

## TABLE 4A – Weed Response to Herbicides in Forage Legumes\*

	SITE OF ACTION	CROP TOLERANCE**	ANNUAL BROADLEAVES													ANNUAL GRASSES						PERENNIALS						
			COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. Black)	PIGWEEED (Redroot)	RAGWEEED (COMMON)	SMARTWEEED	VELVETLEAF	WILD MUSTARD	HOARY ALYSSUM	YELLOW ROCKET	CHICKWEEED (Common)	HENBIT/DEADNETTLE	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	BINDWEEED (FIELD)	CANADA THISTLE	QUACKGRASS	YELLOW NUTSEEDGE	DANDELION	CURLY DOCK
<b>Seedling Legumes</b>																												
2,4-DB	4	2	P	P	G	F	G	F	P	F	F	F	F	P	F	N	N	N	N	N	N	N	P	P	N	N	N	F
BUCTRIL/MOXY	6	3	G	G	E	G	F	G	G	G	F	F	F	P	G	N	N	N	N	N	N	N	P	P	N	N	P	P
EPTAM	15	2	P	P	G	P	F	F	F	F	F	F	F	F	F	F	F	P	F	F	P	P	N	N	F	P	N	P
KERB	3	1	P	P	P	P	P	P	P	P	P	P	P	G	G	F	F	P	F	F	P	P	N	N	G	N	N	P
POAST/POAST PLUS	1	1	N	N	N	N	N	N	N	N	N	N	N	N	N	F	G	E	F	F	F	F	N	N	F	N	N	N
PROWL H <sub>2</sub> O	3	2	N	N	G	P	F	P	P	F	P	N	P	P	P	G	G	G	G	G	G	G	N	N	N	N	N	N
PURSUIT	2	2	F	F	P	E	E	F	G	G	G	-	G	G	F	F	F	G	G	G	F	F	P	P	N	F	P	P
RAPTOR	2	2	G	G	G	E	E	F	G	G	E	-	G	G	P	F	F	E	G	G	F	F	P	F	P	P	-	-
SELECT MAX/SELECT/ARROW	1	1	N	N	N	N	N	N	N	N	N	N	N	N	N	F	G	E	F	F	F	F	N	N	G	N	N	N
WARRANT	15	2	P	N	F	G	G	F	P	P	P	N	N	N	G	F	F	F	F	F	F	F	N	N	N	F	N	N
<b>Established Alfalfa</b>																												
CHATEAU SW/EZ	14	2	P	F	E	E	E	G	F	F	G	-	N	E	E	N	N	P	P	P	N	N	N	N	N	P	N	N
METRIBUZIN	5	3	F	G	E	N	E	E	E	E	E	E	E	E	E	G	G	G	E	F	G	G	N	N	P	P	G	P
SINBAR	5	3	G	G	G	G	G	G	G	G	G	G	E	E	E	G	G	G	G	G	G	G	P	F	F	P	F	P
VELPAR	5	3	G	G	E	F	E	E	E	G	E	E	E	E	E	G	G	E	E	E	E	E	F	F	F	F	E	P
<b>Glyphosate-Resistant Alfalfa</b>																												
EXTREME	2/9	2	F	F	F	F	F	F	G	G	E	G	E	E	F	F	F	F	F	F	F	F	G	G	E	F	F	F
GLYPHOSATE	9	1	F	F	F	F	F	F	G	G	E	G	E	E	G	F	F	F	F	F	F	F	G	G	E	F	G	F

## TABLE 4B – Weed Response to Herbicides in Established Forage Grasses\*

	SITE OF ACTION	CROP TOLERANCE**	ANNUAL BROADLEAVES													ANNUAL GRASSES						PERENNIALS						
			COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. Black)	PIGWEEED (Redroot)	RAGWEEED (COMMON)	SMARTWEEED	VELVETLEAF	WILD MUSTARD	HOARY ALYSSUM	YELLOW ROCKET	CHICKWEEED (Common)	HENBIT/DEADNETTLE	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	BINDWEEED (FIELD)	CANADA THISTLE	QUACKGRASS	YELLOW NUTSEEDGE	DANDELION	CURLY DOCK
2,4-D ESTER	4	2	G	F	G	G	G	G	F	G	G	G	G	P	F	N	N	N	N	N	N	N	F	F	N	N	G	P
BANVEL/CLARITY	4	2	G	G	G	G	G	G	G	G	G	G	G	F	P	N	N	N	N	N	N	N	G	F	N	N	G	F
2,4-D + BANVEL	4/4	2	G	G	G	G	G	G	G	G	G	G	G	F	P	N	N	N	N	N	N	N	G	F	N	N	G	F
CIMARRON PLUS	2/2	3	E	-	E	E	E	E	E	-	E	E	-	E	E	N	N	N	N	N	N	N	-	G	N	N	E	E
CROSSBOW	4/4	3	E	-	E	E	E	E	G	-	E	-	-	E	E	N	N	N	N	N	N	N	-	G	N	N	E	E
GRAZONNEXT HL	4/4	3	G	F	G	G	G	E	E	G	G	-	G	F	F	N	N	N	N	N	N	N	F	E	N	N	F	E
MILESTONE	4	3	G	-	G	-	G	E	E	-	P	-	P	F	F	N	N	N	N	N	N	N	-	E	N	N	P	E
STINGER	4	2	F	G	P	P	P	G	F	P	P	P	P	P	P	N	N	N	N	N	N	N	P	G	N	N	F	P

Herbicide Site of Action: The site of action key is located on pages 15-16.

Herbicide Effectiveness: P = Poor; F = Fair; G = Good; E = Excellent; N = None; - = Not enough information to rank

\* The above ratings are a relative comparison of herbicide effectiveness. Weather conditions greatly influence the herbicide's effectiveness, and weed control may be better under favorable conditions or poorer under unfavorable conditions.

\*\* Crop Tolerance: 1=Minimal risk of crop injury; 2=Crop injury can occur under certain conditions (cold, wet); 3=Severe crop injury can occur. Follow precautions under Remarks and Limitations and on the label; 4=Risk of severe crop injury is high.

## TABLE 4C – Forage Herbicides – Remarks and Limitations

### Direct-Drilled Forage Legumes (No-Till)

***(fall or spring seedings following soybeans, corn or dry edible beans)***

In general, the major benefits of weed control in new alfalfa seedings are improved forage quality in the first harvest and insurance against stand loss from intense weed competition. In conventional tillage, weeds present at planting are killed by tillage during final seedbed preparation. With direct seeding (no-till), vegetation control is accomplished before planting with burndown herbicides such as paraquat (*Gramoxone*) or glyphosate. The required application rate varies, depending on weed species and size. Refer to the product labels for details. *Gramoxone* provides faster kill. Glyphosate is preferred if perennial weeds are present, but fields with serious perennial weed problems should not be direct drilled with a forage legume. Perennial weeds should be controlled in the previous crop or in the fall prior to a spring seeding. Herbicide options in the fall include glyphosate, 2,4-D ester, or a combination of glyphosate plus 2,4-D amine. Do not apply 2,4-D in the spring prior to spring planting.

The need for a burndown herbicide depends on the presence of weeds at planting time. If no weeds are present, a burndown herbicide is not needed. However, a burndown herbicide will improve first-harvest forage quality if weeds are present at planting time, regardless of species or size.

Herbicides applied after crop emergence are not affected by the tillage system used. All of the herbicides listed for postemergence application can be used in all tillage systems including direct drilling.

### Forage Legumes – Preplant Incorporated Only

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses	EPTC ( <i>Eptam</i> )	3	3.5 pt 7EC	<ul style="list-style-type: none"> <li>• <b>Apply preplant incorporated only.</b></li> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply prior to planting <b>alfalfa, birdsfoot trefoil, or clover</b> not seeded with a grass or small grain companion crop.</li> <li>• Work into soil immediately after application.</li> <li>• Seed may be planted immediately after application.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

### Forage Legumes – Postemergence

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses	pendimethalin ( <i>Prowl H<sub>2</sub>O</i> )	0.95	2 pt 3.8SC	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply to <b>seedling or established alfalfa</b> not seeded with a grass or small grain companion crop.</li> <li>• Apply to seedling alfalfa at 2 pt/A once alfalfa has reached the second trifoliolate.</li> <li>• Apply to established alfalfa at 3 pt/A after cutting or mowing in the fall or spring.</li> <li>• All applications need to be made prior to weed emergence – <i>Prowl H<sub>2</sub>O</i> will not control emerged weeds.</li> <li>• Applications may cause some stunting and chlorosis.</li> <li>• DO NOT apply more than 4.2 qt/A per season.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

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## Forage Legumes – Postemergence (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
<b>Annual grasses</b>	acetochlor ( <i>Warrant</i> )	1.5	2 qt 3L	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply to <b>seedling</b> or <b>established alfalfa</b>.</li> <li>• <i>Warrant</i> provides residual control of annual weeds in seedling and established alfalfa. Does not control emerged weeds.</li> <li>• <i>Warrant</i> use rates are based on soil texture and organic matter. Use rates range from 1.25 to 2 qt/A.</li> <li>• Apply to seedling alfalfa planted in the fall or spring up to or at the fourth trifoliolate. After either the first or second cutting in the seeding year, but no later than 7 days after the cutting, a sequential application may be made at 1.25 to 2 qt/a.</li> <li>• Apply to established alfalfa after spring green-up. Applications of this product may be made between cuttings, and no later than 7 days after a cutting.</li> <li>• DO NOT apply acetochlor within 50 feet of any well where the depth to groundwater is 30 feet or less: sands with less than 3% organic matter, loamy sands with less than 2% organic matter, or sandy loams with less than 1% organic matter.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
<b>Annual grasses</b> <b>Perennial grasses</b> <b>Volunteer cereals</b>	sethoxydim ( <i>Poast</i> ) OR ( <i>Poast Plus</i> ) + crop oil concentrate	0.19	1 pt 1.5SC  OR 1.5 pt 1SC + 1 qt	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply to <b>seedling</b> or <b>established alfalfa, birdsfoot trefoil, or clover</b> not seeded with a grass or small grain companion crop.</li> <li>• Apply to grasses up to 8 inches tall (crabgrass up to 6 inches).</li> <li>• <i>Poast</i> at 0.75 pt/A or <i>Poast Plus</i> at 1.125 pt/A will control 1 to 4 inch tall barnyardgrass, green and giant foxtails, and fall panicum.</li> <li>• Volunteer cereals need to be treated before tillering (up to 4 inches tall).</li> <li>• Apply <i>Poast</i> at 1.5 pt/A or <i>Poast Plus</i> at 2.25 pt/A for perennial grass weed control.</li> <li>• The addition of ammonium sulfate (2.5 lb/A) has been shown to improve control of difficult weeds – e.g., crabgrass and quackgrass.</li> <li>• DO NOT apply more than 6.5 pt/A per season of <i>Poast</i> or 9.75 pt/A per season of <i>Poast Plus</i>.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

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## Forage Legumes – Postemergence (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual grasses</b> <b>Perennial grasses</b> <b>Volunteer cereals</b>	clethodim <i>(Select Max)</i> OR <i>(Select/Arrow)</i> + crop oil concentrate	0.068   0.094	9 oz 0.97EC  OR 6 oz 2EC + 1%	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply to <b>seedling</b> or <b>established alfalfa, birdsfoot trefoil, or clover</b> not seeded with a grass or small grain companion crop.</li> <li>• Apply to grasses up to 8 inches tall (crabgrass up to 6 inches).</li> <li>• <i>Select Max</i> at 6 oz/A or <i>Select/Arrow</i> at 4 oz/A will control 1 to 4 inch tall barnyardgrass, green and giant foxtails, and fall panicum.</li> <li>• Volunteer cereals need to be treated between 2 to 6 inches tall.</li> <li>• Apply <i>Select Max</i> from 12 to 32 oz/A or <i>Select/Arrow</i> from 9 to 16 oz/A for perennial grass weed control.</li> <li>• The addition of ammonium sulfate (2.5 to 4 lb/A) has been shown to improve control of difficult weeds – e.g., quackgrass, Johnsongrass, and volunteer cereals.</li> <li>• There is more adjuvant flexibility with <i>Select Max</i> tank-mixtures. Consult label.</li> <li>• DO NOT apply more than 64 oz/A per season of <i>Select Max</i> or 64 oz/A per season of <i>Select/Arrow</i>.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
<b>Annual broadleaves</b>	2,4-DB <i>(Butyrac 200, others)</i>	1	2 qt 2L	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply to <b>seedling</b> and <b>established alfalfa</b>, or <b>seedling birdsfoot trefoil</b>.</li> <li>• DO NOT apply to clover.</li> <li>• Apply postemergence when legume seedlings are at or beyond the 1 to 2 trifoliate stage.</li> <li>• To control hoary alyssum 2,4-DB should be applied to seedlings in the 2 to 4 leaf stage.</li> <li>• DO NOT apply when crop is under stress.</li> <li>• DO NOT spray when temperatures are expected to exceed 90° F within 3 days of application or if temperatures are expected to be below 40° F.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	bromoxynil <i>(Buctril/Moxy, others)</i>	0.25	1 pt 2L	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply postemergence to <b>seedling</b> or <b>established alfalfa</b> when the majority of the field has 4 trifoliates.</li> <li>• DO NOT apply to birdsfoot trefoil or clover.</li> <li>• Can be applied to alfalfa companion seeded with small grains.</li> <li>• Temporary crop leaf burn occurs after application – burn is enhanced under warm, humid conditions.</li> <li>• DO NOT spray when temperatures are expected to exceed 70° F within 3 days of application – can result in unacceptable crop injury.</li> <li>• DO NOT apply more than 2 pt/A per season.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

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## Forage Legumes – Postemergence (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Annual broadleaves	flumioxazin (Chateau SW) OR (Chateau EZ)	0.13	4 oz 51WG OR 4 oz 41.4SC	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• <i>Chateau SW/EZ</i> provides residual control of annual broad-leaf weeds in established alfalfa. Does not control emerged weeds.</li> <li>• Applications can be made to dormant alfalfa or anytime in the spring prior to 6 inches of alfalfa regrowth or between cuttings (&lt;6 inches regrowth).</li> <li>• DO NOT use on mixed alfalfa-grass stands.</li> <li>• DO NOT apply with adjuvants or mix with products formulated as emulsifiable concentrates (EC), unless applying after the last alfalfa cutting for the year.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Seed corn, oats, barley, rye, dry beans, sugar beets, potatoes, cucumbers, and tomatoes may be planted after 6 months if ground is tilled prior to planting or 12 months if no tillage is performed. Successful soil bioassay must be performed prior to planting these crops.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	imazethapyr (Pursuit) + surfactant + ammonium sulfate	0.063	4 oz 2L + 0.25% + 2.5 lb	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply postemergence to <b>seedling</b> or <b>established alfalfa</b>, <b>birdsfoot trefoil</b>, or <b>clover</b> not seeded with a grass or small grain companion crop.</li> <li>• Apply postemergence when legume seedlings are at or beyond the 2 trifoliolate stage and weeds are 1 to 3 inches.</li> <li>• Apply to established alfalfa or clover after cutting or mowing in the fall or spring.</li> <li>• Applications can cause a temporary reduction in growth.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	imazamox (Raptor) + crop oil concentrate + ammonium sulfate	0.031	4 oz 1L + 1% + 2.5 lb	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply postemergence to <b>seedling</b> or <b>established alfalfa</b> not seeded with a grass or small grain companion crop.</li> <li>• DO NOT apply to birdsfoot trefoil.</li> <li>• Apply postemergence when legume seedlings are at or beyond the 2 trifoliolate stage and weeds are 1 to 3 inches.</li> <li>• Apply to established alfalfa or clover after cutting or mowing in the fall or spring.</li> <li>• Increase the rate to 6 oz/A for more effective control of giant foxtail, Pennsylvania smartweed, henbit, and common purslane.</li> <li>• Applications can cause a temporary reduction in growth.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

## Forage Legumes – Dormant Applications

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses Annual broadleaves	pronamide (Kerb)	0.75	1.5 lb 50WG	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply in the fall or winter to <b>seedling</b> or <b>established alfalfa, birdsfoot trefoil, or clover</b> not seeded with a grass or small grain companion crop.</li> <li>• Apply after soil temperatures drop below 55° F, but before soil freeze-up.</li> <li>• Apply 3 lb/A for quackgrass control.</li> <li>• DO NOT apply more than 4 lb/A per season.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	metribuzin (Metribuzin)	0.5	0.67 lb 75DF	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply to <b>established alfalfa</b> only (one year or more).</li> <li>• Can be used on mixed alfalfa-grass stands.</li> <li>• Apply to <b>dormant alfalfa</b> in late fall or early spring.</li> <li>• Increase the rate to 1.3 lb/A for control of dandelion.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	terbacil (Sinbar)	1	1.25 lb 80WG	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply to <b>established alfalfa</b> only (one year or more).</li> <li>• Apply to <b>dormant alfalfa</b> in late fall or early spring.</li> <li>• DO NOT use on mixed alfalfa-grass stands.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	hexazinone (Velpar)	0.5	0.67 lb 75DF	<ul style="list-style-type: none"> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Apply to <b>established alfalfa</b> only (one year or more).</li> <li>• Apply to <b>dormant alfalfa</b> in late fall or early spring for greatest crop safety.</li> <li>• Can be applied in the spring before new growth exceeds 2 inches in height or to alfalfa stubble after cutting and before regrowth exceeds 2 inches – severe injury can occur if alfalfa regrowth is more than 2 inches.</li> <li>• DO NOT use on mixed alfalfa-grass stands.</li> <li>• Increase the rate to 1.3 lb/A for control of dandelion.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

## Table 4D - Weed Control in Roundup Ready (Glyphosate-Resistant) Alfalfa

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses Annual broadleaves Perennials	glyphosate + ammonium sulfate	0.75 a.e.	See Table 10 + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• <b>APPLY TO ROUNDUP READY ALFALFA ONLY.</b></li> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• Many glyphosate products are registered for application to Roundup Ready alfalfa. Read the label and see Table 10 to determine application rates and additives needed for different products.</li> <li>• <i>Establishment:</i> Apply 0.75 lb a.e. to alfalfa before the 4 trifoliolate stage of growth to eliminate seedlings not containing the glyphosate-resistant gene.</li> <li>• Most effective before first cutting to eliminate weeds and allow establishment of a pure alfalfa stand. Second applications in the establishment year are generally not needed.</li> <li>• <i>Established alfalfa:</i> Glyphosate applications are generally not needed in established alfalfa. However, if needed glyphosate can be applied after cutting to newly emerged weeds but before alfalfa regrowth interferes with spray coverage.</li> <li>• Apply 1.5 lb a.e./A of glyphosate for henbit control.</li> <li>• DO NOT exceed 1.5 lb a.e./A in a single application or 4.5 lb a.e./A per season.</li> <li>• Refer to Table 4F for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	glyphosate + imazethapyr <i>(Extreme)</i> + surfactant + ammonium sulfate	0.81	3 pt 2.17L  + 0.25% v/v + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• <b>APPLY TO ROUNDUP READY ALFALFA ONLY.</b></li> <li>• Refer to Table 4A for weed control and crop tolerance ratings.</li> <li>• <i>Extreme</i> at 3 pt/A contains 1.5 pt of glyphosate 3L and 4 oz/A of <i>Pursuit</i>.</li> <li>• Apply to alfalfa at the second trifoliolate stage or larger and when weed are 1-3 inches tall.</li> <li>• <i>Extreme</i> can be applied at rates ranging from 2.2-4.4 pts/A.</li> <li>• <i>Establishment:</i> Apply 3 pt/A to alfalfa before the 4 trifoliolate growth stage to eliminate seedlings not containing the glyphosate-resistant gene.</li> <li>• <i>Established alfalfa:</i> <i>Extreme</i> can be applied in the fall, in the spring to dormant or semi-dormant alfalfa, or between cuttings before alfalfa regrowth interferes with spray coverage.</li> <li>• DO NOT apply more than 3 pts/A of <i>Extreme</i> during the last year of the stand.</li> <li>• DO NOT feed, graze, or harvest Roundup Ready alfalfa for 30 days following application. Refer to Table 4F.</li> <li>• DO NOT replant alfalfa for 4 months following an <i>Extreme</i> application.</li> <li>• <i>Extreme</i> is very persistent and can limit rotational crops. Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

## Table 4E - Weed Control in Grass Pastures

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves Perennial broadleaves	2,4-D ester	1	1 qt 4L	<ul style="list-style-type: none"> <li>• Refer to Table 4B for weed control and crop tolerance ratings.</li> <li>• Use only on established stands of perennial grasses.</li> <li>• Can be applied up to 2 qt/A for moderately susceptible biennial and perennial broadleaf weeds.</li> <li>• Caution should be taken to avoid off-target movement.</li> <li>• DO NOT make more than 2 applications per year.</li> <li>• Refer to Table 4G for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	dicamba (Banvel/Clarity)	1	1 qt 4L	<ul style="list-style-type: none"> <li>• Refer to Table 4B for weed control and crop tolerance ratings.</li> <li>• Use on established stands of perennial grasses.</li> <li>• Can be applied up to 1 qt/A for moderately susceptible biennial and perennial broadleaf weeds.</li> <li>• Treat biennials weeds in the rosette stage.</li> <li>• Caution should be taken to avoid off-target movement.</li> <li>• DO NOT exceed 2 qt/A per year.</li> <li>• Refer to Table 4G for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	2,4-D ester + dicamba (Banvel, Clarity)	0.75 + 0.25	1.5 pt 4L + 0.5 pt 4L	<ul style="list-style-type: none"> <li>• Refer to Table 4B for weed control and crop tolerance ratings.</li> <li>• Use on established stands of perennial grasses.</li> <li>• Caution should be taken to avoid off-target movement.</li> <li>• Refer to Table 4G for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	metsulfuron-methyl + chlorsulfuron (Cimarron Plus) + surfactant	0.01	0.25 oz 63WG + 0.125%	<ul style="list-style-type: none"> <li>• Refer to Table 4B for weed control and crop tolerance ratings.</li> <li>• Use on established stands of perennial grasses.</li> <li>• DO NOT use on timothy pastures.</li> <li>• <i>Cimarron Plus</i> may temporarily stunt fescue and cause it to turn yellow.</li> <li>• Make applications in the spring after new growth is 5 to 6 inches tall, or in the fall.</li> <li>• DO NOT exceed 0.5 oz/A per year.</li> <li>• Refer to Table 4G for harvest restrictions.</li> <li>• <i>Cimarron Plus</i> has extensive residual activity consult label for pasture renovation and recropping restrictions.</li> </ul>
	2,4-D ester + triclopyr (Crossbow)	1.5	2 qt 3L	<ul style="list-style-type: none"> <li>• Refer to Table 4B for weed control and crop tolerance ratings.</li> <li>• Use on established stands of perennial grasses.</li> <li>• Make applications when brush and broadleaf weeds are actively growing.</li> <li>• Caution should be taken to avoid off-target movement.</li> <li>• DO NOT make more than one application per year.</li> <li>• Refer to Table 4G for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

*(Continued on next page)*



## Table 4E - Weed Control in Grass Pastures *(continued)*

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual broadleaves</b> <b>Perennial broadleaves</b>	aminopyralid + 2,4-D <i>(GrazonNext HL)</i> + surfactant	0.156	1.5 pt 3.74L  + 0.25%	<ul style="list-style-type: none"> <li>• Refer to Table 4B for weed control and crop tolerance ratings.</li> <li>• Can be applied after perennial grasses are well established.</li> <li>• Make applications when broadleaf weeds are actively growing.</li> <li>• Caution should be taken to avoid off-target movement.</li> <li>• DO NOT use aminopyralid-treated plant residues or manure from animals that have grazed aminopyralid-treated areas for compost or mulch for sensitive broadleaf plants – conduct a bioassay.</li> <li>• DO NOT apply more than 2.1 pt/A per year.</li> <li>• Refer to Table 4G for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	aminopyralid <i>(Milestone)</i> + surfactant	0.156	5 oz 2L  + 0.25%	<ul style="list-style-type: none"> <li>• Refer to Table 4B for weed control and crop tolerance ratings.</li> <li>• Can be applied after perennial grasses are well established.</li> <li>• Make applications when broadleaf weeds are actively growing.</li> <li>• Caution should be taken to avoid off-target movement.</li> <li>• DO NOT use aminopyralid-treated plant residues or manure from animals that have grazed aminopyralid-treated areas for compost or mulch for sensitive broadleaf plants – conduct a bioassay.</li> <li>• DO NOT apply more than 7 oz/A per year.</li> <li>• Refer to Table 4G for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	clopypalid <i>(Stinger)</i>	0.19	0.5 pt 3SL	<ul style="list-style-type: none"> <li>• Refer to Table 4B for weed control and crop tolerance ratings.</li> <li>• Can be applied after perennial grasses are well established.</li> <li>• Make applications when broadleaf weeds are actively growing.</li> <li>• Caution should be taken to avoid off-target movement.</li> <li>• DO NOT use clopypalid-treated plant residues or manure from animals that have grazed clopypalid-treated areas for compost or mulch for sensitive broadleaf plants – conduct a bioassay.</li> <li>• Refer to Table 4G for harvest restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

## TABLE 4F — Harvest Restrictions for Forage Legume Herbicides

Herbicide	Restrictions
<i>2,4-DB</i>	Do not graze established alfalfa or feed straw or hay from treated crops to livestock within 30 days after application. Do not graze or feed seedling alfalfa, clover or birdsfoot trefoil within 60 days after application.
<i>Buctril, Moxy</i>	Do not cut for feed or graze spring-treated alfalfa within 30 days following treatment. Do not cut for feed or graze fall or winter treated alfalfa until spring, at least 60 days after treatment.
<i>Chateau SW/EZ</i>	Do not graze or harvest within 25 days after application.
<i>Eptam</i>	None for preplant application.
<i>Kerb</i>	Do not graze or harvest for forage or dehydration within 120 days of application.
<i>Metribuzin</i>	Do not graze or harvest within 28 days after application.
<i>Poast, Poast Plus</i>	Do not apply within 7 days of feeding, grazing or harvesting for (undried) forage, or within 14 days of feeding or harvesting for (dry) hay.
<i>Prowl H<sub>2</sub>O</i>	Do not apply within 28 days of harvesting alfalfa forage.
<i>Pursuit</i>	Do not feed, graze or harvest alfalfa for 30 days following application.
<i>Raptor</i>	There should be an interval of at least 20 days between application and cutting or feeding alfalfa forage or hay.
<i>Select, Select Max, Arrow</i>	Do not apply within 15 days of grazing, feeding or harvesting (cutting) alfalfa for hay or forage.
<i>Sinbar</i>	None.
<i>Velpar</i>	Do not graze or feed forage or hay to livestock within 30 days after application.
<i>Warrant</i>	Do not graze or harvest within 20 days after application.
<b>Glyphosate-Resistant Alfalfa</b>	
<i>Extreme</i>	Do not feed, graze, or harvest Roundup Ready alfalfa for 30 days following application.
<i>Glyphosate</i>	Do not harvest or graze alfalfa for a minimum of 5 days following application.

## TABLE 4G — Harvest Restrictions for Forage Grass Herbicides

Herbicide	Restrictions
<i>2,4-D</i>	Do not graze animals on treated areas within 7 days after treatment. Do not permit dairy animals or meat animals being finished for slaughter to forage treated fields within 3 days of slaughter. Do not cut grass for hay within 30 days after application.
<i>Banvel/Clarity</i>	Animals cannot be removed from treated area for slaughter prior to 30 days after last application. There is no waiting period between treatment and grazing for non-lactating animals. Timing restriction for lactating dairy animals following treatment: up to 1 pt/A—7 days before grazing, 37 days before hay harvest; up to 1 qt/A—21 days before grazing, 51 days before hay harvest. See label for details.
<i>Cimarron Plus</i>	None.
<i>Crossbow</i>	Do not apply within 14 days of harvesting hay.
<i>GrazonNext HL</i>	Do not graze or harvest hay within 7 days of application. See remarks and limitations section on residue and manure management.
<i>Milestone</i>	None. See remarks and limitations section on residue and manure management.
<i>Stinger</i>	None. See remarks and limitations section on residue and manure management.