



Single Herbicides and Herbicide Premixes for Use in Winter Wheat

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Effective weed management is essential to improving the yield and quality of Oklahoma wheat. As herbicide resistant cases increase across the state, growers are forced to make more complicated weed management decisions. A useful strategy in managing or delaying resistance is the rotation of herbicides and use of herbicide premixes.

Applications of a single herbicide or herbicides having the same mode of action can be effective, but should be limited in a single growing season. Over-reliance on a single herbicide or mode of action places selection pressure on weed populations and may eventually select for resistant individuals. Management of resistant individuals is expensive as crop yield and quality decrease and money is spent on herbicides that are no longer working.

Herbicide premixes can be a useful strategy in resistance management. Effective mixtures broaden the spectrum of weed species controlled and often include more than one mode of action. The following two tables list several single

herbicides and herbicide premixes. *Before applying any herbicide, always consult the label for appropriate rates, tank-mix partners, plant-back intervals, geographic restrictions, spray carrier volumes, nozzles, and other special instructions.*

Abbreviations:

lb = pound
ae = acid equivalent
gal = gallon
pt = pint
E or EC = emulsifiable concentrate
fl oz = fluid ounce
PRE = preemergence
oz = ounce
POST = post emergence
SG = soluble granule
EPOST = early postemergence
DF = dry flowable

Table 1. Single herbicides labeled for use in winter wheat.

<i>Single herbicide (manufacturer)</i>	<i>Common name</i>	<i>Use rate per acre</i>	<i>Herbicide mode of action</i>	<i>Wheat application timing</i>
2,4-D Amine or Ester (3.8 lb ae/gal)	2,4-D Amine or Ester	0.5-2 pt	Growth regulator	Only in spring (fully tillered) to pre-boot
Aim EC (FMC)	Carfentrazone	0.5-2.0 fl oz	PPO inhibitor	PRE up to boot
Ally XP (DuPont)	Metsulfuron	0.1 oz	ALS inhibitor	Hard dough to >10 days before harvest
Amber Custom-Pak (Syngenta)	Triasulfuron	0.56 oz (PRE) or 0.28-0.56 oz (POST)	ALS inhibitor	PRE up to pre-boot
Axial XL (Syngenta)	Pinoxaden	16.4 fl oz	ACCase inhibitor	2 leaf to pre-boot
Beyond* (BASF)	Imazamox	4-6 fl oz	ALS inhibitor	After tiller initiation to pre-jointing
Broclean, Brox 2EC, Moxly 2E, etc. (2 lb ae/gal)	Bromoxynil	1.5-2 pt	PS II inhibitor	Emergence to boot
Dicamba, Clarity, etc. (4 lb ae/gal)	Dicamba	2-4 fl oz	Growth regulator	PRE up to jointing
Everest 2.0 (Arysta LifeScience)	Flucarbazone	0.50-1 fl oz	ALS inhibitor	1 leaf to jointing
Express 50 SG (DuPont)	Tribenuron	0.25-0.5 oz	ALS inhibitor	2 leaf to pre-flag leaf
Glean XP (DuPont)	Chlorsulfuron	See label	ALS inhibitor	PRE or 2-leaf to pre-boot
Harmony SG (DuPont)	Thifensulfuron	0.45-0.9 oz	ALS inhibitor	2 leaf to pre-flag leaf
Olympus (Bayer)	Propoxycarbazono	0.6 oz (PRE) or 0.6-0.9 oz (POST)	ALS inhibitor	Preplant up to pre-joint
Osprey (Bayer)	Mesosulfuron	4.74 oz	ALS inhibitor	Emergence to jointing
Pre-Pare (Arysta LifeScience)	Flucarbazone	See label	ALS inhibitor	Preplant or PRE
PowerFlex HL (Dow)	Pyroxulam	3.5 oz	ALS inhibitor	3 leaf to jointing
Metribuzin 75 DF	Metribuzin	See label	PS II inhibitor	2 leaf to 4 tillers
Zidua (BASF)	Pyroxasulfone	See label	Shoot inhibitor	Delayed PRE or EPOST

*Only apply Beyond to Clearfield or Clearfield Plus wheat varieties.

SEVERAL OF THESE HERBICIDES REQUIRE OR RECOMMEND THE USE OF AN ADJUVANT. SEE THE ADJUVANTS SECTION FOR EACH LABEL.

Table 2. Premix herbicides for use in winter wheat.

<i>Premix herbicide (manufacturer)</i>	<i>Use rate per acre</i>	<i>Component herbicides</i>	<i>Herbicide mode of action</i>	<i>Application timing</i>
Affinity BroadSpec (DuPont)	0.4-1.0 oz	Thifensulfuron Tribenuron	ALS inhibitor ALS inhibitor	2 leaf to pre-flag leaf
Agility SG (DuPont)	1.6-3.2 oz	Dicamba Thifensulfuron Tribenuron Metsulfuron	Growth regulator ALS inhibitor ALS inhibitor ALS inhibitor	2 leaf to pre-joint
Ally Extra SG (DuPont)	0.3-0.5 oz	Thifensulfuron Tribenuron Metsulfuron	ALS inhibitor ALS inhibitor ALS inhibitor	2 leaf to pre-flag leaf
Anthem Flex (FMC)	See label	Pyoxasulfone Carfentrazone	Shoot inhibitor PPO inhibitor	PRE to pre-spike or at spike up to 4 tillers
Axiom DF (Bayer)	See label	Flufenacet Metribuzin	Shoot inhibitor PS II inhibitor	At spike to 2 leaf
Finesse Cereal and Fallow (DuPont)	0.2-0.5 oz (Preplant and PRE) and 0.2-0.4 oz (POST)	Chlorsulfuron Metsulfuron	ALS inhibitor ALS inhibitor	Preplant, PRE, or 1 leaf to pre-boot
Harmony Extra SG (DuPont)	0.45-0.9 oz depending on weed pressure	Thifensulfuron Tribenuron	ALS inhibitor ALS inhibitor	Preplant or 2 leaf to pre-flag leaf
Huskie (Bayer)	13.5-15 fl oz	Pyrasulfotole Bromoxynil	HPPD inhibitor PS II inhibitor	1 leaf up to flag leaf emergence
Orion (Syngenta)	17 fl oz	Florasulam MCPA	ALS inhibitor Growth regulator	3 leaf up to jointing
Pulsar (Syngenta)	8.3-12.5 fl oz	Dicamba Fluroxypyr	Growth regulator Growth regulator	Prior to jointing
Rage D-Tech (FMC)	See label (PRE) 8-16 fl oz (POST)	2,4-D Ester	Carfentrazone Growth regulator	PPO inhibitor Preplant or 3 leaf up to jointing
Rave (Syngenta)	2-4 oz	Triasulfuron Dicamba	ALS inhibitor Growth regulator	After emergence up to jointing

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