



# CHEMICAL WEED CONTROL FOR FIELD CROPS

## Hard Red Spring and Durum Wheat, Winter Wheat and Barley

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
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Refer to page 6 for additional Fall, Early Preplant, and PRE Herbicides.

### Soil-Applied Herbicides

Far-Go (triallate <sup>8</sup> ) 	<b>HRSW &amp; DURUM.</b> 1 qt / 10 lb 10G (1 lb) <b>BARLEY:</b> 1.25 qt/12.5 lb 10G (1.25 lb)	Wild oat.	Spring: HRSW, Durum and Barley. Apply before or after seeding. PPI 3 or more days before seeding.	Application before seeding: PPI with field cultivator set at 4 inches deep. Two pass incorporation is recommended. Application after seeding: Apply before kernel sprouts exceed 0.5 inch in length and incorporate with harrows set more shallow than seed. A1-2 B1-2 C1 C8 S13
Buckle (triallate <sup>8</sup> & trifluralin <sup>3</sup> ) 	<b>DURUM &amp; BARLEY.</b> 10 to 12.5 lb G (1 to 1.25 lb & 0.3 to 0.4 lb)	Wild oat and foxtails.	Fall: Apply within 3 weeks of freeze up. Spring: Barley only. Prior to seeding.	<b>Do not apply to HRSW.</b> Incorporate within 24 hours after application. Set 2 <sup>nd</sup> incorporation more shallow than first. Stand reduction may occur. Do not apply on soil treated with trifluralin the previous year. A1-2 B1-2 B7 C1 C8 C13 S3 S13 Y15
	<b>Fall: 12.5 to 15 lb G</b> <b>Spring: 10 lb G</b> (1 lb & 0.3 lb)		HRWW: Fall. HRSW: Spring PPI only.	Use only in designated counties in North Dakota. Apply only to fields fallowed the previous year. Do not apply to soil treated with trifluralin the previous year. A1-2 B1-2 B7 C1 C8 C13 S13 Y15
Treflan / generic trifluralin <sup>3</sup>  Not for Winter Wheat	<b>1 pt 4EC</b> <b>5 lb 10G</b> (0.5 lb)	Foxtail.	Spring: PPI.	<b>FOR BARLEY ONLY.</b> Incorporate twice 2 to 3 inches deep. A1-2 B7 C1 C13 Y15
	<b>4 lb 10G</b> (0.4 lb)			<b>FOR DURUM WHEAT ONLY.</b> For foxtail suppression only. A1-2 B7 C1 C13 S3 X1 Y15
	<b>3.5 to 4 lb 10G</b> (0.35 to 0.4 lb)			<b>FOR HRSW ONLY.</b> For suppression of foxtail only. Use west of Hwy 3 only. A1-2 B7 C1 C13 S2 Y15
	<b>1 pt 4E</b> (0.5 lb)			Spring: After seeding. Plant 2 to 2.5 inches deep. Incorporate shallow twice with flex-tyne or diamond harrow 1 to 1.5 inches deep. A1-2 B7 C1 C13 S3 Y15
	<b>1 pt 4E</b> <b>5 lb 10G</b> (0.5 lb)			Fall: After September 1 until freeze-up. Incorporate once in fall within 24 hours after application. Keep spring incorporation depth more shallow than fall. Stand reduction may occur. A1-2 B1-2 B7 C1 C13 S3 Y15
	<b>3.5 to 5 lb 10G</b> (0.35 to 0.5 lb)			<b>FOR HRSW AND DURUM ONLY.</b> For foxtail suppression only. A1-2 B1-2 B7 C13 S3 Y15
Olympus (propoxy-carbazon <sup>2</sup> ) Not for barley Very Long Residual	<b>HRWW.</b> 0.6 oz WDG (0.42 oz) <b>HRSW.</b> 0.2 oz WDG (0.14 oz)	Japanese and downy brome, mustard and pigweed species.	PRE.	Add NIS at 1 qt/100 gal for control of emerged species. Maximum propoxycarbazon rate per year allowed from Olympus or with combined products is 0.84 oz ai/A in winter wheat or 0.28 oz ai/A in spring wheat. C1 C12 S3 S6 Y2 Y5 Y15
Pre-Pare (flucarbazone <sup>2</sup> ) Not for durum or barley Short to Long Residual	<b>HRSW.</b> 0.2 to 0.3 oz WDG (0.14 to 0.21 oz)	G. foxtail, mustard and pigweeds. Soil residue may control y. foxtail, wild oat, Japanese and downy brome.	Preplant within 10 days of planting or PRE.	Add NIS at 1 qt/100 gal for control of emerged species. Maximum flucarbazone rate per year allowed from Pre-Pare with combined products is 0.43 oz WDG. A1 C7 S3 S6 Y2 Y5 Y15
Anthem Flex (pyoxasulfone & carfentrazone <sup>14,15</sup> ) Not for barley or durum wheat	<b>2 to 4.5 fl oz SC</b> (1 to 2.25 oz)	Pre: Foxtail and pigweed. POST: Broadleaf weeds less than 2 inches.	PRE to 4 <sup>th</sup> tiller.	PRE requires precipitation for activation. Sequential rain events will improve weed control. Adjust rate for soil type. Add NIS at 1 qt/100 gal or PO at 1-2 pt/A + UAN or AMS. C1 S3 S7 S11 Y15

# Hard Red Spring and Durum Wheat, Winter Wheat and Barley

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
<b>POST-Applied Herbicides</b>				
<b>Prowl H20</b> (pendimethalin <sup>3</sup> )  <b>Not for Barley</b>	<b>1.5 to 3 pt ACS</b> (0.7 to 1.4 lb)	Foxtail and some small-seeded broadleaf weeds.	Wheat: 1- to 3-leaf.	Soil residue provides PRE control of weeds. Does not control emerged weeds. Adjust rate for soil type. Allow a 60 day PHI. Refer to label for tank-mixtures. A1-2 B1-2 B7 C1 C13 E10 Y15
<b>Zidua</b> (pyroxasulfone <sup>15</sup> )  <b>Not for Barley or Durum wheat</b>	<b>1 to 2 oz WDG</b> (0.85 to 1.7 oz)	Some small-seeded weeds.	Wheat: Emergence through 4 <sup>th</sup> tiller.	Soil residue provides PRE control of weeds. Requires 1 inch of rainfall for activation. Sequential rain events will improve weed control. Refer to label for use directions and restrictions. A1-2 C1 D6 Y15
MCPA <sup>4</sup> amine MCPA <sup>4</sup> ester	<b>0.5 to 1.33 pt 4SL</b> <b>0.5 to 1.33 pt 4EC</b> (0.25 to 0.66 lb)	Broadleaf weeds.	Crop: 3-leaf until prior to boot. Winter wheat: In spring - well tillered until prior to boot.	Use high rate for large or perennial weeds. A3 A6 C1-2 S6
2,4-D <sup>4</sup> amine 2,4-D <sup>4</sup> ester	<b>0.5 to 1 pt 4SL</b> <b>0.5 to 1 pt 4EC</b> (0.25 to 0.5 lb)		<i>Do not apply to winter wheat in fall.</i>	Follow label directions as 2,4-D labels vary on application timing. Do not apply from early boot to dough stage. A3 A6 B3 C1-2 S6
Dicamba <sup>4</sup>	<b>2 to 4 fl oz SL</b> (1 to 2 oz) <b>Barley: 2 to 3 fl oz</b> (1 to 1.5 oz)	Broadleaf weeds including wild buckwheat, sunflower, Russian thistle and kochia.	HRSW/Durum: Up to 5-leaf.  Barley: Up to 4-leaf.  HRWW: Pre-joint.	Dicamba must be applied before 6-leaf stage. Use low dicamba rate and high MCPA rate on 4-leaf HRSW or durum. Barley is relatively susceptible to injury from dicamba. Do not apply dicamba with 2,4-D to barley. A3 A6-7 B6 C1-2 C4 S1 S5-12 Y9 Y15
Starane Ultra / generic fluroxypyr <sup>4</sup>	<b>0.67 pt 1.5EC</b> <b>0.35 pt 2.8EC</b> <b>5 oz 40WDG</b> (2 oz)	Kochia, volunteer flax, and few other broadleaf weeds.	Crop: 2-leaf through flag leaf emergence. Weeds: Small.	Refer to label for weeds controlled, registered tank-mix options, and rates. Commercial mixture with MCPA ester available as Hat Trick. A3 C5 S6 S9-10
Curtail M / generic clopyralid <sup>4</sup> & MCPA <sup>4</sup>	<b>1.75 to 2.33 pt EC</b> (0.09 to 0.12 lb & 0.5 to 0.68 lb)	Broadleaf weeds and Canada thistle.	Crop: 3-leaf until prior to boot.	Apply to Canada thistle at rosette to early bolting stage. Do not harvest hay from treated fields. A3 C5 S5 S8-12 T3 T9 Y15
Curtail / generic clopyralid <sup>4</sup> & 2,4-D <sup>4</sup>	<b>2 to 2.67 pt SL</b> (0.09 to 0.13 lb & 0.5 to 0.67 lb)		Crop: 4-leaf until prior to boot.	
WideMatch / generic clopyralid <sup>4</sup> & fluroxypyr <sup>4</sup>	<b>1 to 1.33 pt EC</b> (0.09 to 0.125 lb & 0.09 to 0.125 lb)	Broadleaf weeds including kochia, wild buckwheat, vol. flax, and Canada thistle.	Crop: 3-leaf through flag leaf emergence.  Weeds: Up to 4 inches tall or vining.	An economical formulation of clopyralid. Apply with 2,4-D, MCPA, or thifensulfuron to increase spectrum of broadleaf weed control. Does not antagonize POST grass herbicides labeled in small grains. WideMatch commercial mixture with MCPA ester available as Hat Trick or Weld. Refer to label for application information. A3 C5 S1 S4-10 S12 T3 T9 Y15
<b>PerfectMatch</b> (pyroxsulam <sup>2</sup> & clopyralid <sup>4</sup> & fluroxypyr <sup>4</sup> ) <b>Not for Barley</b>	<b>1 pt SE</b> (0.014 lb & 0.094 lb & 0.094 lb)	Also controls foxtail, wild oat, barnyardgrass, and partial control of bromes.	Crop: 3-leaf until prior to jointing. Weeds: Up to 4 inches tall.	Also S2-3 S13

## Hard Red Spring and Durum Wheat, Winter Wheat and Barley

<b>Herbicide</b>	<b>Product/A (ai/A)</b>	<b>Weeds</b>	<b>When to Apply</b>	<b>Remarks and Paragraphs</b>
Bromoxynil <sup>6</sup>	<b>1 to 2 pt EC</b> (0.25 to 0.5 lb)	Small broadleaf weeds including small kochia.	Crop: Emergence until prior to boot.	Contact, non-residual herbicide requiring thorough coverage. Most active in hot and sunny conditions. Refer to label for tank-mix options.
Bromoxynil <sup>6</sup> & MCPA <sup>4</sup>	<b>1 to 2 pt 4EC</b> <b>0.8 to 1.6 pt 5EC</b> (0.25 to 0.5 lb & 0.25 to 0.5 lb)	Small broadleaf weeds including wild buckwheat, sunflower, Russian thistle and kochia.	Crop: 3-leaf stage until prior to boot.	A3 C1-2 S1 S6-12
Bromoxynil <sup>6</sup> & 2,4-D <sup>4</sup>	<b>0.75 to 1.5 pt EC</b> (0.18 to 0.38 lb & 0.25 to 0.5 lb) Rates vary by label.			A3 C1-2 S1 S6-12
Bromoxynil <sup>6</sup> & fluroxypyr <sup>4</sup>	<b>14 to 21 fl oz EC</b> (4 to 6 oz & 1 to 1.5 oz)		Crop: 3-leaf to flag leaf emergence.	Higher rates or a tank-mix partner may be required for high weed populations and weeds greater than 4 inches tall. A3 C1-2 C5 S1 S6-13
<b>Aim</b> (carfentrazone <sup>14</sup> )	<b>0.5 fl oz EC</b> (0.128 oz)	Small broadleaf weeds including pigweed and kochia.	Crop: Up to jointing stage. Weeds: Small. Up to 2 inches tall.	Contact, non-residual herbicide requiring thorough coverage. May cause cosmetic speckling on wheat leaves. Add NIS at 1 qt/100 gal. Refer to label for tank-mix options and application information. A3 B4 C1
<b>Huskie Complete</b> (bromoxynil <sup>6</sup> & pyrasulfotole <sup>27</sup> & thiencazone <sup>2</sup> & mefenpyr safener)  <b>Not for Barley</b> <b>RUP</b>	<b>13.7 fl oz OD</b> (0.156 lb phenol or 0.22 lb ester & 0.028 lb & 0.072 oz)	Wild oat, foxtails, barnyardgrass, Persian dandelion, and most annual broadleaf weeds including resistant weeds.	Wheat: 1-leaf to 60 day PHI. Grass weeds: Up to 2 tillers. Broadleaf weeds: Up to 4 inches tall.	Do not apply to barley. Will control some ACC-ase resistant grass biotypes. Refer to label for crop rotation restrictions, tank-mix options, and application information. C1 C11 S1-13 Y6
<b>Huskie</b> (bromoxynil <sup>6</sup> & pyrasulfotole <sup>27</sup> & mefenpyr safener)	<b>11 to 15 fl oz EC</b> (0.16 to 0.2 lb & 0.027 to 0.036 lb)	Most annual broadleaf weeds including resistant weeds.	Crop: Up to flag leaf emergence. Weeds: Up to 4 inches tall.	Most crops can be planted the year following application. Do not plant lentil for 18 months after application. Refer to label for tank-mix options and application information. Huskie = C1 C11 S1 S4-12 Y6 Wolverine Advanced = C1 C11 S1 S3-13
<b>Wolverine Advanced</b> (fenoxaprop <sup>1</sup> & bromoxynil <sup>6</sup> & pyrasulfotole <sup>27</sup> & mefenpyr safener)	<b>1.7 pt EC</b> (0.085 lb & 0.223 lb & 0.028 lb)	Annual grass and broadleaf weeds.	Wheat: Emergence to 60 days PHI. Barley: Emergence to 5-leaf. Grass weeds: 1-leaf to 2-tiller.	
<b>Talinor</b> (bromoxynil <sup>6</sup> & bicyclopyrone <sup>27</sup> & safener)	<b>13.7 to 18.2 fl oz EC</b>	Most annual broadleaf weeds including resistant weeds.	Crop: 2-leaf to pre-boot. Weeds: Up to 4 inches tall.	Must include co-pack of CoAct adjuvant and petroleum oil adjuvant at 1 gal/100 gal or NIS at 1 qt/100 gal. May omit oil or surfactant if tankmixed with a herbicide containing a built-in adjuvant.

# Hard Red Spring and Durum Wheat, Winter Wheat and Barley

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
<b>Short Residual ALS Herbicides</b>				
<b>Orion</b> (florasulam <sup>2</sup> & MCPA <sup>4</sup> ester)	<b>17 fl oz SE</b> (0.07 oz & 0.31 lb)	Some broadleaf weeds.	Crop: 3-leaf to jointing. Weeds: Small.	Add NIS at 1 qt/100 gal. May be tank-mixed with grass herbicides. Allow a 60 day PHI. Refer to label for application information. A3 C1-2
<b>Starane Flex</b> (florasulam <sup>2</sup> & fluroxypyr <sup>4</sup> )	<b>13.5 fl oz EC</b> (0.07 oz & 1.4 oz)		Crop: 3-leaf to flag leaf emergence. Weeds: Small.	May be tank-mixed with Group 1 POST grass herbicides. Allow a 60 day PHI. Has shorter crop rotation restrictions than WideMatch. A3 C1 C5 S6
<b>Quelex</b> (florasulam <sup>2</sup> & halauxifen <sup>4</sup> )	<b>0.75 oz WDG</b> (0.075 oz & 0.075 oz)		Crop: 2-leaf to flag leaf emergence. Weeds: Small.	Add NIS at 1 to 2 qt/100 gal. Has not been proven safe to some rotational crops. Allow a 60 day PHI. A3 C1 S6 Y15
thifensulfuron <sup>2</sup>	<b>0.3 to 0.6 oz DF</b> 0.45 to 0.9 oz SG (0.225 to 0.45 oz)	Mustards, redroot pigweed, lambsquarters, wild buckwheat, smartweed, and sunflower.	Crop: 2-leaf until prior to flag leaf emergence.  Allow a 45 day PHI.	Do not apply higher tribenuron rates with POST Group 1 (ACCCase) grass herbicides to avoid grass herbicide antagonism. Tribenuron may enhance control of some Group 2 (ALS) herbicides (e.g. flucarbazone) for yellow foxtail. Addition of MCPA ester or 2,4-D ester improves broadleaf weed control and crop safety. Add NIS at 1 pt/100 gal except when adding 2,4-D or MCPA at 0.75 pt/A. Sentrallis may control kochia. No crop rotation restrictions the following year. Refer to label for list of registered tank-mixes. A3 A5-6 C1 S1 S5-7 T3 X1 Y1 Y3
<b>Sentrallis</b> (thifensulfuron <sup>2</sup> & fluroxypyr <sup>4</sup> )	<b>7 to 14 fl oz OD</b> (0.22 to 0.44 & 1.12 to 2.24)			
Express / generic tribenuron <sup>2</sup>	<b>0.17 to 0.33 oz DF</b> <b>0.25 to 0.5 oz SG</b> (0.125 to 0.25 oz)	Mustards, marshelder, prickly lettuce, Russian thistle, Canada thistle.		
thifen <sup>2</sup> & tribenuron <sup>2</sup> 4:1 ratio 75DF <b>Affinity T/M 50SG</b> 3:1 <b>Audit 75DF</b> 2:1 ratio 75DF 1:1 ratio 75DF <b>Affinity B/S 50SG</b>	<b>0.4 to 0.67 oz DF</b> <b>0.6 to 1 oz SG</b> <b>0.3 to 0.5 oz DF</b> <b>0.3 to 0.66 oz DF</b> <b>0.25 to 0.5 oz DF</b> <b>0.4 to 0.8 oz SG</b>	Provides a broader spectrum of control than either a.i. alone. Choose ratio based on prevalent weeds.		
<b>Supremacy</b> (fluroxypyr <sup>4</sup> & thifensulfuron <sup>2</sup> & tribenuron <sup>2</sup> )	<b>4 to 6 oz WDG</b> (1 to 1.5 oz ae & 0.18 to 0.27 oz & 0.06 to 0.09 oz)	Broadleaf weeds including pigweed, buckwheat, kochia, mustard, flax, and Canada thistle.		Add NIS at 1-2 qt/100 gal except when adding an EC or ester formulated herbicide. Use higher rates for larger weeds. A3 A5-6 C1 C5 C9 S1 S6-12

## Long Residual ALS Herbicides

Ally / generic metsulfuron <sup>2</sup>	<b>0.1 oz XP</b> (0.06 oz)	Broadleaf weeds including perennial sowthistle. Partial control of wild buckwheat.	Crop: 2-leaf until prior to boot.	Addition of 2,4-D ester or MCPA ester improves broadleaf weed control and crop safety. Add NIS at 1 pt/100 gal except when adding 2,4-D or MCPA at 0.75 pt/A. Refer to label for crop rotation restrictions. Do not apply within 22 months of last metsulfuron treatment. Do not apply to soils above pH 7.9. A3 C1 S1 S4-12 X1 Y3 Y6 Y15
Ally Extra / generic metsulfuron <sup>2</sup> & thifensulfuron <sup>2</sup> & tribenuron <sup>2</sup>	<b>0.3 to 0.6 oz DF</b> (0.174 to 0.347 oz)	Broadleaf weeds including perennial sowthistle. Improved control of wild buckwheat.	Crop: 2-leaf until prior to flag leaf emergence.	
<b>Travallas</b> (metsulfuron <sup>2</sup> & thifensulfuron <sup>2</sup> & fluroxypyr <sup>4</sup> )	<b>7 fl oz OD</b> (0.022 & 0.22 & 1.1 oz)			

## Very Long Residual ALS Herbicides

Amber / generic triasulfuron <sup>2</sup>	<b>0.28 to 0.56 oz DF</b> (0.21 to 0.42 oz)	Broadleaf weeds.	Crop: 2-leaf until prior to boot stage.	Add NIS at 1 qt/100 gal. A3 C1 Y1 Y3 Y6 Y15
Glean / generic chlorsulfuron <sup>2</sup>	<b>0.167 to 0.33 oz DF</b> (0.125 to 0.25 oz)	Broadleaf weeds and suppression of foxtail and Canada thistle.	Crop: 2-leaf until prior to flag leaf emergence.	Add NIS at 1 pt/100 gal except when adding 2,4-D ester or MCPA ester at 0.75 pt/A. Refer to label for application timings, tank-mix options, weeds controlled, and soil pH restrictions. A3 C1 Y1 Y3 Y6 Y15
Finesse / generic chlorsulfuron <sup>2</sup> & metsulfuron <sup>2</sup>	<b>0.2 to 0.4 oz DF</b> (0.15 to 0.3 oz)			

## Hard Red Spring and Durum Wheat, Winter Wheat and Barley

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
<b>POST-Applied Grass Herbicides</b>				
<b>Axial XL</b> (pinoxaden <sup>1</sup> & cloquintocet safener) <b>Not for Durum</b>	<b>16.4 fl oz EC</b> (0.86 oz)	Foxtail, wild and volunteer oat, Persian darnel, and annual ryegrass +	Crop: 2-leaf to boot.  Grasses: 1-leaf to 6-leaf + 3 tillers.	Axial XL and Axial Star is formulated with Adigor adjuvant. May be tank-mixed with most broadleaf herbicides. Refer to label for tank-mix information, and restrictions.  A3 C1 C3 S3 S13
<b>Axial Star</b> (pinoxaden <sup>1</sup> & fluroxypyr <sup>4</sup> ) <b>Not for Durum</b>	<b>16.4 fl oz EC</b> (0.053 lb & 0.094 lb)	fluroxypyr also controls kochia with partial control of annual broadleaf weeds.	Crop: 2-leaf until prior to boot. Foxtail: 1- to 3-leaf. Wild oat: 1- to 6-leaf.	
<b>Discover NG</b> (clodinafop <sup>1</sup> & cloquintocet safener) <b>Not For Barley</b>	<b>12.8 to 16 fl oz EC</b> (0.05 to 0.06 lb)	Wild oat, green and yellow foxtail, barnyardgrass, Persian darnel, and annual ryegrass.	Wheat: 2-leaf until prior to boot. Wild oat: 1- to 6-leaf. Foxtails: 1- to 5-leaf.	Discover NG is formulated with oil adjuvant. Add MSO adjuvant at 1 qt/100 gal if <10 gpa. Apply higher rates for Persian darnel and ryegrass. Refer to label for rates and tank-mix information. A3 C1 C6 S3 S13
Fenoxaprop <sup>1</sup> & mefenpyr safener	<b>0.33 to 0.66 pt EC</b> (0.04 to 0.08 lb)	Wild oat, green and yellow foxtail, millets, corn, and barnyardgrass.	Wheat: Emergence to 60 days PHI. Barley: 1-leaf to 4-leaf. Grass weeds: 1-leaf to 2-tiller.	Apply 0.33 pt/A for green foxtail, corn and millet. Apply 0.4 pt/A for yellow foxtail and proso millet. Apply 0.66 pt/A for barnyardgrass and wild oat. Refer to label for tank-mix options. A3 C1 C9 S3 S13
<b>Wolverine Advanced</b> (fenoxaprop <sup>1</sup> & bromoxynil <sup>6</sup> & pyrasulfotole <sup>27</sup> & mefenpyr safener)	<b>1.7 pt EC</b> (0.085 lb & 0.223 lb & 0.028 lb)	Annual grass and broadleaf weeds.	Wheat: Emergence to 60 days PHI. Barley: Emergence to 5-leaf. Grass weeds: 1-leaf to 2-tiller.	Most crops can be planted the year following application. Do not plant lentil for 18 months after application. A3 C1 C9 C11 S1 S3-13
<b>Everest 2.0 Sierra</b> (flucarbazone <sup>2</sup> & safener) <b>Not for Barley</b>  <b>Short to Long Residual</b>	<b>0.5 to 1 fl oz SC</b> (0.224 to 0.432 oz)	Wild oat, green foxtail, mustards, and pigweed. Partial control of yellow foxtail, barnyardgrass, downy brome, Japanese brome and Persian darnel	Wheat: 1-leaf to prior to jointing.  Grass weeds: Up to 4 leaves.	Add basic pH blend adjuvant at 2-4 qt/100 gal or NIS at 1 qt/100 gal + AMS. Apply 0.5 fl oz/A for green foxtail or sequentially after Pre-Pare. Do not apply more than a total of 0.432 oz ai/A flucarbazone to the crop. Apply 0.75 to 1 fl oz/A for wild oat and other grasses. Tankmixes with tribenuron improve grass control. A3 C1 C7 S2-3 S13
<b>Raze</b> (flucarbazone <sup>2</sup> & fluroxypyr <sup>4</sup> & safener) <b>Not for Barley</b>	<b>5 to 9 fl oz SC</b> (0.2 to 0.37 oz & 1.06 to 1.9 oz)	Wild oat, foxtail, kochia, mustards, pigweed, flax, and bedstraw.	Wheat: 2-leaf to prior to jointing. Grass weeds: 1 to 4 leaves. Broadleaf weeds: 2 to 4 inches.	Add basic pH blend adjuvant at 2 to 4 qt/100 gal or NIS at 1 qt/100 gal + AMS. Apply 5 fl oz/A for green foxtail or sequentially after Pre-Pare. Apply 7 to 9 fl oz/A for wild oat, other grasses, and kochia. Tankmixes with SU broadleaf herbicides will improve grass control and expand spectrum of grasses controlled. A3 C1 C5 C7 S3 S13

# Hard Red Spring and Durum Wheat, Winter Wheat and Barley

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
<b>Olympus</b> (propoxy-carbazon <sup>2</sup> )  <b>Not For Barley</b> <b>Very Long Residual</b>	<b>0.6 to 0.9 oz WDG</b> (0.42 to 0.63 oz)  Spring wheat: <b>0.2 oz WDG</b> (0.14 oz)	Quackgrass, downy brome, Japanese brome, foxtail barley and mustard species.	Wheat: 2-leaf to jointing. Grasses: 2-leaf to 2-tiller. Broadleaf weeds: Less than 2 inches tall or in diameter.	<b>Application at high rates may injure spring wheat.</b> Do not apply after wheat jointing begins. Add NIS at 1 to 2 qt/100 gal. May be applied with liquid fertilizer in winter wheat. Use high rate for wild oat and brome species. Allow a 71 day PHI. Refer to label for tank-mix options. A3 C1 C12 S2 X1 Y2 Y4 Y6 Y15
<b>Osprey</b> (mesosulfuron <sup>2</sup> & mefenpyr safener) <b>Winter wheat only</b> <b>Short Residual</b>	<b>3.2 to 4.75 oz WDG</b> (0.14 to 0.21 oz)	Wild oat, Persian darnel, and mustard species.	Wheat: Up to jointing. Weeds: Less than 2 inches or 1-tiller.	<b>Do not use in spring wheat.</b> Add MSO adjuvant at 1.5 pt/A. May control some ACC-ase resistant wild oat biotypes. Refer to label for tank-mix options. A3 C1 C12 S13 Y2 Y4 Y15
<b>Rimfire Max</b> (mesosulfuron <sup>2</sup> & propoxycarbazon <sup>2</sup> & mefenpyr safener) <b>Not For Barley</b> <b>Short to Long Residual</b>	<b>3 oz WG</b> (0.057 oz & 0.143 oz)	Wild oat, barnyardgrass, seedling foxtail barley, bromus grass species, Persian darnel and mustard species.	Wheat. Spring: 1-leaf to flag leaf emergence. Grasses: 1-leaf to 2-tiller. Broadleaf weeds: Less than 2 inches tall.	Add MSO adjuvant at 1.25 pt/A, or NIS at 2 qt/100 gal + 28% UAN at 1 to 2 qt/A, or basic pH blend adjuvant at 1 gal/100 gal (0.8 to 1.6 pt/A). Do not use petroleum oil or adjuvants containing organosilicone because wild oat control will be reduced. Refer to label for tank-mix options. A3 C1 C12 S2-3 S13 Y2 Y15
<b>PowerFlex HL</b> (pyroxsulam <sup>2</sup> + cloquintocet safener) <b>Only for Winter Wheat</b> <b>Short Residual</b>	<b>2 oz WDG</b> (0.26 oz)	Wild oat, foxtail, bromes, barnyardgrass, and Persian darnel.	Wheat: 3-leaf to prior to jointing.  Grass weeds: 2- to 4-leaf.	May control some ACC-ase resistant wild oat biotypes. Allow a 60 day PHI. For PowerFlex: Add NIS at 1-2 qt/100 gal + AMS at 1.5 lb/A or petroleum oil adjuvant at 0.8 gal/100 gal. May be applied in a 50% N spray solution. Refer to label for application information. A3 C5 S1-13 T3 T9 Y15
<b>Teammate</b> (pyroxsulam <sup>2</sup> & safener) <b>Not for Barley</b> <b>Short Residual</b> <b>Registration Pending</b>	<b>1 oz WDG</b> (0.21 oz)			
<b>GoldSky</b> (pyroxsulam <sup>2</sup> + florasulam <sup>2</sup> + fluroxypyr <sup>4</sup> + cloquintocet safener) <b>Not for Barley</b> <b>Short Residual</b>	<b>1 pt OD</b> (0.21 oz & 0.04 oz & 1.42 oz)	Wild oat, bromes, barnyardgrass, foxtail, P. darnel, and many annual broadleaf weeds.  Also controls Canada thistle.	Wheat: 3-leaf to prior to jointing. Grass weeds: 2- to 4-leaf.  Broadleaf weeds: Less than 3 inches tall.	For GoldSky: Add NIS at 1-2 qt/100 gal + AMS at 1.5 lb/A. Do not add NIS with tank-mix of EC herbicides.  Refer to label for tank-mix information and restrictions. A3 C1 C5 C10 S1-3 S13
<b>PerfectMatch</b> (pyroxsulam <sup>2</sup> & clopyralid <sup>4</sup> & fluroxypyr <sup>4</sup> ) <b>Not for Barley</b> <b>Long Residual</b>	<b>1 pt OD</b> (0.014 lb & 0.094 lb & 0.094 lb)			
<b>Varro</b> (thiencarbazon <sup>2</sup> & mefenpyr safener)  <b>Not for Barley</b> <b>Short Residual</b>	<b>6.85 fl oz EC OD</b> (0.072 oz)	Wild oat, foxtails, barnyardgrass, Persian darnel, and some annual broadleaf weeds.	Wheat: 1-leaf to jointing. Grass weeds: Up to 2 tillers. Broadleaf weeds: Up to 3 inches tall.	May control some ACC-ase resistant grass biotypes. Varro may be tank-mixed with most broadleaf herbicides. Refer to label for crop rotation restrictions, tank-mix options, and application information. C1 C11 S1-13 Y6 Y15
<b>Huskie Complete</b> (bromoxynil <sup>6</sup> & pyrasulfotole <sup>27</sup> & thiencarbazon <sup>2</sup> & mefenpyr safener) <b>Not for Barley</b> <b>Short Residual</b>  <b>RUP</b>	<b>13.7 fl oz EC OD</b> (0.156 lb phenol or 0.22 lb ester & 0.028 lb & 0.072 oz)	Wild oat, foxtails, barnyardgrass, Persian darnel, and most annual broadleaf weeds including resistant weeds.	Wheat: 1-leaf to 60 day PHI. Grass weeds: Up to 2 tillers. Broadleaf weeds: Up to 3 inches tall.	

# HERBICIDE-RESISTANT WHEAT

## Clearfield Wheat

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
<b>Beyond</b> (imazamox <sup>2</sup> )  <b>Long Residual</b>	<b>4 fl oz SL</b> (0.5 oz)	Annual grass and broadleaf weeds including wild oat, green and yellow foxtail, Japanese and downy brome, and Persian darnel.	Wheat: 4-leaf to prior to jointing.  Weeds: 1 to 3 inches tall.	<b>Apply only to Clearfield wheat varieties.</b> Beyond at 4 to 6 fl oz/A may be used on winter wheat and 2 resistant-gene spring wheat. Add NIS at 1 qt/100 gal + UAN at 1 to 2 qt/A. Will not control ALS-resistant kochia and wild oat. Refer to label for tank-mix options and application information. Will suppress feral rye. A3 A5-7 C1-2 Y2 Y15

## Grass weed control from POST applied herbicides.

POST GRASS HERBICIDES	Wild oat	Foxtail, Green	Foxtail, Yellow	Barley, Volunteer	Barnyardgrass	Corn, Volunteer	Brome, Downy*	Brome, Japanese*	Persian darnel	Ryegrass, Annual	Quackgrass	Foxtail barley
Axial XL <sup>1</sup> /Star <sup>1,4</sup>	E	G-E	G-E	N	G-E	N	N	N	E	F	N	N
Beyond <sup>2</sup> /ClearMax <sup>2,4</sup>	E	E	G-E	E	E	G-E	G-E	E	E	G-E	F	-
Discover NG <sup>1</sup>	E	E	G-E	P-G	E	E	N	N	G-E	G-E	-	N
Everest 2.0 / Sierra <sup>2</sup>	G-E	E	P-G	P-F	P	F-G	P	G-E	F-G	P-F	P-F	F
Fenoxaprop <sup>1</sup>	E	E	E	N	E	E	N	N	N	-	N	N
GoldSky <sup>2,2,4</sup>	G-E	F-G	G-E	N	G-E	G	F-G	G-E	G	G-E	F	F
Huskie Complete <sup>2,6,27</sup>	G	G-E	G-E	-	G-E	-	P-F	F-G	F-G	-	-	F
Maverick <sup>2**</sup>	E	P-F	P-F	-	P	-	F-G	G	-	P-F	G	-
Olympus <sup>2</sup>	G-E	P-F	P-F	F-G	G	-	F-G	E	N	-	F-G	G
Perfectmatch <sup>2,4,4</sup>	G-E	F-G	G	N	G-E	G	F-G	G-E	G	G-E	F	F
PowerFlex <sup>2</sup>	G-E	F-G	G	N	G-E	G	F-G	G-E	G	G-E	F	F
Rimfire Max <sup>2,2</sup>	G-E	P-F	P-F	P-F	G	F-G	P-F	G	G	-	F	F-G
Teammate <sup>2</sup>	G-E	F-G	G	N	G-E	G	F-G	G-E	G	G-E	F	F
Varro <sup>2</sup>	G	G	G-E	-	G	-	P-F	F-G	F-G	-	-	F-G
Wolverine Advanced <sup>1,6,27</sup>	E	G-E	G-E	N	E	E	N	N	N	N	N	N

\*Early fall applications provide better control than late fall or spring. Earlier spring application are more effective than late spring or mid-season application.

\*\*Suggested for use only in continuous wheat because of crop rotation restrictions.

Weed control ratings are based on the following scale:

- E = Excellent = 90 to 99% control
- G = Good = 80 to 90% control
- F = Fair = 65 to 80% control
- P = Poor = 40 to 65% control
- N = None = No control
- "-" = insufficient information