect Resistance	Enlist E3™ + Conkesta™: 2,4-D + Glyphosate + Glufosinate + 2 Bt Traits (Dow AgroSciences)
Yield & Stress Systems	Next-Generation Higher-Yielding Soy (Monsanto, BASF)	Insect Resistance	Intacta RR2 2 nd -Generation Insect Protection (Monsanto)
		Insect Resistance	Intacta RR2 PRO™ 3rd-Generation Insect Protection (Monsanto)

PEST MANAGEMENT TRAITS

SCN = Soybean Cyst Nematode

ASR = Asian Soybean Rust

RR = Roundup Ready®

LL = Liberty Link™, tolerant to glufosinate herbicides

HPPDi = Hydroxyphenylpyruvate deoxygenase inhibitor, family of herbicides

Enlist™ = Dow AgroSciences herbicide trait providing tolerance to glyphosate, 2,4-D, glufosinate

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Herbicide Tolerance	Next-Generation Herbicide Tolerance (Bayer)	Herbicide Tolerance	Enlist™ (Dow AgroSciences)
Herbicide Tolerance	4 th -Generation Weed Control System (Monsanto)	Herbicide Tolerance/ Insect Resistance	GlyToI™ TwinLink™ Plus: Glufosinate + Glyphosate + Expanded Insect Resistance (Bayer)
Insect Resistance	Lygus Control (Monsanto)	Insect Resistance	Bollgard® 3 XtendFlex® (Monsanto)
		Insect Resistance	4 th -Generation Bollgard® (Monsanto)

PEST MANAGEMENT TRAITS

Enlist™ = Dow AgroSciences herbicide trait providing tolerance to 2,4-D and glufosinate

GlyToI™ = Glyphosate Tolerant, tolerant to glyphosate herbicides

TwinLink™ = Bayer dual insect resistance trait plus tolerant to glufosinate herbicides

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Herbicide Tolerance	Dicamba Tolerance (Monsanto)	Herbicide Tolerance	TruFlex™ Roundup Ready® (Monsanto)
Oil Quality	(Bayer)	Herbicide Tolerance	Optimum® GLY (DuPont Pioneer)
<p>PEST MANAGEMENT TRAITS RR = Roundup Ready® LL = Liberty Link™, tolerant to glufosinate herbicides</p> <p>“Early Development” may include products in their research, discovery and proof of concept phases, as well as early product development.</p> <p>“Advanced Development” products are in late stages of development and have an expected launch date within the next five to seven years, subject to regulatory approvals. Contact individual trait developers for timelines and estimated launch dates.</p>		Herbicide Tolerance	LL (DuPont Pioneer)
		Herbicide Tolerance	Optimum® GLY + LL (DuPont Pioneer)
		Herbicide Tolerance	LibertyLink® (Monsanto)
		Herbicide Tolerance	RR + LL (Bayer)
		Herbicide Tolerance	TruFlex™ Roundup Ready® + LibertyLink® (Monsanto)
		Healthy Fatty Acids	(BASF, Cargill)

