

FORAGE HERBICIDE

Quick Reference Guide

This guide serves as a quick reference for many pasture herbicides however, it is not comprehensive of all available herbicide products. There are generic herbicide options for many of the products listed below and it is important to pay attention to the active ingredients on the product label. The cost per acre in Table 1 is an **estimate**, as herbicide prices can vary widely depending on location, container size, and use of generic products. Always read and follow label instructions.

A few tips to make your herbicide application more effective:

- CORRECTLY IDENTIFY THE TARGET WEEDS.** Correct identification is a crucial step in herbicide selection. If you are unsure of the species, you can use a plant identification app such as PlantNet or Seek by iNaturalist, or contact your county agent. For best results, take pictures in the shade or on an overcast day to avoid shadows. Take a picture of the whole plant and close-ups of flowers or seedheads, roots, leaves, and stems, making sure the photos are in focus.
- APPLY AT THE RIGHT TIME.** One of the biggest mistakes producers make is spraying at the wrong time, often too late. It is much easier to kill 2-to-4-inch pigweed versus 18-to-24-inch pigweed. Spray biennial weeds like thistle in the rosette stage of growth before they begin to flower. The optimum time for controlling perennials is in the fall. Do not apply herbicides to drought stressed weeds or when temperatures are below 40°F.
- CALIBRATE.** Calibrating ensures you are applying the correct amount of product per acre to effectively control your weeds and are getting the most of your herbicide investment. If using a boomless sprayer, select a swath width to achieve uniform coverage. Actual swath width is almost always less than what is stated by the nozzle manufacturer. See FSA2212 [Calibrating Boom Sprayers](#) or FSA2197 [Calibrating Single Nozzle Boom-less Sprayers](#) for more information on sprayer calibration.
- USE A SURFACTANT.** Surfactants improve coverage and herbicide penetration into the plant for postemergence herbicides, making your application more effective. The label will indicate which type of surfactant (nonionic, crop oil concentrate, or methylated seed oil) to add to the spray mix. Some herbicides will produce a lot of foam during mixing, the use of a de-foaming agent will eliminate this problem.
- TOUGH WEEDS WILL REQUIRE MULTIPLE APPLICATIONS.** Perennial weeds such as horsenettle or blackberry will not be controlled with a single herbicide application. Reapply herbicides when regrowth appears. Difficult weeds will often need several herbicide applications across multiple years for complete control.

TABLE 1. FORAGE HERBICIDE QUICK REFERENCE GUIDE

HERBICIDE ACTIVE INGREDIENT(S)	PRODUCT RATE/ACRE	EST. COST/ ACRE	HAY OR GRAZING RESTRICTIONS	COMMENTS AND PRECAUTIONS
PREEMERGENCE				
Prowl H2O <i>pendimethalin</i>	2 – 3 qt	\$27 – \$40	No hay or grazing restrictions in warm-season grasses	Needs ¼ to ½" rainfall within 7 days of application for activation. Tank mix with glyphosate and/or metsulfuron for control of existing weeds in dormant bermudagrass. Apply in February for summer annual weed control.
Rezilon <i>indaziflam</i>	3 fl oz	\$35	Hay: Wait 40 days to harvest if applying >3 fl oz/A in an application. Grazing: None	Use only in established hay fields. Fall applications are recommended for annual ryegrass control. Do not apply after mid-February. Label allows up to 5 fl oz/A in an application, however rates higher than 3 fl oz/A are not recommended.
POSTEMERGENCE				
ROUNDUP, OTHERS <i>glyphosate</i>	8 – 32 fl oz	\$5 – \$12	Check label as restrictions vary depending on product used and rate applied	Non-selective. When making applications to dormant bermudagrass, use 16 to 32 fl oz/A. Tank mix with metsulfuron at 0.3 to 0.5 oz/A for improved winter weed control.
PATRIOT <i>metsulfuron</i>	0.1 – 1 oz	\$1 – \$4	No hay or grazing restrictions	Improves broadleaf weed control when tank mixed with auxin herbicides. Weak on thistle and ragweed species. Do not use on tall fescue, ryegrass, or bahiagrass.
OUTRIDER 75DF <i>sulfosulfuron</i>	1.33 oz	\$23	No hay or grazing restrictions	Controls johnsongrass (18" to 24" tall) and some sedges. For optimal control, wait 14 days after application to cut hay or graze. Do not use on tall fescue.
PANORAMIC 2SL <i>imazapic</i>	6 fl oz	\$6	Hay: Wait 7 days after application to harvest Grazing: None	Best option for sandbur control. Will suppress bermudagrass for 30 to 45 days, plan on losing one hay cutting. Jiggs is more sensitive than other bermudagrass varieties.

TABLE 1. FORAGE HERBICIDE QUICK REFERENCE GUIDE (CONTINUED)

HERBICIDE ACTIVE INGREDIENT(S)	PRODUCT RATE/ACRE	EST. COST/ ACRE	HAY OR GRAZING RESTRICTIONS	COMMENTS AND PRECAUTIONS
POSTEMERGENCE (CONTINUED)				
PASTORA <i>nicosulfuron + metsulfuron</i>	1 – 1.5 oz	\$23 - \$34	No hay or grazing restrictions	Use on bermudagrass established at least 1 year, may temporarily yellow or stunt bermudagrass. Apply when grass weeds are <2" tall. Suppresses Vaseygrass when applied at 1.5 oz/A. Do not use on tall fescue or bahiagrass.
CHAPARRAL 72 DF¹ <i>aminopyralid + metsulfuron</i>	1 – 3.3 oz	\$7 - \$26	No hay or grazing restrictions	For optimal control, wait 14 days after application to cut hay or graze. Do not use on legumes, fescue, or bahiagrass.
2,4-D² <i>2,4-D 4 lb formulations</i>	1 – 2 qt	\$6 - \$12	Hay: Wait 7 days after application to harvest. Dairy animals: Withhold grazing of treated forage for 7 days after application. Meat animals: Terminate grazing of treated forage 3 days before harvest.	Can be applied to established white clover at 1 qt/A or less, though injury will still occur. Will severely damage most other clovers. Apply when weeds are small. For buttercup control, apply December through mid-February.
WEEDMASTER^{2,3} <i>2,4-D amine + dicamba</i>	1 – 4 pt	\$4 - \$16	Hay: Wait 7 days after application to harvest. Dairy animals: Withhold grazing of treated forage for 7 days after application. Meat animals: Terminate grazing of treated forage 3 days before harvest.	Controls more broadleaf weeds than 2,4-D alone, including some difficult to control weeds such as dogfennel and smartweed. Apply when weeds are small.
NOVAGRAZ^{1,2} <i>2,4-D amine + floryprauxifen-benzyl</i>	24 – 48 fl oz	Not available	Hay: Wait 14 days after application to harvest. Dairy animals: Withhold grazing of treated forage for 3 days after application. Meat animals: Terminate grazing of treated forage 3 days before harvest.	Controls more broadleaf weeds than 2,4-D alone. Can be applied to established perennial white clover and some annual lespedezas, however significant injury will still occur. Plants should recover in 5 to 6 weeks. Requires addition of 1% v/v methylated seed oil (1 gal. MSO per 100 gal. spray solution). Do not apply to other clovers (red, crimson, alsike, etc).
GRAZONNEXT HL^{1,2} <i>aminopyralid + 2,4-D amine</i>	19 – 34 fl oz	\$9 - \$16	Hay: Wait 7 days after application to harvest. Grazing: None	A spray application generally results in better weed control than applying on dry fertilizer. When using dry fertilizer as a carrier, apply rate needed for target weed per label instructions on at least 200 pounds of dry fertilizer per acre.
DURACOR¹ <i>aminopyralid + floryprauxifen-benzyl</i>	12 – 20 fl oz	\$11 – \$18	Hay: Wait 7 days after application to harvest. Grazing: None	A spray application generally results in better weed control than applying on dry fertilizer. When using dry fertilizer as a carrier, apply a minimum of 16 fl oz/A on at least 200 pounds of dry fertilizer per acre.
GRAZON P+D^{1,2} <i>picloram + 2,4-D amine</i>	2 – 4 pt	\$11 - \$22	Hay: Wait 30 days after application to harvest. Dairy animals: Withhold grazing of treated forage for 7 days after application. Meat animals: Terminate grazing of treated forage 3 days before harvest.	GrazonPD3 has a lower use rate and is less volatile than Grazon P+D. GrazonPD3 is also less acutely toxic to humans than Grazon P+D. Avoid applications of either product near surface water as this herbicide can harm aquatic organisms at low rates. See label for groundwater advisory.
GRAZONPD3^{1,2} <i>picloram + 2,4-D choline</i>	1.25 – 2.67 pt	\$11 - \$23	Hay: Wait 30 days after application to harvest. Dairy animals: Withhold grazing of treated forage for 7 days after application. Meat animals: Terminate grazing of treated forage 3 days before harvest.	GrazonPD3 has a lower use rate and is less volatile than Grazon P+D. GrazonPD3 is also less acutely toxic to humans than Grazon P+D. Avoid applications of either product near surface water as this herbicide can harm aquatic organisms at low rates. See label for groundwater advisory.
SURMOUNT¹ <i>picloram + fluroxypyr</i>	3 – 6 pt	\$28 - \$57	Hay: None. Dairy animals: Withhold grazing of treated forage for 14 days after application. Meat animals: Terminate grazing of treated forage 3 days before harvest.	Controls many difficult-to-control broadleaf weeds. Best herbicide option for prickly pear. Avoid applications near surface water as this herbicide can harm aquatic organisms at low rates. See label for groundwater advisory.
FACET L <i>quinclorac</i>	22 – 32 fl oz	\$24 – \$35	Hay: Wait 7 days after application to harvest. Grazing: None	Controls broadleaf weeds and grasses, including crabgrass. Suppresses kno-troot foxtail and annual foxtail species. For best results, apply in early spring and add 2 pt/A crop oil concentrate or 1 to 2 pt/A methylated seed oil.
REMEDY ULTRA <i>triclopyr</i>	1 – 4 pt	\$11 - \$44	Hay: Wait 14 days after application to harvest. Meat animals: Terminate grazing of treated forage 3 days before harvest.	Used primarily for woody plant control, apply when brush is actively growing. May be used as a cut stump treatment. For blackberry control, use 3 pt/A plus 0.3 oz/A metsulfuron.
PASTUREGARD HL <i>triclopyr + fluroxypyr</i>	0.75 – 4 pt	\$13-69	Hay: Wait 14 days after application to harvest. Meat animals: Terminate grazing of treated forage 3 days before harvest.	Use low rates for small annual broadleaf weeds and higher rates for larger annual weeds or perennials. Use 4 pt/A to control difficult weeds like blackberry.

¹Aminopyralid, picloram, floryprauxifen-benzyl: See product label for restrictions regarding manure and hay use, as well as plant-back restrictions.

²2,4-D: Applications of 2,4-D are restricted from April 16 - September 15 in Clay, Greene, Craighead, Poinsett, Cross, Crittenden, St. Francis, Lee, Phillips, and Mississippi Counties. In the rest of the state, a 1-mile buffer for ground applications must be maintained between the treated field and susceptible crops.

³Dicamba: Applications of dicamba are allowed year-round for pasture and rangeland, however from April 16 - June 30, a 1-mile buffer must be maintained from University and USDA research stations, a ¼-mile buffer must be maintained to non-dicamba tolerant crops, and a ½-mile buffer must be maintained from certified organic and commercially grown specialty crops.

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