### **CHEMICAL FALLOW**

For Future Planting of Registered Crops.

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Roundup / generic glyphosate	0.38 to 1.5 lb ae See Remarks.	Annual and perennial grass and broadleaf weeds.	Weeds: Less than 12 inches tall. See label.	Ib ae/gal   Ib ai/gal   0.38 ae   0.75 ae   1.125 ae   1.5 ae   3   4   = 16 fl oz   32 fl oz   48 fl oz   64 fl oz   4/4.17   5.4/5.1   = 12 fl oz   24 fl oz   36 fl oz   48 fl oz   4.5   5.5   = 11 fl oz   22 fl oz   32 fl oz   44 fl oz   5   6.1   = 10 fl oz   20 fl oz   30 fl oz   40 fl oz   Non-selective, non-residual, translocated, foliar herbicide   Apply with AMS fertilizer at 4 lb/100 gal, or more for hard water.   Roundup/glyphosate will not control glyphosate-resistant volunteer crops.   Apply with 2,4-D or Banvel/dicamba for improved broadleaf weed control.   Refer to label of tank-mix partner for rates, adjuvant use, application information, and other restrictions.   A4-7 B1 X1.   Pages: 102-103, 104-105.
Sharpen (saflufenacil)	1 to 2 fl oz (0.36 to 0.72 oz)	Broadleaf weeds.	Fallow and post- harvest.	Provides burndown control of emerged broadleaf weeds. Apply when weeds are small and actively growing. Apply with 1% v/v MSO or PO + UAN at 1 to 2% v/v. Sharpen has no grass activity. Planting interval is dependant on soil texture and OM. Refer to label for tank-mix options. A1 B1-2 B9 S1 S3-5 S7-8 X1.
Spartan Advance (glyphosate & sulfentrazone)	<b>21 to 46 fl oz</b> (1.5 to 3.2 oz & 0.5 to 1.08 lb)	Grass and broadleaf weeds.		Plant only registered crops the following season. Adjust rate for soil type. Refer to label for use information. A1-2 A4-7 B1 E11 Y14. Pages: 102-103, 104-105, 108-110.
Rage D-Tech (2,4-D ester & carfentrazone)	1 to 2 pt (0.5 to 1 lb ae & 0.256 to 0.512 lb)	Broadleaf weeds.	Fallow and post- harvest.	Refer to label for use information.  Apply with NIS at 0.25% v/v or petroleum or MSO type oil at 1.5 to 2% v/v + UAN at 2 to 4% v/v.
Aim (carfentrazone)	<b>0.5 to 1 fl oz EC</b> (0.128 to 0.256 oz)	Broadleaf weeds including pigweed and ALS kochia.	Weeds: Less than 2 inches tall.	Non-residual, contact, herbicides requiring thorough coverage. Most active in hot, sunny conditions. Add NIS at 0.25% v/v.
paraquat RUP	<b>1.5 to 4 pt 2SL</b> <b>1 to 2.7 pt 3SL</b> (0.375 to 1 lb)	Emerged annual grass and broadleaf weeds.	Weeds: Small.	B4 B8 C4 X1. Pages: 102-103, 104-105.
Affinity T/M 50SG 3:1 Audit 75 DF 2:1 ratio 75DF	0.3 to 0.5 oz DF 0.3 to 0.66 oz DF 0.25 to 0.5 oz DF	Provides a broader spectrum of control than either a.i. alone. Choose ratio based on prevalent weeds.	Any time after harvest until 60 days prior to planting crop.	Add NIS at 0.25 to 0.5% v/v unless restricted by the tankmix partner.  Apply in a tank-mixture with other registered herbicides to delay weed resistance.  Products containing tribenuron give season-long Canada thistle and perennial sowthistle control.  A3 A5-7 C18 X1.  Pages: 102-103, 104-105.
2,4-D	<b>1.5 to 4 pt 4EC/SL</b> (0.75 to 2 lb ae)	Broadleaf weeds and suppression of Canada thistle.	POST.	Use the higher rate for perennial weeds. C2 X1. Pages: 102-103, 104-105.
Banvel / generic dicamba	<b>0.5 to 1 pt</b> (0.25 to 0.5 lb ae)			Soil residual from fall application may damage broadleaf crops seeded the next year. Allow 45 days/pint of dicamba excluding days when ground is frozen to rotate to any crop. A3 A5-7 B5 C2 C8 X1 Y10. Pages: 102-103, 104-105, 108-110.
Distinct (dicamba & diflufenzopyr)	6 oz WDG (3 oz ae & 1.2 oz)			Add NIS at 0.25% v/v + 28% UAN at 1.25 qt/A or AMS at 8.5 to 17 lb/100 gallons. Refer to label for tank-mix options. Allow 45 days/0.5 lb ai of dicamba excluding days when ground is frozen to rotate to any crop. Distinct at 6 oz 70WDG/A = 6 fl oz Clarity. A3 A5-7 B5 C2 C8 X1 Y10. Pages: 102-103, 108-110.

## **CHEMICAL FALLOW**

## For Future Planting to Wheat, Durum, Barley, and Oat

	Product/A			
<u>Herbicide</u>	(ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Roundup / generic glyphosate	0.38 to 1.5 lb ae See Remarks.	Annual and perennial grass and broadleaf weeds.	Weeds: Less than 12 inches tall. See label.	Ib ae/gal   Ib ai/gal   0.38 ae   0.75 ae   1.125 ae   1.5ae   3   4   = 16 fl oz   32 fl oz   48 fl oz   64 fl oz   4/4.17   5.4/5.1   = 12 fl oz   24 fl oz   36 fl oz   48 fl oz   4.5   5.5   = 11 fl oz   22 fl oz   32 fl oz   44 fl oz   5   6.1   = 10 fl oz   20 fl oz   30 fl oz   40 fl oz   Non-selective, non-residual, translocated, foliar herbicide. Apply with AMS fertilizer at 4 lb/100 gal, or more for hard water. Roundup/glyphosate will not control volunteer Roundup resistant crops. Apply with 2,4-D or Banvel/dicamba for improved broadleaf weed control. Refer to label of tank-mix partner for rates, adjuvant use, application information, and other restrictions. A4-7 B2 X1. Pages: 102-103, 104-105.
Curtail / generic clopyralid & 2,4-D	<b>4 pt</b> (0.19 & 1 lb ae)	Broadleaf weeds including Canada thistle.	Canada thistle: Prior to bud stage.	Apply after a majority of rosettes have emerged. A3 C7 T2 T6 X1. Pages: 102-103, 104-105, 108-110.
Starane / generic fluroxypyr	0.5 - 0.67 pt 1.5EC 0.25 - 0.35pt 2.8EC 3.75 - 5 oz 40WDG (1.5 to 2 oz ae)	Kochia including resistant biotypes.	Weeds: 4- to 8- inches tall.	No residual weed control. Controls ALS-resistant and dicamba-resistant kochia. Do not plant any crop for 120 days after application. A3 C7 S3 X1. Pages: 102-103, 104-105.
Tordon 22K (picloram)	<b>0.25 to 0.5 pt</b> (0.063 to 0.125 lb)	Annual weeds.	Weeds: Actively growing.	Refer to label for grazing and rotational restrictions. Do not rotate to corn or sorghum the following year. Rates greater than 0.5 pt/A should be used post-harvest
Tordon 22K (picloram) + 2,4-D	<b>0.5 to 1 pt + 1 to 2 pt</b> (0.125 to 0.25 + 0.5 to 1 lb ae)	Perennial weeds.	Canada thistle: Prior to bloom. Field bindweed: Actively growing.	when rotating to fallow the following year. T2-4 T6 T15 X1 Y1 Y16. Pages: 108-110.
Paramount (quinclorac) Future Planting of Wheat and Durum Only	<b>0.33 lb DF</b> (0.25 lb)	Field bindweed: Runners at least 4 inches long.  May control foxtails, barnyardgrass, and volunteer flax.	Postharvest or in the spring prior to seeding of wheat including durum.	Apply with MSO adjuvant at 1.5 pt/A. AMS at 2.5 lb/A or UAN at 1 gal/A will improve control but do not substitute for MSO. Apply after harvest but prior to frost. Use in a 3-year program with 0.33 lb DF/A the first year and 0.17 to 0.33 lb DF/A in following years. B7 T1. Pages: 108-110.
Valor (flumioxazin) Future Planting of Wheat and Durum	2 to 3 oz WDG (0.063 to 0.094 lb)	Most small- seeded broadleaf weeds.	Post-harvest in fall until 30 days prior to planting.	Apply in spring with Roundup/glyphosate or 2,4-D for control of emerged vegetation. Add NIS at 0.25% v/v or petroleum oil adjuvant at 2 pt/A for burndown applications. A1 B1-2

# CRP

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Roundup /	0.38 to 1.5 lb ae See Remarks.	Annual and perennial grass and broadleaf weeds.	Preplant or any time prior to crop emergence.	
2,4-D	<b>1.5 to 4 pt 4EC/SL</b> (0.75 to 2 lb ae)	Annual broadleaf weeds, biennial thistles, and suppression of perennial broadleaf weeds.	Weeds: Emergence to bud stage. Pasture grasses: After 5-leaf stage.	Apply only registered brands in CRP. <u>Do not graze animals for 7 days after application or within 3 days of slaughter.</u> Do not apply after boot stage on grasses for seed production. Use 2 pt/A on annuals and gumweed and 4 pt/A on sages and other perennials.  Controls buckbrush/western snowberry.  T2 T3 T8 X1.  Pages: 102-103, 104-105.
Banvel / generic dicamba	<b>0.5 to 4 pt</b> (0.25 to 2 lb ae)		Grasses: After 3-leaf stage of seedling grasses. Weeds: Prior to bud stage for thistles and knapweeds.	Add NIS at 0.25% v/v. Spray drift from Banvel/dicamba may injure nearby susceptible crops and trees. Rates greater than 1 pt/A may injure newly seeded grasses. Refer to label for grazing restrictions and tank mixtures with other herbicides. T2 T3 T10 X1 Z1. Pages: 102-103, 104-105, 108-110.
Banvel / generic dicamba + 2,4-D	1 to 4 pt + 2 pt 4EC/SL (0.5 to 2 + 1 lb ae)		Biennial thistles: Rosette stage.	Apply with NIS at 0.25 to 0.5% v/v. T2-3 T8 T10 X1 Z1 Pages: 102-103, 104-105, 108-110.
Overdrive (dicamba & diflufenzopyr)	6 oz WDG (3 oz ae & 1.2 oz)		Prior to bud stage for thistles and knapweeds.	Add NIS at 0.25% v/v + 28% UAN at 1.25 qt/A or AMS at 17 lb/100 gallons. Canada thistle suppression only. D8 T2 Y11 Y24. Pages: 102-103, 108-110.
Ally / generic metsulfuron	<b>0.1 to 1 oz DF</b> (0.06 to 0.6 oz)	Season-long control of perennial sowthistle.	Fall or spring to early summer. Weeds: Less than 4 inches tall.	Apply with phenoxy type herbicide to small annual weeds or before thistle plants bolt.  Add NIS at 0.25 to 0.5 % v/v or oil adjuvant at 1% v/v.  Add 2,4-D for Russian thistle control.  Use Cimarron X-tra/generics for control of buckbrush and perennial species.  T2 T11 X1 Y3 Y24 Z1.  Pages: 102-103, 104-105, 108-110.
Cimarron X-tra / generic chlorsulfuron & metsulfuron	<b>0.5 to 2 oz DF</b> (0.188 to 0.75 oz & 0.15 to 0.6 oz)	Some annual and perennial weeds.		Add NIS at 0.25 to 0.5% v/v. Allow a 14 day grazing restriction for Rage D-Tech. T2 T11 X1 Y3 Y24 Z1. Pages: 102-103, 108-110.
Rage D-Tech (carfentrazone + 2,4-D)	8 to 32 fl oz (0.188 to 0.75 oz & 0.15 to 0.6 oz ae)			

	Product/A			
Herbicide	(ai/A)	Weeds	1	Remarks and Paragraphs
Starane / generic fluroxypyr	0.5 - 0.67 pt 1.5EC 0.25-0.35 pt 2.8EC 3.75 - 5 oz 40WDG	Kochia and other broadleaf weeds.	Spring: Kochia less than 6 inches tall.	Will kill desirable legumes but controls kochia, including ALS-resistant kochia. C7 S5
	(1.5 to 2 oz ae)			Pages: 102-103, 104-105.
Stinger / generic clopyralid	<b>1/3 to 2/3 pt</b> (2 to 4 oz ae)	toz ae) including Canada thistle and knapweeds.	growing and prior to bud stage for	Apply after most thistle shoots have emerged but before bud stage. Do not apply Curtail/generics to new grass seedings. Use lower rate for annual broadleaf weeds and higher rate for perennial thistles and knapweeds.
Curtail / generic clopyralid & 2,4-D	4 to 8 pt (1 to 2 oz & 0.19 to 0.38 lb ae)			Do not cut treated grass for hay within 30 days after application. T2 Z1. Pages: 102-103, 104-105, 108-110.
Crossbow (triclopyr & 2,4-D)	<b>1 to 6 qt</b> (0.25 to 1.5 & 0.5 to 3 lb ae)	Trees, brush and broadleaf weeds.	Spring: Prior to bud stage for thistles and knapweed. Fall: To rosettes.	Provides more consistent musk thistle and brush control (except buckbrush and western snowberry) than 2,4-D alone. Use highest rate for elm and Russian olive. Observe grazing and haying restrictions.
Milestone (aminopyralid)	3 to 7 fl oz (0.75 to 1.75 oz ae)	Most annual and perennial composite weeds, including wormwood and thistles. See label.	Spring: Rosette to bolting or in fall.	Apply up to 14 oz/A for spot treatment.  Milestone can leave a residue for several years following application. Legume species are very susceptible. Refer to label for crop rotation restrictions if CRP breakout into cropland is planned.  T12 Y24 Z1  Pages: 102-103, 108-110.
Tordon (picloram)	<b>0.25 to 0.5 pt</b> (0.06 to 0.13 lb ae)	Annual broadleaf weeds.	Weeds: Small and actively growing.	Apply 0.25 to 0.5 pt/A for small annual weeds. Apply 2 pt/A for suppression and 4 pt/A as spot treatment to control perennial weeds. Rates over 2 pt/A may suppress perennial grasses. Observe grazing restrictions. Apply with 2,4-D to provide
	1 to 4 pt (0.25 to 1 lb ae)	Perennial broadleaf weeds and trees.	Emergence to bud stage.	cost-effective weed control. Tordon can leave a residue for several years following application. Refer to label for crop rotation restriction if CRP breakout into cropland is planned. T2 T3 T15 Z1.  Pages: 108-110.
Plateau (imazapic)	4 to 12 fl oz for pasture, rangeland, native prairie restoration, and wildflower establishment. (1 to 3 oz ae)	Foxtail and annual and perennial broadleaf weeds including leafy spurge.	Grasses: 7 to 10 days after planting.  fy  Weeds: Up to 6 inches tall.  Grasses: 7 to 10 days after Add MSO type adjuvant at 2 pt/A 4 fl oz/A controls/suppresses and 12 fl oz/A controls annual weeds Russian knapweed.  Rates above 8 fl oz/A can cause production, especially cool-season	Rates above 8 fl oz/A can cause reduced grass production, especially cool-season grasses.
			Early September to early October. Apply in mid- September for leafy spurge control.	Use lower rates in areas of low rainfall. High risk of injury to switchgrass. No grazing restrictions specified. Does not control absinth wormwood, Canada thistle, or spotted knapweed. T13 T17 Y24 Z1. Pages: 102-103, 108-110.

Pages 102-103 = Herbicides resistance, Pages 104-105 = Generic and commercial names, Pages 108-110 = Crop rotation restrictions.

#### **GRASS ESTABLISHMENT**

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Roundup / generic glyphosate	0.38 to 1.5 lb ae See Remarks.	Emerged grass and broadleaf weeds.	Preplant or anytime prior to crop emergence.	Description   Description
2,4-D MCPA	<b>0.5 to 1 pt 4EC/SL</b> (0.25 to 0.5 lb ae)	Broadleaf weeds.	Grasses: After 5- leaf stage.	Use rates listed for establishing grasses. T8 X1
Buctril / generic bromoxynil	1 to 2 pt (0.25 to 0.5 lb)		Grasses: Anytime after emergence.	Grass tolerance is excellent. Can be applied to grass-alfalfa mixtures. Registered CRP species include wheatgrasses (crested, tall, western, bluebunch, and intermediate), perennial ryegrass, fescue, Russian wildrye, and alfalfa. Most active in hot, sunny conditions.
Bronate / generic bromoxynil & MCPA	1 to 2 pt 4EC 0.8 to 1.6 pt 5EC (0.25 to 0.5 & 0.25 to 0.5 lb ae)		POST: Grasses: 3-leaf stage or larger.	Refer to Buctril/bromoxynil section above for registered grass species. Consult label for list. Pages: 102-103, 104-105.
Starane / generic fluroxypyr	0.5 - 0.67 pt 1.5EC 0.25 - 0.35pt 2.8EC 3.75 - 5 oz 40WDG (1.5 to 2 oz ae)	Kochia and a few broadleaf weeds.	Spring: Kochia less than 6 inches tall.	Will kill desirable legumes. C7 S5 Pages: 102-103, 104-105.

Pages 102-103 = Herbicides resistance, Pages 104-105 = Generic and commercial names, Pages 108-110 = Crop rotation restrictions.

## **VEGETATION CONTROL FOR CRP BREAKOUT**

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Roundup / generic glyphosate	0.75 to 1.5 lb ae See Remarks.	CRP vegetation and weeds.	14 to 21 days prior to tillage.	Ib ae/gal   Ib ai/gal   0.75 ae   1.125ae   3