


SUGARBEET

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
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Refer to page 6 for Fall or Spring Early Preplant Herbicides (See M6 to M9 for fall-applied herbicides).
Refer to page 43 for additional herbicides to use in conventional or herbicide resistant sugarbeet.

Soil-Applied Herbicides

Far-Go (triallate) 	1.5 qt EC, 15 lb 10G (1.5 lb)	Wild oat.	PPI. Spring. Fall - see label for rates and timing.	Incorporate immediately after application. A second incorporation will improve wild oat control. A1-2 M1-2,7
Eptam (EPTC)	2.3 to 3.4 pt (2 to 3 lb)	Annual grasses and some broadleaf weeds.		Eptam may cause some sugarbeet stand reduction and temporary stunting. A1-2 B1 M1-2 M5-6 M17 S4
Eptam (EPTC) + Ro-Neet SB (cycloate)	1.1 to 2.3 pt + 2.7 to 3.3 pt (1 to 2 + 2 to 2.5 lb)			Less sugarbeet injury than from Eptam alone. Refer to narrative for suggested rates for various soil textures and organic matter. A1-2 M1-2 M5-6 M17 S4
Ro-Neet SB (cycloate)	4 to 5.3 pt (3 to 4 lb)			Ro-Neet is safer than Eptam. Weed control is poor on fine textured, high OM soils. A1-3 M1-2 M5-6 M17 S4
Nortron / generic ethofumesate	6 to 7.5 pt (3 to 3.75 lb)	Good pigweed and kochia control.	PPI or PRE.	PPI improves weed control. Band application reduces cost and risk of carryover. A1 M1-2 M9 M17 S4 Y12

POST-Applied Herbicides

Nortron / generic ethofumesate	3 to 4 fl oz (0.09 to 0.125 lb)	Improves broadleaf weed control, including kochia, pigweed, and lambsquarters	POST in combination with Betamix*.	Apply Norton* POST three times at 4 fl oz/A or four times at 3 fl oz/A but do not apply more than 12 fl oz/A total during the growing season due to crop rotation restrictions. M1-2 M8-9 M14 M17 Y12 Pages: 102-103, 104-105, 108-110
Stinger / generic clopyralid	4 to 10.6 fl oz (0.09 to 0.25 lb ae)	Cocklebur, marshelder, ragweed, sunflower, buckwheat, and Canada thistle.	POST. Sugarbeet: Cotyledon to 8 leaves.	Refer to narrative for rates and sizes for various species. Stinger* may be tank-mixed with Betamix*. Allow a 45 day PHI. M1-2 M8 M12 M14 S7 Pages: 102-103, 104-105, 108-110
UpBeet (triflurosulfuron)	0.25 to 1 oz DF (0.125 to 0.5 oz)	Annual broadleaf weeds.	POST. Weeds: Cotyledon to 2-leaf.	Apply two or more times in combination with Betamix. Do not exceed 2.5 oz/A/season. Allow a 60 day PHI. M1-2 M8 M11 M14
Betamix Phen-Des 8+8 (desmedipham & phenmedipham)	0.75 to 7.5 pt 0.06 to 0.6 lb + 0.06 to 0.6 lb	Annual broadleaf weeds.	POST. Sugarbeet: Cotyledon up to 8-leaf stage. Broadleaf weeds: Cotyledon up to 4-leaf stage.	Risk of sugarbeet injury increases from morning or midday applications and in certain environments. Split application with reduced rates has reduced sugarbeet injury and increased weed control compared to a single full-dose application. Do not add MSO or any adjuvant when applying full rates. Refer to paragraph for rate adjustment information. Allow a 75 day PHI. M1-2 M3 M8-9 M14 M17 Pages: 102-103, 104-105, 108-110
Betamix* + Nortron* (desmedipham & phenmedipham + ethofumesate)	0.52 to 4.6 pt + 1.3 to 12 fl oz (0.042 to 0.375 lb + 0.042 to 0.375 lb)			
Betamix* + UpBeet + Stinger* + MSO adjuvant or Betamix* + Nortron* + UpBeet + Stinger* + MSO adjuvant	MICRO-RATE PROGRAM 8 to 12 fl oz + 0.125 oz + 1.3 fl oz + 1.5% v/v or 8 to 12 + 0.86 to 1.3 fl oz + 0.125 oz + 1.3 fl oz + 1.5% v/v. MID-RATE PROGRAM 12 to 16 fl oz + 0.125 oz + 1.3 fl oz + 1.5% v/v or 12 to 16 + 1.3 to 1.7 fl oz + 0.125 oz + 1.3 fl oz + 1.5% v/v.	Annual broadleaf weeds and fair to good annual grass control. Generally provides poor control of ALS-resistant kochia. Increasing clopyralid rate from 1.3 to 2.6 fl oz will improve control of lanceleaf sage with some risk of increased sugarbeet injury.	POST. Sugarbeet: Apply a minimum of three times with subsequent treatments at 5 to 7 day intervals. Micro-rate can be applied starting at cotyledon sugarbeet stage. Mid-rate can be applied starting at 4-leaf sugarbeet stage.	Use mid-rate for difficult weed problems or when application has been delayed. A herbicide for grass control at ½ to 1X normal rate can be added. Nozzle plugging from herbicide precipitation in the spray tank can be reduced by: - mixing in warm water - raising water pH to 8 or 9 - premixing UpBeet - adding a grass herbicide - frequent sprayer cleaning. Allow a 75 day PHI. M1-3 M8-9 M11-12 M14 Pages: 102-103, 104-105, 108-110

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

*Or generic equivalent.

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Assure II Targa (quizalofop)	8 to 10 fl oz (0.88 to 1.1 oz)	Annual grasses, quackgrass, and volunteer grass crops.	POST. Sugarbeet: Cotyledon to PHI. Grass weeds: Refer to table in soybean section on page 26.	Add oil adjuvant at 1% v/v but not less than 1.25 pt/A. See Select Max label for detailed adjuvant recommendations. Apply with AMS or UAN for greater control of grass species. Refer to soybean section for rates for different grass species. Use only Assure II*, Fusilade DX, and Select* to control volunteer corn. Select* is antagonized less than Assure II*, Fusilade DX, and Poast when tank-mixed with Betamix*. Allow 40 day PHI for Select*/Select Max, 45 day PHI for Assure II*, 60 day PHI for Poast, and 90 day PHI for Fusilade DX. A5-6 E2 M1-2 M8 Pages: 102-103, 104-105
Fusilade DX (fluazifop)	5 to 12 fl oz (1.25 to 3 oz)			
Select / generic clethodim	6 to 8 fl oz (1.5 to 2 oz)			
Select Max (clethodim)	9 to 16 fl oz (1.125 to 2 oz)			
Poast (sethoxydim)	0.5 to 1.5 pt (0.1 to 0.3 lb)	Annual grasses.		
Treflan / generic trifluralin	1.5 pt (0.75 lb)	Late emerging annual grass and some broadleaf weeds.	POST. Sugarbeet: 2 to 6 inches tall.	Must be incorporated. Beet roots must be covered before application and be well-rooted before incorporation. Emerged weeds are not controlled. May be applied over the tops of sugarbeet. A1-2 M1-2 M13 Y14 Pages: 104-105, 108-110
Dual Magnum / generic S-metolachlor	1.33 to 1.67 pt (1.25 to 1.6 lb)		POST. Sugarbeet: 4 or more true leaves.	Emerged weeds are not controlled. Precipitation is required for activation. May be applied more than once but seasonal total applied must not exceed 2.6 pt/A for Dual Magnum* or 24 fl oz/A for Outlook*. Lay-by Dual Magnum* or Outlook* should cautiously be applied where PPI or PRE Nortron* was used because sugarbeet injury may be severe. Allow a 60 day PHI except the PHI is 95 days for Outlook* applied to 9-leaf through 12-leaf sugarbeet. E5 M1-2 M4 M10 M17
Outlook / generic dimethenamid	18 to 21 fl oz (0.84 to 0.98 lb)		POST. Sugarbeet: 2 to 8 true leaves.	

HERBICIDE RESISTANT SUGARBEET

Refer to section listed above for additional herbicides to use in conventional or herbicide resistant sugarbeet.

Roundup Ready Sugarbeet

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs																																																
Sequence (glyphosate & S-metolachlor)	2.5 to 3 pt (0.7 to 0.84 lb + 0.94 to 1.125 lb)	Grass and broadleaf weeds.	POST. Sugarbeet: 2 true leaves to 30 day PHI.	Maximum single rate (2- to 8-leaf sgbt) = 2.5 pt/A on coarse soils and 3 pt/A on medium to fine soils. Maximum single rate (8-leaf to canopy closure) = 2.5 pt/A. Include additional Roundup* as allowed. Seasonal maximum rate = 7 pt/A. Allow a 60 day PHI. M1-2 M4 M15-17																																																
Roundup / generic glyphosate (Use only registered brands)	Maximum single application up to 8-leaf stage = 1.125 lb ae Maximum single application from 8-leaf sugarbeet to canopy closure = 0.75 lb ae See Remarks.	Annual and perennial grass and broadleaf weeds.	POST. Sugarbeet: Emergence to canopy closure. Weeds: 1 to 2 inches tall.	Apply only to Roundup Ready sugarbeet varieties. <table><tr><th></th><th>lb ae/gal</th><th>lb ai/gal</th><th>0.75 lb ae</th><th>0.98 lb ae</th><th>1.125 lb ae</th></tr><tr><td></td><td></td><td></td><td>fl oz/A</td><td></td><td></td></tr><tr><td>3</td><td>= 4</td><td>=</td><td>32</td><td>41</td><td>48</td></tr><tr><td>3.75</td><td>= 5</td><td>=</td><td>25</td><td>33</td><td>38</td></tr><tr><td>4/4.17</td><td>= 5.4/5.1</td><td>=</td><td>24</td><td>31/30</td><td>36/35</td></tr><tr><td>4.5</td><td>= 5.5</td><td>=</td><td>22</td><td>28</td><td>32</td></tr><tr><td>4.72</td><td>= 6.3</td><td>=</td><td>20</td><td>26</td><td>30</td></tr><tr><td>5</td><td>= 6.1</td><td>=</td><td>20</td><td>25</td><td>30</td></tr></table>		lb ae/gal	lb ai/gal	0.75 lb ae	0.98 lb ae	1.125 lb ae				fl oz/A			3	= 4	=	32	41	48	3.75	= 5	=	25	33	38	4/4.17	= 5.4/5.1	=	24	31/30	36/35	4.5	= 5.5	=	22	28	32	4.72	= 6.3	=	20	26	30	5	= 6.1	=	20	25	30
	lb ae/gal	lb ai/gal	0.75 lb ae	0.98 lb ae	1.125 lb ae																																															
			fl oz/A																																																	
3	= 4	=	32	41	48																																															
3.75	= 5	=	25	33	38																																															
4/4.17	= 5.4/5.1	=	24	31/30	36/35																																															
4.5	= 5.5	=	22	28	32																																															
4.72	= 6.3	=	20	26	30																																															
5	= 6.1	=	20	25	30																																															

Additional Remarks and Paragraphs

Max. single app. from sgbt emergence to 8 leaves = **1.125 lb ae**.
Total maximum from sgbt emergence to 8 leaves = **1.96 lb ae**.
Max. single application from 8 lvs to canopy closure = **0.75 lb ae**.
Total maximum from 8 leaves to canopy closure = **1.54 lb ae**.
Total maximum from emergence through harvest = **3.38 lb ae**.
Maximum for year = **6 lb ae**.

Add Stinger* to improve control of volunteer soybean, ragweed, and wild buckwheat.

Add Nortron* to improve control of kochia, lambsquarters, pigweed species, and waterhemp.
Add UpBeet + MSO to improve control of lambsquarters, common mallow, redroot pigweed, common ragweed, and velvetleaf.
Add Betamix* + Nortron* to improve control of waterhemp.
Add Dual Magnum* or Outlook* for residual control of waterhemp.
Add AMS fertilizer at 4 lb/100 gal, or more for hard water.
Refer to labels for restrictions. Allow a 30 day PHI.
A4-7 M1-2 M15-17 X1 Pages: 102-103, 104-105

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


*Or generic equivalent.

POTATO

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

Soil-Applied Herbicides

Eptam (EPTC)	3.5 to 9 pt EC 15 to 30 lb 20G (3 to 6 lb)	Grass and some broadleaf weeds.	PPI, Dragoff, or Directed spray at layby.	Incorporate immediately after application at 4 to 6 inches deep. Poor wild mustard control. Adjust rate for soil type. Allow a 45 day PHI. May be applied with Sencor / generic metribuzin at 0.33 to 0.67 lb DF/A. A1-2 B1 F2 S4
	5.25 to 7 pt EC 22.5 to 30 lb 20G (4.5 to 6 lb)		Fall: Incorporate after October 15 until freeze-up.	
Treflan / generic trifluralin	1 to 2 pt EC 0.8 to 1.7 lb 60DF (0.5 to 1 lb)		Postplant incorporate (PoPI).	Adjust rates for soil type. Poor wild oat and no wild mustard control. Incorporate above the seed piece after planting or immediately following drag-off or hilling but before potato and weed emergence.
Sonalan (ethalfluralin)	1.33 to 2.67 pt (0.5 to 1)			
Prowl Prowl H2O (pendimethalin)	1.75 to 3.6pt 3.3EC 1.57 to 3 pt 3.8ACS (0.72 to 1.5 lb)		PRE or EPOST. Potato: Before 6 inches tall.	Incorporation improves consistency of weed control.
Outlook / generic dimethenamid	16 to 21 fl oz (0.75 to 1 lb)		PRE.	
Dual / generic S/metolachlor	1 to 2 pt (1 to 2 lb)		PPI or PRE.	Only one application allowed. Allow a 40 day PHI. S-metolachlor may give greater weed control than generic metolachlor at equal product rates. Allow a 40 day PHI. Several commercial mixtures are available (Boundary). A1-2 B1 B6 E5 E10 SS4 S7 X1 Y1 Y14 Pages: 102-103, 104-105, 108-110
Lorox / generic linuron 	1.5 to 4 lb DF 1.5 to 4 pt L (0.75 to 2 lb)	Annual grass and broadleaf weeds.	PRE to potato. Small grass and broadleaf weeds.	Seed piece must be planted at least 2 inches deep. Apply after drag-off or hilling. Use higher rates for fine-textured soils. Apply with NIS at 0.25% v/v to emerged weeds. A1-2
Sencor / generic metribuzin	0.33 to 1.33 lb DF 0.5 to 2 pt 4F (0.25 to 1 lb)	Annual broadleaf weeds and grass suppression.	PRE to potato.	Apply after planting and before potato emergence or after drag-off. Do not incorporate. Adjust rate according to soil type. Several commercial mixtures are available (Boundary). E6 N1-3 Y1 Y4 Y13 Pages: 104-105, 108-110
	0.33 to 0.67 lb DF 0.5 to 1 pt 4F (0.25 to 0.5 lb)		POST. Weeds: Up to 1 inch tall.	Only for russet type or white skinned varieties that are not early maturing. Do not use on early maturing, smooth skinned white or red-skinned varieties or Atlantic, Shepody, Chipbelle, Bellchip, or Centennial varieties. Use low rate for pigweed or lambsquarters control. Allow a 60 day PHI. Soil residue may injure crops the following year. E6 N1-2 N4 Y1 Y4 Y13
Chateau (flumioxazin)	1.5 oz (0.77 oz)	Annual broadleaf weed control.	PRE to potato.	Apply after planting and before potato emergence. Seed piece must be planted at least 2 inches deep. Refer to label for use instructions. A1-2 E13 S1 S3-5 S7 S3-4
Reflex (fomesafen)	0.75 pt (0.188 lb)			Apply after planting and before potato emergence. Use is restricted to east of Hwy 281. Do not apply PPI or POST to potato. Allow a 70 day PHI. Refer to label for other restrictions. A1-2 N3 S1 S3-5 S7 S3-4 Y10

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

POTATO

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Matrix / generic rimsulfuron	1 to 1.5 oz DF (0.25 to 0.375 oz)	Annual grass and broadleaf weeds and quackgrass. Suppression of lambsquarters and Canada thistle.	PRE to potato and weeds. After hilling or drag-off but before potato emerge. POST. Potato: Up to 14 inches tall. Annual weeds: Small.	Requires 1 inch water after application for activation. May be applied with Dual, Eptam, Prowl/H2O, and Sencor. Can be applied in two sequential applications of 1 oz/A PRE followed by 1 oz/A POST. Apply to annual weeds less than 1 inch tall. Add NIS at 0.25% v/v or oil adjuvant at 1% v/v. Refer to label for application information and restrictions. A5-7 N1-3 X1 Y3 Y24
Matrix / generic rimsulfuron + Metribuzin	1 to 1.5 oz DF + 0.33 to 0.75 lb DF 0.5 to 1.12 pt 4F (0.25 to 0.375 oz + 0.25 to 0.56 lb) 1 to 1.5 oz DF + 0.25 to 0.67 lb DF 0.38 to 1 pt 4F (0.25 to 0.375 oz + 0.188 to 0.5 lb)	Annual grass and broadleaf weeds including kochia, lambsquarters, wild buckwheat and suppression of quackgrass.	PRE to potato and weeds. After hilling or drag-off but before potato emerge. POST. Potato: Up to 14 inches tall. Annual weeds: Small.	Refer to label for varietal restrictions. Injury may occur when metribuzin is applied POST to early maturing smooth-skinned white and all red-skinned potato varieties - use only the low rate of metribuzin and consider benefits of weed control vs risk of potato injury prior to application to "at risk" varieties. Allow a 60 day PHI. Use the low rate of metribuzin when applied PRE to coarse textured soil. A5-7 E6 N1-3 Y1 Y3-4 Y13 Pages: 102-103, 104-105, 108-110
Poast (sethoxydim)	0.5 to 1.5 pt (0.1 to 0.3 lb)	Annual grasses.	POST. Potato: Refer to PHI.	Add oil adjuvant at 1% v/v but not less than 1.25 pt/A. Oil adjuvant at more than 1 qt/A is not needed. See Select Max label for detailed adjuvant recommendations.
Select / generic clethodim	6 to 8 fl oz (1.5 to 2 oz)	Annual grasses and quackgrass.	Grass weeds: Refer to soybean section on page 26.	May be tank-mixed with metribuzin. Allow a 30 day PHI. A3 A5-6 E2 S2 S6 X1 Pages: 102-103, 104-105
Select Max (clethodim)	9 to 16 fl oz (1.125 to 2 oz)			

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POTATO VINE DESICCATION

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Reglone / generic diquat	1 to 2 pt (0.25 to 0.5 lb)	Desiccant.	Allow a 7 day PHI.	Add NIS at 0.25% v/v. Most active in hot, sunny conditions. Reglone/diquat at 2 pt/A can be applied to all potatoes varieties and seed potato. Sequential application may be made up to a total of 4 pt/A. Allow at least 5 days between applications.
Firestorm (paraquat) RUP	0.7 to 1.35 pt 3SL (0.25 to 0.5 lb)		Allow a 3 day PHI.	Paraquat use is for fresh market potatoes ONLY. Do not use paraquat on potatoes that will be stored or used as seed pieces. B8
Rely 280 (glufosinate)	21 fl oz (0.38 lb)		Allow a 9 day PHI.	Do not apply to potato grown for seed pieces. Best results when applied at the beginning of natural potato vine senescence. Requires thorough coverage. Most active in hot, sunny conditions. Apply in greater than 20 gpa by ground and 5 to 10 gpa by air. Use higher spray volumes on dense potato vines.
Aim (carfentrazone)	3.2 to 5.9 fl oz EW (0.8 to 1.6 oz)		Allow a 7 day PHI.	Add MSO at 1 qt/A. Use sequential applications and higher spray volumes on dense potato vines. Thorough coverage essential. Most active in hot, sunny conditions. B4
Vida (pyraflufen)	2 to 5.5 fl oz EC (0.05 to 0.14 oz)			
Sulfuric acid RUP	20 gal		Allow a 5 day PHI.	Extremely corrosive.

LEGUME FORAGES

Alfalfa or Trefoil Establishment, No Companion Crop

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraph
Refer to page 6 for Fall or Spring Early Preplant Herbicides. Refer to page 47 for additional herbicides to use in conventional or herbicide resistant alfalfa.				
Eptam (EPTC)	2 to 4.5 pt EC 10 to 20 lb 20G (1.75 to 4 lb)	Grass and some broadleaf weeds.	PPI.	Poor wild mustard control. Incorporate immediately after application. The 2 pt/A rate can be used on all varieties. A1-2 B1 B6 E10 F2 P1
Treflan / generic trifluralin	1 to 1.5 pt (0.5 to 0.75 lb)			Alfalfa stand reduction/stunting possible but reduced weed competition will help alfalfa establishment. P1
Prowl H₂O (pendimethalin)	1 to 2 pt EC (0.48 to 0.95 lb)	Annual grass and some broadleaf weed.	PRE to weeds. Alfalfa: <6 inches of regrowth.	Allow a 50 day PHI. Refer to label for use instructions. A1-2 B1 E11 S1 S3-5 S7 S3-4 Y15
Chateau (flumioxazin)	<4 oz / application (<2 oz) <8 oz / season (<4 oz)	Annual broadleaf weed.		Separate sequential Chateau applications by at least 60 days. Apply soon after cutting and removing alfalfa to minimize alfalfa injury. Refer to label for use instructions. A1-2 B1 E11 S1 S3-5 S7 S3-4 Y15
2,4-DB ester 2,4-DB amine	2 to 4 pt 2EC/SL (0.5 to 1 lb ae)	Small broadleaf weeds.	Alfalfa: More than 2 trifoliate leaves. Weeds: <3 inches.	Sweetclover may be killed by 2,4-DB. Poor wild mustard control. No absinth wormwood control. Allow a 60 day PHI or grazing interval. P1
Buctril / generic bromoxynil For Alfalfa Only	1 to 1.5 pt (0.25 to 0.38 lb)		Alfalfa: At least 4 trifoliates. Weeds: Small.	Sweetclover may be killed. Alfalfa injury may occur if temperature within 3 days of application exceeds 80F in the western half or 70F in the eastern half of ND. Can be tank-mixed with Pursuit or Raptor. P1
Pursuit (imazethapyr) For Alfalfa Only	3 to 4 fl oz (0.75 to 1 oz ae)	Annual broadleaf and grass weeds. Poor yellow foxtail, lambsquarters, ragweed, and buckwheat control. No perennial weed control.	Fall or Spring. Alfalfa: At least 2 trifoliates.	Apply to seedling, established, dormant, actively growing alfalfa or between cuttings. Excellent alfalfa safety. Add MSO at 1.25 pt/A + UAN at 1 to 2 qt/A. Can be tank-mixed with Buctril/bromoxynil or Poast. A1 A3 A5-7 E7 E9 P1 X1 Y2 Y17
Raptor (imazamox) For Alfalfa Only	4 to 6 fl oz (0.5 to 0.75 oz ae)		Weeds: 1- to 3-inches tall.	
Poast (sethoxydim)	0.5 to 1.5 pt (0.19 to 0.28 lb)	Annual grasses.	POST. Alfalfa: Allow a 15 days PHI.	May be applied to alfalfa and sainfoin. Add oil adjuvant at 1% v/v but not less than 1.25 pt/A.
Select / generic clethodim	6 to 16 fl oz (1.5 to 4 oz)	Annual grasses and quackgrass.	Grass weeds: See soybean section on page 26.	Oil adjuvant at more than 1 qt/A is not needed. See Select Max label for detailed adjuvant recommendations. A3 A5-6 E2 S2 S6 X1 Pages: 102-103, 104-105
Select Max (clethodim)	9 to 32 fl oz (1.125 to 4 oz)			

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LEGUME FORAGES

Established Alfalfa

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs																																
paraquat RUP	2 to 3 pt 2SL 1.3 to 2 pt 3SL (0.5 to 0.75 lb)	Small annual and early germinating weeds.	Alfalfa: Before spring regrowth is 2 inches tall.	Apply to well established stands, at least 1 year old, after dormancy but before spring regrowth reaches 2 inches. Allow a 60 day PHI or grazing interval. B8 P1																																
	1 pt 2SL 0.7 pt 3SL (0.25 lb)	Larger weeds.	Between cuttings - includes first-year alfalfa.	Apply up to 5 days after cutting. Allow a 30 day PHI. May be applied to dormant alfalfa. B8 P1																																
Treflan / generic trifluralin	1.5 to 2 pt (0.75 to 1 lb)	Annual grass and some broadleaf weed.	Weeds: Prior to emergence.	Apply when crop is dormant, or in fall after a cutting. Incorporate by irrigation or mechanical equipment. P1 X1																																
	20 lb 10G (2 lb)																																			
Prowl H₂O (pendimethalin)	1 to 2 pt EC (0.48 to 0.95 lb)		Weeds: PRE. Alfalfa: 2 to 6 inches of regrowth.	Allow a 50 day PHI. Refer to label for use instructions. A1-2 B1 E11 S1 S3-5 S7 S3-4 Y15																																
2,4-DB ester 2,4-DB amine	2 to 4 pt 2EC/SL (0.5 to 1.0 lb ae)	Broadleaf weeds.	Weeds: Less than 3 inches tall.	Sweet clover may be killed by 2,4-DB. No wild mustard or absinth wormwood control. Allow a 30 day hay, harvest or grazing interval. P1																																
Pursuit (imazethapyr)	3 to 4 fl oz (0.75 to 1 oz ae)	Annual broadleaf and grass weeds.	POST. Alfalfa: At least 2 trifoliates. Weeds: 1- to 3-inches tall.	For Alfalfa Only. Excellent alfalfa safety. Add oil additive at 1.5 to 2 pt/A + UAN at 1 to 2 qt/A. No absinth wormwood control. Can be tank-mixed with bromoxynil or Poast. A1 A3 A5-6 E2 S2 S6 P1 X1																																
Raptor (imazamox)	4 to 6 fl oz (0.5 to 0.75 oz ae)																																			
Poast (sethoxydim)	0.5 to 1.5 pt (0.2 to 0.3 lb)	Annual grasses.	Grass. Alfalfa: Allow a 15 day PHI.	Add oil adjuvant at 1% v/v but not less than 1 pt/A. Oil adjuvant at more than 1 qt/A is not needed. See Select Max label for detailed adjuvant recommendations. Apply in two sequential applications for quackgrass control. A3-7 B2 P1 X1 Pages: 102-103, 104-105																																
Select / generic clethodim	6 to 8 fl oz (1.5 to 2 oz)	Annual grasses and quackgrass.	Grass weeds: Refer to soybean section on page 26.																																	
Select Max (clethodim)	9 to 16 fl oz (1.125 to 2 oz)																																			
Roundup / generic glyphosate	0.75 to 1.5 lb ae See Remarks.	Alfalfa and emerged grass and broadleaf weeds.	Apply in spring or fall for quackgrass control.	<table><tr><th></th><th><u>0.75 lb ae</u></th><th><u>1.125 lb ae</u></th><th><u>1.5 lb ae</u></th></tr><tr><td><u>lb ae/gal</u></td><td><u>lb ai/gal</u></td><td colspan="2"><u>fl oz</u></td></tr><tr><td>3</td><td>= 4</td><td>= 32</td><td>48 64</td></tr><tr><td>3.75</td><td>= 5</td><td>= 26</td><td>38 52</td></tr><tr><td>4/4.17</td><td>= 5.4/5.1</td><td>= 24</td><td>36 48</td></tr><tr><td>4.5</td><td>= 5.5</td><td>= 22</td><td>32 44</td></tr><tr><td>4.72</td><td>= 6.3</td><td>= 20</td><td>30 40</td></tr><tr><td>5</td><td>= 6.1</td><td>= 19</td><td>29 38</td></tr></table> <p>Apply where crop destruction is acceptable. Treated crop and weeds can be harvested and fed 36 hours or longer after treatment. Apply with AMS fertilizer. Refer to label for adjuvant use. A3-7 B2 X1. Pages: 102-103, 104-105.</p>		<u>0.75 lb ae</u>	<u>1.125 lb ae</u>	<u>1.5 lb ae</u>	<u>lb ae/gal</u>	<u>lb ai/gal</u>	<u>fl oz</u>		3	= 4	= 32	48 64	3.75	= 5	= 26	38 52	4/4.17	= 5.4/5.1	= 24	36 48	4.5	= 5.5	= 22	32 44	4.72	= 6.3	= 20	30 40	5	= 6.1	= 19	29 38
	<u>0.75 lb ae</u>	<u>1.125 lb ae</u>	<u>1.5 lb ae</u>																																	
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3	= 4	= 32	48 64																																	
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4.72	= 6.3	= 20	30 40																																	
5	= 6.1	= 19	29 38																																	

HERBICIDE RESISTANT ALFALFA

Refer to page 46 for additional herbicides to use in conventional or herbicide resistant alfalfa.

Roundup Ready Alfalfa - Established

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Roundup / generic glyphosate	Up to 1.5 lb ae See Remarks.	Emerged annual and perennial grass and broadleaf weeds.	RR Alfalfa: Emergence to 5 days prior to any cutting (PHI). Apply as a single application or multiple applications at least 7 days apart.	Apply only to glyphosate resistant alfalfa. Add AMS fertilizer at 4 lb/100 gal, or more for hard water. Multiple applications may be necessary to control weed flushes. Drift and off-site movement may cause injury or death to other plants and crops. Refer to label for weeds controlled, application information, adjuvant use, tankmix options with residual herbicides, and restrictions. A3-7 B2 P1 X1 Pages: 102-103, 104-105

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