



Current Report

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Components and Ratios of Pre-mix Herbicides for Use in Corn and Grain Sorghum

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Many herbicide options for field corn and grain sorghum comprise multiple herbicide active ingredients to broaden the spectrum of weed species the product will control. Herbicides are also combined to include additional herbicide modes of action so that development of herbicide-resistant weeds can be prevented or delayed. Knowing the amount of the individual herbicides in the pre-mix is useful for deciding if additional product should be applied to further improve weed control.

The following table lists several pre-mix herbicides that are labeled for use in field corn and grain sorghum and the

equivalent rates of the individual herbicide components. Use rates for pre-mix herbicides are based on label recommendations for medium texture soils with 1.5% organic matter and pH of 6.5. Use rates can vary depending on crop, soil characteristics, and planned follow-up herbicide applications. *Before using any herbicide, always consult the label for appropriate rates, application timing, tank-mix partners, plant-back intervals, geographic restrictions, and other special instructions.*

Pre-mix herbicide (manufacturer)	Use rate per acre	Component herbicides	Equivalent rates (per acre)	Herbicide Mode of Action	Labeled for use in ^a :	
					Field corn	Grain sorghum
Basis (DuPont)	0.5 oz	Resolve SG Harmony 50 SG	1 oz 0.25 oz	ALS inhibitor ALS inhibitor	✓	
Bicep II Magnum [®] (Syngenta)	2.1 qt	atrazine	1.6 lb ai	PS II inhibitor	✓	✓
Cinch ATZ [®] (DuPont)		Dual II Magnum/Cinch	1.33 pt	Shoot inhibitor		
Bicep Lite II Magnum [®] (Syngenta)	1.5 qt	atrazine	1.0 lb ai	PS II inhibitor	✓	✓
Cinch ATZ Lite [®] (DuPont)		Dual II Magnum/Cinch	1.33 pt	Shoot inhibitor		
Callisto Xtra [®] (Syngenta)	24 fl oz	Callisto atrazine	0.3 fl oz 0.6 lb ai	Pigment inhibitor PS II inhibitor	✓	
Camix (Syngenta)	2.0 qt	Dual II Magnum Callisto	1.76 pt 5.36 fl oz	Shoot inhibitor Pigment inhibitor	✓	
Capreno (Bayer)	3.0 fl oz	Laudis	2.47 fl oz	Pigment inhibitor	✓	
Corvus [®] (Bayer)	5.6 fl oz	thiencarbazone-methyl	0.013 lb ai	ALS inhibitor		
Degree Xtra (Monsanto)	3.0 qt	Balance Flexx thiencarbazone-methyl	5.26 fl oz 0.033 lb ai	Pigment inhibitor ALS inhibitor	✓	
Expert [®] (Syngenta)	3.0 qt	Degree atrazine	4.3 pt 1.0 lb ai	Shoot inhibitor PS II inhibitor	✓	✓
G-Max Lite [®] (BASF)	2.7 pt	atrazine	1.6 lb ai	PS II inhibitor		
Guardsman Max [®] (BASF)	3.5 pt	Dual II Magnum glyphosate	1.37 pt 32 fl oz (3 lb ae/gal)	Shoot inhibitor glyphosate	✓	✓ (PRE only)
Halex GT (Syngenta)	3.6 pt	Outlook atrazine	16 fl oz 0.9 lb ai	Shoot inhibitor PS II inhibitor	✓	✓
Harness Xtra [®] (Monsanto)	2.0 qt	Outlook atrazine	16 fl oz 1.45 lb ai	Shoot inhibitor PS II inhibitor	✓	✓
Hornet (Dow)	3 oz	Dual Magnum glyphosate	1 pt 39.7 fl oz (3 lb ae/gal)	Shoot inhibitor glyphosate	✓	
		Callisto	3 fl oz	Pigment inhibitor		
		Harness atrazine	1.8 pt 1.25 lb ai	Shoot inhibitor PS II inhibitor	✓	
		Python	0.7 oz	ALS inhibitor		
		Stinger	4 fl oz	Growth regulator	✓	

Pre-mix herbicide (manufacturer)	Use rate per acre	Component herbicides	Equivalent rates (per acre)	Herbicide Mode of Action	Labeled for use in ^a :	
					Field corn	Grain sorghum
Lumax [®] (Syngenta)	2.5 qt	Dual II Magnum atrazine	1.75 pt 0.63 lb ai	Shoot inhibitor PS II inhibitor	✓	✓
Lexar [®] (Syngenta)	3.0 qt	Dual II Magnum atrazine Callisto	1.36 pt 1.3 lb ai 5.34 fl oz	Shoot inhibitor PS II inhibitor Pigment inhibitor	✓	✓
Parallel Plus [®] (MANA)	2.29 qt	atrazine Parallel	1.6 lb ai 1.6 pt	PS II inhibitor Shoot inhibitor	✓	✓
Prequel [®] (DuPont)	1.66 oz	Resolve SG Balance Pro	1 oz 1 fl oz	ALS inhibitor Pigment inhibitor	✓	
Realm Q (DuPont)	4 oz	Resolve SG Callisto	1.2 oz 2.5 fl oz	Shoot inhibitor PS II inhibitor	✓	
Require Q (DuPont)	4 oz	Resolve SG dicamba	1 oz 3.8 fl oz (4 lb ai/gal)	ALS inhibitor Growth regulator	✓	
Resolve Q (DuPont)	1.25 oz	Resolve SG Harmony 50 SG	0.9 oz 0.1 oz	ALS inhibitor ALS inhibitor	✓	
Sequence (Syngenta)	2.5 pt	glyphosate Dual Magnum	30 fl oz (3 lb ae/gal) 0.98 pt	glyphosate Shoot inhibitor	✓	✓ (PRE only)
Steadfast Q (DuPont)	1.5 oz	Accent Resolve SG	0.26 oz 0.28 oz	ALS inhibitor ALS inhibitor	✓	
SureStart (Dow) TripleFLEX (Monsanto)	1.75 pt	Surpass Python Stinger	1.03 pt 0.52 oz 2.7 fl oz	Shoot inhibitor ALS inhibitor Growth regulator	✓	
Verdict (BASF)	13 fl oz	Sharpen Outlook	2.6 fl oz 10.8 fl oz	PPO inhibitor Shoot inhibitor	✓	✓
Yukon (Gowan)	4 oz	Permit dicamba	0.67 oz 4 fl oz (4 lb ai/gal)	ALS inhibitor Growth regulator	✓	✓

^a Check product label for appropriate application timing.

^b Restricted use pesticide.

Abbreviations:

oz = ounce	ai = active ingredient
fl oz = fluid ounce	ae = acid equivalent
gal = gallon	DF = dry flowable
pt = pint	L = liquid
qt = quart	SG = soluble granule
lb = pound	

Additional resources

For more information on herbicide modes of action, please see OSU Extension Fact Sheet PSS-2778 "Understanding Herbicide Mode of Action."

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