



IPM-0028-A

Pasture & Forage Crops

Weed Control Recommendations for 2026



Weed control is frequently a necessary component of hay and pasture management. Most hay and pasture forages are generally very competitive with proper soil pH, fertility, moisture, and grazing management. However, weeds can still be a problem even in the best managed pasture. Weeds tend to reduce forage production and are generally lower in quality than most forage species, especially as they mature. Some weeds may also be poisonous to livestock and should be controlled when found. Other spiny or thorny weeds deter animals from grazing and result in decreased forage utilization. Finally, other very aggressive weeds known as invasive plants may completely overrun and replace desirable pasture species, resulting in tremendous losses in forage productivity.

The first thing to remember when considering pasture weed management is the following: there are no silver bullets that will solve pasture weed problems with a single shot. Pasture and hay weed management is generally needed on an annual basis. If left untreated, weed species may easily replenish soil seed banks that persist for years. With long-lived seedbanks, eradication is very unlikely, except for very small infestations of new weeds. An old but true saying about many weeds is “One year of seed equals seven years of weeds.”

Mowing for Weed Control

Mowing as a stand alone management tool has an important role in pasture weed management. Mowing is often used to clean up pastures from an aesthetic perspective. Mowing can also stimulate grasses to produce new shoots that are higher in quality than older rank growth. Depending on whether you have annual or perennial weeds, weeds will respond differently to mowing.

The timing of mowing is critical for maximum effect. When targeting herbaceous weeds, mowing is often most effective either at or just prior to early flowering. This timing is when annuals and biennials have fully shifted into reproductive mode and are most susceptible to defoliation. For herbaceous perennials, this timing is generally when root energy reserves are at their lowest and plants are most susceptible to defoliation. While most herbaceous weeds will recover from growing

points below the mowing height, this timing appears to slow recovery more than earlier timings. Mowing after flowering, however, generally serves to spread weed seed and provides little control especially for annuals and biennials. For woody weeds, annual mowing does improve aesthetics, but remaining root systems create woody thickets and are problematic for tractor tires and equipment. It reduces foliage thus causing no translocation to the root so it doesn't kill the plant.

With these timing issues in mind, it may be necessary to pick your battles in mixed stands of weeds. Target specific weed species at the optimal timing and recognize that other species in the fields may not be controlled as well. Either way, mowing will open up the canopy and stimulate new forage growth. This is often greatly needed under dense stands of weeds where shading suppresses forage growth.

Integrating Mowing and Herbicides

Mowing integrated with herbicide treatment is a tricky business. It is often species specific. For example, after mowing blackberries or any woody species. You must have at least one year's worth of growth to have enough foliage to take in enough herbicide. Do not spray until the following growing season. For most annual weeds, do not mow for two weeks either before or after spraying. This ensures enough regrowth after mowing but before spraying for the weed to be able to absorb sufficient herbicides. After spraying, this no-mow window allows the herbicide time to translocate to the roots before mowing removes the top growth. For herbaceous perennials, spraying should be delayed after mowing until flowering or when there is 12 to 24 inches of regrowth. For woody plants, wait to spray after mowing until there are 3 to 4 feet of regrowth and do not mow for at least 2 months after treatment or until woody stems are dead.

For hayfields on a 28-day cutting schedule, herbicide treatment of herbaceous perennials and woody plants may be less effective. Several products are available that allow you to spray 7 days after cutting. For perennials, it is best to wait at least one month after the last cutting. This may or may not be possible since September and October are often very dry and early frost may prevent treatment. Another option would be to avoid cutting heavily infested areas to allow for a longer window for better herbicide performance.

Herbicide Use

When using herbicides, always read and follow label directions. Most pasture herbicides now have fewer restrictions on grazing or hay harvest than they previously did only a few years ago. However, there are still critical issues for many herbicides with regards to injury of certain grasses and legumes, plantback restrictions for small grains for winter grazing, and allowable uses of hay and manure where treatments have previously been applied

Additionally, herbicide use should be carefully considered in pastures near broadleaf crops or vegetables. Herbicide drift or volatilization may become serious issues in these situations.

Herbicide efficacy is often reduced if applications are made during droughts or if very cold conditions persist in the winter or spring. Most herbicides that are applied to the foliage tend to work better when plants are actively growing and a surfactant is added to the spray tank. For pasture herbicides a non-ionic surfactant is often the best choice, but be sure to read the label for surfactant directions. Finally herbicide resistance has rarely been an issue in pastures, but the best approach is to rotate herbicides with different modes of action when possible.

Treat Annual and Perennial Weeds Differently

Annual weeds are better controlled when they are small (<4 to 6 inches) and actively growing or with a preemergence herbicide prior to seed germination. Many times they are hidden by the forage so care must be taken to be diligent and look for them. Perennials persist by both seed and roots; therefore, compared to annual species, they are generally more difficult to control. Treating perennials during periods of active growth and/or with herbicides that have both foliar and soil activity generally results in better control. Due to larger root systems, perennial weed control is often more effective when aboveground foliage is large and can absorb and translocate more herbicide.

Table 1. Pasture and Rangeland Recommendations

Herbicide Trade Name	Herbicide Common Name	REI/PHI (Hours or Days)	Rate/Acre Broadcast		Herbicide Group	Time of Application	Weeds Controlled	Comments
			Formulation	Active Ingredient				
BERMUDAGRASS PASTURES AND HAYFIELDS DURING ESTABLISHMENT								
PREEMERGENCE								
*Various (4 lb/gal)	diuron	12 hr/70 d	0.8–2.4 qt.	0.8–2.4 lb.	7	Apply after sprigs are planted but before emergence of bermudagrass or weeds.	Annual broadleaf and grass weeds.	Plant sprigs 2 inches deep in a well-prepared seedbed. Do not treat areas where sprigs are planted less than 2 inches deep as crop injury may occur.
POSTEMERGENCE IN NEWLY ESTABLISHED PASTURE								
*Various (4 lb/gal)	dicamba	24 hr/30 d (slaughter) 7 d (lactating dairy and hay)	8–16 fl.oz.	0.25–0.5 lb.	4	Apply after bermudagrass is planted but before germinating weeds reach 1 inch in height.	Annual broadleaf weeds and some perennial weeds	Do not use on bentgrass, carpetgrass, buffalograss, and St. Augustine grass. Will kill or injure legumes.
*Various	2,4-D + dicamba	48 hr/30 d (slaughter) 7 d (lactating dairy and hay)	2–4 pt.	0.97–1.94 lb.	4 + 4	Apply after bermudagrass is planted but before germinating weeds reach 1 inche in height.	Certain annual and perennial broadleaf weeds	See label for precautions. Do not use on bentgrass, carpetgrass, buffalograss, and St. Augustinegrass. Do not spray on legumes. Use a NIS at 0.25% v/v.
ESTABLISHED PERENNIAL GRASS PASTURES AND HAYFIELDS								
PREEMERGENCE								
Prowl H2O	pendimethalin	24 hr/0 d	1.1–4.2 qt.	1–4 lb.	3	Apply preemergence before weeds emerge	Most annual grasses and small-seeded broadleaf weeds.	See label for tank-mix partners and further application instructions. Rainfall is necessary for herbicide activation into soil.
Rezilon	indaziflam	12 hr/40 d if rate exceeds 3 fl.oz.	3-5 fl.oz.	0.04-0.065 lb.	29	Apply soon after harvest or during dormancy several weeks prior to weed seed germination.	Annual grasses and small-seeded broadleaf weeds.	Apply only to established perennial warm season grasses. Do not exceed 5 fl oz per acre in a single application. Do not exceed 6 fl oz per acre per year. Do not exceed more than 2 applications in a 12-month period. Rainfall is necessary for activation into soil. See label for additional precautions and tank mixes.

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ESTABLISHED PERENNIAL GRASS PASTURES AND HAYFIELDS								
POSTEMERGENCE								
2, 4-D Amine	2, 4-D	48 hr/7 d	2-4 pt.	1-2 lb.	4	Apply to weeds 2 to 6 inches tall.	Annual broadleaf weeds	Apply to weeds 2 to 6 inches tall. Apply low volatile esters from October through March. Apply only nonvolatile amine forms from April through late June. Add an NIS at 0.25% v/v or a COC at 0.5% v/v. See label for additional precautions and tank mixes.
2, 4-D LV Ester	2, 4-D	48 hr/7 d	2 qt.	2 lb.	4	Apply in November or December when winter annuals emerge, and repeat in late February or March.	Winter annual weeds	Apply when temperature is 65 degrees F or above. Do not spray on legumes such as clovers, lespedeza, or alfalfa. May injure young, tender ryegrass. See label for tank mix partners and additional precautions.
Aim EC	carfentrazone-ethyl	12 hr/0 d	0.5-2 fl. oz.	0.008-0.031 lb.	14	Apply when weeds are smaller than 4 inches tall.	Bitter sneezeweed, spiny pigweed, jimsonweed, woolly croton, hophornbeam copperleaf, and jimsonweed controlled up to 4 inches tall; buttercup, dogfennel, horsenettle up to 4 inches tall will be suppressed.	Can be used on all pasture grasses. Add NIS at 0.25% v/v or a COC at 1% v/v and AMS at 2.5 pounds per acre. Do not make applications less than 7 days apart. Do not apply more than 3 applications per season.

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ESTABLISHED PERENNIAL GRASS PASTURES AND HAYFIELDS (cont.)								
POSTEMERGENCE (cont.)								
Chaparral	aminopyralid + metsulfuron methyl	48 hr/0 d	1.5–3.3 oz.	0.067–0.15 lb.	2 + 4	Apply at 2.0 oz/a to provide control of most pasture weeds when applied early in the season.	Pensacola bahiagrass, ryegrass, spiny pigweed, beggarticks, sowthistle, and many other annual weeds in addition to woody plants such as Cherokee and multiflora rose, wisteria, locust	Hay treated with Chaparral in the preceding 18 months CANNOT be distributed or made available for sale off the farm or ranch where harvested unless allowed by supplemental labeling. Hay from areas treated with Chaparral in the preceding 18-months CAN NOT be used for silage, haylage, baylage, and green chop unless allowed by supplemental labeling. Wait 14 days before cutting hay so that herbicide can work. Include a COC at 1%/v/v, MSO at 0.5% v/v, NIS at 0.25% v/v, or AMS at 2 qt/A. Use a reduced rate of NIS on tall fescue as Chaparral may damage fescue.
Cimarron Max	metsulfuron + dicamba + 2,4-D	48 hr/37 d (hay)	Part A: 0.25–1 oz./A; Part B: 1, 2, and 4 pts./A	Part A: 0.01 lb.–0.04 lb.; Part B: 0.125, 0.25, and 0.5 lb.	2 + 4	Apply to actively growing weeds.	Annual and some perennial broadleaf weeds	Will control Pensacola bahiagrass. Will injure tall fescue with Part A rates above 0.25 oz./A. Use an NIS at 0.5 to 1 pt./100 gal. of spray solution. See label for additional restrictions and instructions. See label for tank mix partners.
Various (4 lb/gal)	dicamba	24 hr/(see comments)	8–32 fl.oz.	0.25–1 lb.	4	Apply to annual weeds when small and actively growing; Apply to perennial weeds when larger, later in the season.	Annual broadleaf weeds and suppresses perennial and brush species	Do not use more than 32 fl.oz. per acre per season. See label for tank-mix partners and restrictions. See label for drift cautions especially during the warm season months. Will kill clovers, alfalfa, and other legumes. For lactating dairy animals following treatment, up to 1 pt.
Crossbow	2, 4-D Ester + triclopyr	when dry/14 d	1–4 qt.	0.75–3 lb.	4 + 4	Apply when weeds are actively growing. Best time to treat biennial and winter annual weeds is when the plant is in rosette stage.	Horseweed, wild lettuce, spiny amaranth, ground ivy, lespedeza, mouseear chickweed, wild carrot, horsetail, thistle	This may not be applied to forage that is to be cut and sold for commercial purposes. Do not allow lactating dairy animals to graze treated areas until the next growing season. For all other animals, there are no grazing restrictions. Do not slaughter until animals withdrawn at least 3 days. See label for additional restrictions and spray options for woody plant control.

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ESTABLISHED PERENNIAL GRASS PASTURES AND HAYFIELDS (cont.)								
POSTEMERGENCE (cont.)								
Distinct	diflufenzopyr + dicamba	24 hr/0 d (grazing) 7 d (hay)	2-8 oz.	0.0875-0.35 lb.	19 + 4	Apply when weeds are small and actively growing.	Annual and biennial broadleaf weeds and suppression of annual grasses	Only use an NIS at a rate of 0.25% v/v that is 80% active. Will kill clovers, alfalfa, and other legumes. Do not apply to newly seeded grass. See label for tank-mix options, restrictions, and limitations.
Duracor	aminopyralid + florypyrauxifen-benzyl	48 hr/14 d (hay), 0 d (graze); see label restrictions for grazing livestock within 3 d of application	12-20 fl.oz.	0.068-0.114 lb.	4 + 4	Apply when weeds are small and actively growing.	Annual and perennial broadleaf weeds.	Apply to established annual and perennial grass pastures and hayfields. Apply with MSO at 1% v/v or NIS at 0.25% v/v. Residue in hay and manure can cause off-site damage to sensitive plants. See label for additional restrictions and proper application timing to forage crops.
Facet L	quinclorac	12 hr./7 d (hay) 0 d (graze)	22-32 fl.oz.	0.25-0.38 lb.	4 + 26	Apply when weeds are small and actively growing.	Foxtail suppression. Crabgrass and broadleaf signalgrass under 2 inches tall, and other grasses and broadleaves.	Apply with a COC at 1% v/v or an MSO at 1 to 2 pints per acre. See label for all cool-season and warm-season grasses that you can spray and weeds that are controlled. See label for tank-mix partners, restrictions, and limitations.
ForeFront HL, GrazonNext HL	aminopyralid + 2, 4-D	48 hr/7 d (hay)	1.2-2.1 pt.	1.12-1.96 lb.	4 + 4	Apply to annual weeds when small and actively growing; Apply to perennial weeds during rosette stage; apply to brush from full leaf to flowering at least 1 year after mowing.	Annual and perennial broadleaf weeds	Residue in hay and manure can cause off-site problems. See label for all restrictions regarding the use and movement of ForeFront HL in hay. For optimum control, do not mow or cut hay for at least 14 days after application. Add a NIS at 0.25-0.5% v/v. May increase the palatability of poisonous plants. Do not graze until poisonous plants are dry and no longer palatable.

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ESTABLISHED PERENNIAL GRASS PASTURES AND HAYFIELDS (cont.)								
POSTEMERGENCE (cont.)								
Freelexx	2,4-D choline	48 hr/7 d (hay), 0 d (graze)	2-4 pt.	0.95-1.9 lb.	4	Apply during warm weather when weeds are small and actively growing.	Annual and perennial broadleaf weeds.	Apply to established grass forage. Do not use from early boot to milk stage where grass seed production is desired. Do not apply more than 8.42 pts of Freelexx per acre per season. Do not make more than 2 applications per acre per season.
Graslan L	picloram + 2,4-D choline	48 hr/0 d non-lactating, 7 d lactating (graze); 30 d harvest (hay)	1-5 pt.	0.23-1.2 lb.	4 + 4	Apply when weeds are small and actively growing.	Annual and perennial broadleaf weeds.	This is a Restricted Use Pesticide. Apply no more than 10 pints per acre per year. Do not make more than 2 applications per year and not within 30 days of previous application. Lower rates may be used early in the season when weeds are small. Use higher rates on larger annual weeds or on established perennial or woody brush.
Grazon P + D	picloram + 2,4-D	12 hr/0 d non-lactating, 7 d lactating (graze); 30 d harvest (hay)	1-8 pt.	0.32-2.54 lb.	4 + 4	Apply to annual weeds when small and actively growing; apply to woody plants when plant is between flowering and fruiting stage, at least one year after mowing.	Annual and perennial broadleaf weeds and woody plants	This is a Restricted Use Pesticide. Add an NIS at 0.25% v/v. Do NOT use treated grass or manure from animals being fed treated grass for composting and mulching of desirable susceptible broadleaf plants. See label for additional restrictions and precautions.
Impose, Plateau	imazapic	12 hr/7 d (hay)	4-12 fl.oz.	0.063-0.188 lb.	2	Apply after bermudagrass has reached 100% green-up using the lower rates for annuals, the higher rates for weeds at or above the boot stage, and highest rates (8 to 12 oz./a) for perennial grasses or before a killing frost.	Broadleaf weeds and grasses, such as panicums, crabgrass, foxtail, sandbur, and nutsedges	Only apply on bermudagrass, however, be aware that some varieties including Jiggs, is more sensitive than others and may suppress growth to the point of losing a cutting of hay. Do not use on World Feeder bermudagrass. Use an NIS at 0.25% v/v.

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ESTABLISHED PERENNIAL GRASS PASTURES AND HAYFIELDS (cont.)								
POSTEMERGENCE (cont.)								
Milestone	aminopyralid	48/N.A.	3–7 fl.oz.	0.05–0.11 lb.	4	Milestone can be applied to control broadleaf weeds prior to grass planting. Grass seed germination and seedling development can be adversely affected by many factors. See Milestone label.	Annual and perennial broadleaf weeds	DO NOT apply in area of desirable legumes. During the season of establishment, Milestone should be applied only after perennial grasses are well established. During the season of establishment, Milestone should be applied only after perennial grasses are well established. Add a nontoxic surfactant to the spray mix at a rate of 1 to 2 quarts per 100 gallons. See label for rate. DO NOT use treated hay or manure off-site.
MezaVue	aminopyralid + picloram + fluroxypyr	Until dry/ 7 d (hay), 0 d grazing for non-lactating animals, 14 d grazing for lactating dairy animals	18–32 fl.oz. broadcast. 1–2% v/v solution for spot treatment	0.3–0.52 lb. Up to 1.04 lb (spot treatment)	4	Postemergence while weeds are actively growing. Apply to brush after full leaf expansion.	Broadleaf weeds and woody brush.	Hay treated within the preceding 18 months may only be used on the farm where product was applied unless allowed by supplemental labeling. Legumes such as clover and alfalfa are highly sensitive to MezaVue.
NovaGraz	2,4-D + florpyrauxifen-benzyl	48h/ 0d (graze); 3d (graze dairy); 14d (hay), 3d slaughter	24–48 fl. oz.	Part A: 0.5 - 1.0 lb; Part B: 0.008375-0.016875 lb.	4 + 4	Best suited for cool season broadleaf weeds. Apply when weeds are actively growing (early spring through early summer).	Annual and some perennial broadleaf weeds; specifically thistles and buckhorn plantain.	Used to control broadleaf weeds in grass pastures mixed with established, perennial white clover and lespedeza; add MSO or COC at 1% v/v. White clover and lespedeza will exhibit some injury (lodging and loss of vigor but will recover); will kill red clover. Little to no soil residual activity.
Outrider	sulfosulfuron	12 hr/0 d	1.33 fl.oz.	0.062 lb.	2	For best control of johnsongrass, apply when it is actively growing and is at least 18 to 24 inches tall and up to the heading stage.	Johnsongrass, purple and yellow nutsedge, shepherd's-purse, catchweed bedstraw	May be used on bermudagrass and bahiagrass. An NIS containing at least 90% active ingredient is required at 0.25 to 0.5% v/v. For control of large established weeds or dense populations, a single application of up to 2 oz. may be used. For best weed control, do not mow or harvest the pasture to be treated for 2 weeks before or 2 weeks after application.

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ESTABLISHED PERENNIAL GRASS PASTURES AND HAYFIELDS (cont.)								
POSTEMERGENCE (cont.)								
Pastora	nicosulfuron + metsulfuron	4 hr/0 d	1–1.5 oz.	0.045–0.067 lb.	2 + 2	Apply within 7 days of hay cutting when broadleaf weeds are less than 4 inches tall and grasses are less than 2 inches tall.	Broadleaf weeds and grasses	Labeled in bermudagrass only. An NIS at 0.25% v/v is preferred adjuvant. Do not make more than 2 applications per year or apply at least 16 days between applications. See label for tank-mix partners and other precautions.
Pasturegard HL	triclopyr + fluroxypyr	12 hr/14 d (hay) see comments	1–4 pt.	0.5–2 lb.	4 + 4	Apply to annual weeds when small and actively growing; apply to woody plants when plant is between flowering and fruiting stage, at least one year after mowing	Broadleaf weeds, woody plants such as blackberry, maypop, dogfennel, locust	Add a NIS at a rate of 0.25% v/v. See label for weeds controlled and specific herbicide use rates. Do NOT use on legumes, and reduce potential drift injury on legumes growing near treated area. Do not allow lactating dairy animals to graze treated areas until the next growing season. For all other animals, there are no grazing restrictions. Do not harvest hay for 14 days after application and do not slaughter until animals withdrawn at least 3 days.
Remedy Ultra	triclopyr	When dried/ 0 d grazing, 3 d slaughter, 14 d hay.	2–4 pt.	1–2 lb.	4	Apply to annual weeds when small and actively growing and to woody vegetation when plants are in full leaf.	Broadleaf weeds and woody plants	For broadcast applications, add an NIS, COC, MSO, or basif oil. See label for specifics on tank-mix partners and restrictions. Do not allow lactating dairy animals to graze treated areas until the next growing season. For all other animals, there are no grazing restrictions. Do not harvest hay for 14 days after application and do not slaughter until animals withdrawn at least 3 days.
Telar XP	chlorsulfuron	4 hr/0 d	0.25–1.33 oz.	0.01–0.06 lb.	2	Apply to young, actively growing annual weeds, while perennial weeds are in bud to bloom, or when biennials are in fall rosette.	Annuals and some biennials and perennials	Do not exceed 1.3 oz. per acre per season. Add nonionic surfactant at 0.25% v/v. Desirable broadleaf crops like clover and alfalfa are sensitive and severe injury may occur. Rates higher than 0.5 oz/A may injure fescue.
*Various (5.5 lb./gal.)	glyphosate	4 hr	8–11 fl.oz.	0.34–0.47 lb.	9	Apply immediately after first bermudagrass hay cutting before new growth has started.	Broadleaf weeds and grasses	Broadcast application during growing season may cause growth stunting and yellowing, but usually grasses will grow out of injury. Spot treatment should not exceed 10% of the total pasture. Significant injury may occur to forage grass with glyphosate applications.

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ESTABLISHED PERENNIAL GRASS PASTURES AND HAYFIELDS (cont.)								
POSTEMERGENCE (cont.)								
Sandea	halosulfuron-methyl	12 hr/ 37 d (hay), 0 d (graze)	0.66-1.33 oz	0.03-0.06 lb.	2	Apply when weeds are small and actively growing. Apply as soon as possible after the removal of hay.	Sedges and certain annual broadleaf weeds.	Apply to established grass forage. Second postemergence spot applications may be necessary on weed regrowth. Do not apply more than 2 applications or exceed 1.33 oz per acre in a 12-month period. Include a NIS at 0.25-0.5% v/v solution for all postemergence treatments. See label for tank mix partners.
Sharpen	saflufenacil	14 hr/0 d	1 oz. (bermuda) -2 oz. (all others)	0.022-0.045 lb.	14	Apply when weeds are small and actively growing.	Spiny amaranth, crotonaria, horsenettle, horseweed, ragweed, Canada thistle, and other annual broadleaf weeds	Apply an MSO at 1% v/v and an AMS at 8.5-17 lb./gal. for cool season and apply with only an MSO at 1% v/v with warm-season applications. Also is labeled for PRE control while establishing cool-season forage grasses. In-season applications will damage bahiagrass. Dormant-season applications are allowed for burndown and residual control.
Surmount	picloram + fluroxypyr	12 hr/ 0 d grazing, 3 d slaughter, 14 d hay harvest.	1.5-6 pt.	0.40-1.61 lb.	4 + 4	Apply to annual weeds when small and actively growing and to woody vegetation when plants are in full leaf.	Broadleaf weeds and woody plants	This is a Restricted Use Pesticide. Do not allow lactating dairy animals to graze treated areas until the next growing season. Add an NIS at 0.25% v/v. Do NOT use treated grass or manure from animals being fed treated grass for composting and mulching of desirable susceptible broadleaf plants. See label for additional restrictions and precautions.
Velpar DF	hexazinone	48 hr/ 0 d grazing (see comments)	0.9-1.5 lb.	0.67-1.12 lb.	5	Apply one time per year when weeds are actively growing	Smutgrass and other broadleaf weeds and grasses	Labeled in bermudagrass and bahiagrass only. Use in a minimum of 25 gpa for thorough coverage. Treated forage grasses may not be fed for hay until 38 days after application. Use low rate in sandy soils. An NIS will cause more injury to the forage grasses. See label for other precautions and restrictions.
Velpar L	2,4-D + dicamba	48 hr/7 d	2.75-4.5 pt. 2-4 pt.	0.67-1.12 lb. 0.97-1.94 lb.	4 + 4	Apply after bermudagrass is planted but before germinating weeds reach 1 inch in height.	Certain annual and perennial broadleaf weeds	See label for precautions. Do not use on bentgrass, carpetgrass, buffalograss, and St. Augustine grass. Do not spray on legumes. Use a NIS at 0.25% v/v.

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ESTABLISHED BERMUDAGRASS								
Impose, Plateau	imazapic	12 hr/7 d (hay)	6–12 fl.oz.	0.094–0.188 lb.	2	Apply when there is no green at the root crown or on stolons. Tissue tissue	Annual ryegrass, tall fescue, little barley, wildoats along with various winter annual broadleaf weeds	Add 10 to 20 gallons per acre of liquid nitrogen as the spray carrier. Do not add additional spray adjuvant when liquid fertilizer is used as the spray carrier. An NIS at 0.25% v/v may be used if nitrogen is not the spray carrier. See label for precautions.
Pastora	nicosulfuron + metsulfuron	4 hr/0 d	1–1.5 oz.	0.045–0.067 lb.	2 + 2	Apply targeting winter and early season weeds during dormancy	Broadleaf weeds and grasses	Labeled in bermudagrass only. An NIS at 0.25% v/v is preferred adjuvant. Do not make more than 2 applications per year or apply more than 2.5 oz per acre per year. Allow at least 16 days between applications. See label for tank-mix partners and other precautions.
Various (60% metsulfuron methyl)	metsulfuron methyl	4 hr/0 d grazing or haying	0.1–0.4 oz broadcast or 1 oz/100 gal for spot treatments	0.0038–0.015 lb	2	Apply to actively growing weeds. For bahiagrass control, use 0.3 oz. after green-up and before seedhead formation.	Pensacola bahiagrass, buttercup, bitter sneezeweed, pigweed, and other annual grasses and broadleaves.	Do not apply on bahiagrass pastures. Will damage fescue at rates above 0.4 oz. Following applications at 0.1–0.3 oz/A, alfalfa, clovers, bermudagrass, ryegrass, and tall fescue may be planted after 4 months. Add 0.5 to 1 quart nonionic surfactant per 100 gallons of spray solution. Do not apply more than 1.67 oz per acre per season.
DORMANT BERMUDAGRASS PASTURES								
Gramoxone SL	paraquat	24 hr/40 d	0.7–1.3 pt.	0.25 lb.	22	Apply when bermudagrass is dormant.	Annual broadleaf weeds and grasses	This is a Restricted Use Pesticide. Consult label for all restrictions on Gramoxone SL use and applications. An NIS at 0.25% v/v or a COC at 0.5% v/v is required for use.
*Various (5.5 lb./gal.)	glyphosate	4 hr/NA	8–11 fl.oz.	0.34–0.47 lb.	9	Apply to actively growing winter broadleaf weeds and grasses, along with weedy infestations of dallisgrass.	Broadleaf weeds and grasses	Spot treatment should not exceed 10% of the total pasture. Significant injury may occur to forage grass with green, living tissue present.

Table 1. Pasture and Rangeland Recommendations

Herbicide Trade Name	Herbicide Common Name	REI/PHI (Hours or Days)	Rate/Acre Broadcast		Herbicide Group	Time of Application	Weeds Controlled	Comments
			Formulation	Active Ingredient				
FORAGE SORGHUMS								
POSTEMERGENCE								
2, 4-D Amine (4 lb/gal)	2, 4-D	48 hr/7 d	0.5–1 pt.	0.25–0.5 lb.	4	Apply over the top when weeds are small and when sorghum plants are 4 to 6 inches tall.	Annual broadleaf weeds	DO NOT spray over-the-top when sorghum plants are less than 4 inches tall or more than 10 inches tall. See precautions and restrictions on application information and drift.
Atrazine 90WDG	atrazine	12 hr/45 d	2.2 lb.	2 lb.	5	Apply after sorghum has emerged but before weeds are 1.5 inches tall.	Annual broadleaf weeds and grasses	This is a Restricted Use Pesticide. Do Not use on sandy loams or courser soil textures. Consult label for all restrictions on Atrazine use and applications.
Atrazine 4L	atrazine	12 hr/45 d	2 qt.	2 lb.	5	Apply after sorghum has emerged but before weeds are 1.5 inches tall.	Annual broadleaf weeds and grasses	This is a Restricted Use Pesticide. Do Not use on sandy loams or courser soil textures. Consult label for all restrictions on Atrazine use and applications.
FESCUE CONVERSION*								
POSTEMERGENCE								
Gramoxone SL/ generics	paraquat	24 hr/60 d	1–2 pt. fb 1–2 pt. (2 lb. ai) 0.7–1.3 pt. fb 0.7–1.3 pt. (3 lb. ai)	0.25–0.5 lb.	22	Apply in split-applications 10–21 days apart when fescue is actively growing and no more than 4 inches high.	Controls endophyte-infected fescue when fescue is actively growing but no more than 4 inches tall.	This is a Restricted Use Pesticide. Consult label for all restrictions on paraquat use and applications. An NIS at 0.25% v/v or a COC at 0.5% v/v is required for use. Control will be better if fescue is not allowed to seed the previous year.
Poast plus, Poast	sethoxydim	12 hr/30 d	1.0–1.25 pt.	0.013–0.16 lb.	1	Apply to actively growing tall fescue after it has 4 to 6 inches of new growth and before the seedhead has emerged.	Tall fescue growth suppression	DO NOT mow tall fescue for 30 days before or 14 days after treatment. For greater suppression, apply up to 2.5 pt. per acre. Maximum annual application rate: 7.5 pt./A.
*Various (5.5 lb/gal)	glyphosate	4 hr	32 fl.oz. (5.5 lb. ai)	1.1 lb.	9	Apply with 1 qt fb 1 qt after regrowth occurs again.	Endophyte-infected fescue as well as other grasses	Check label to see if an NIS or COC is needed. Do not allow plants to reproduce seed. See label for tank-mix partners, restrictions, and maximum use rate /acre / year.

Table 1. Pasture and Rangeland Recommendations

Herbicide Trade Name	Herbicide Common Name	REI/PHI (Hours or Days)	Rate/Acre Broadcast		Herbicide Group	Time of Application	Weeds Controlled	Comments
			Formulation	Active Ingredient				
PASTURE RENOVATION								
Gramoxone SL	paraquat	24 hr/40 d	1–2 pt.	0.25–0.50 lb.	22	Apply when bermudagrass is dormant. For little barley control, apply before the mid-boot stage	Annual broadleaf weeds and grasses.	This is a Restricted Use Pesticide. Consult label for all restrictions on Gramoxone SL use and applications. An NIS at 0.25% v/v or a COC at 0.5% v/v is required for use.
WINTER GRAZING/GRAIN PRODUCTION (WHEAT, BARLEY, RYE, OATS, RYEGRASS)								
2, 4-D Amine	2, 4-D	48 hr/ 14 d	0.5–2 pt.	0.25–1 lb.	4	Apply when grain is in full tiller stage, but before boot stage.	Annual broadleaf weeds	See label for tank-mix partners and other timings depending on the grain you are growing. Limited to one POST application per cycle. Be aware of drift concerns and laws in your area affecting 2,4-D. An NIS should be added for POST applications at 0.25% v/v.
CLOVERS, LESPEDEZA, AND OTHER LEGUME FORAGES								
PREPLANT INCORPORATED								
Eptam 7E	EPTC	12 hr/14 d	2.25–4.5 pt.	1.97–4.0 lb.	8	Apply and incorporate just before planting.	Broadleaf weeds and grasses	Can be applied on alfalfa, birdsfoot trefoil, lespedeza. DO NOT use on white dutch clover. Established stands of alfalfa, ladino clover can be sprayed 2.5–3.5 pt prior to weed emergence. PHI= 45 d
ALFALFA, CLOVERS, LESPEDEZA, AND OTHER LEGUME FORAGES								
POSTEMERGENCE								
Gramoxone SL	paraquat	12 hr/60 d	1.0–2.0 pt.	0.25–0.5 lb.	22	Apply on established plantings during the dormant season during late fall or winter months after the last fall cutting and before first spring cutting.	Annual broadleaf weeds and grasses	See label for specifics on when Gramoxone SL may be applied to alfalfa and the rates that may be used. This is a Restricted Use Pesticide. See label for tank-mix partners. An NIS at 0.25% v/v or a COC at 0.5% v/v is required for use.

Table 1. Pasture and Rangeland Recommendations

Herbicide Trade Name	Herbicide Common Name	REI/PHI (Hours or Days)	Rate/Acre Broadcast		Herbicide Group	Time of Application	Weeds Controlled	Comments
			Formulation	Active Ingredient				
ALFALFA, CLOVERS, LESPEDEZA, AND OTHER LEGUME FORAGES (cont.)								
POSTEMERGENCE (cont.)								
Kerb 50-W	pronamide	24 hr/ 50 d (harvest seed) 120 d (grazing and haying)	1.0–4.0 lb.	0.5–2 lb.	3	Apply during the fall or winter months; for best control apply under cool temperature conditions (55–60° F).	Controls susceptible winter annuals and perennial grasses and certain broadleaf weeds when applied preemerge.	This is a Restricted Use Pesticide. It may be applied both PRE and POST. See chart in label that gives you specific weeds, timings, and product amounts needed for optimum weed control.
Pursuit	imazethapyr	4 hr/NA	3–6 oz.	0.05–0.09 lb.	2	Apply when Alfalfa or Clover is in the second trifoliolate stage or larger and when weeds are 1–3 inches tall.	Controls a broad spectrum of broadleaf and grass weeds.	Labeled for use on alfalfa, birdsfoot trefoil, and clover. May be applied to seedling alfalfa or clover. In established alfalfa or clover apply in the spring to dormant or semi-dormant alfalfa or clover growth or regrowth (3 inches). See label for adjuvants, tank-mix options, and use precautions.
Select Max, generics	clethodim	24 hr/15 d	9–32 fl.oz. (0.97 lb. ai) 6–16 fl.oz. (2 lb. ai)	0.068–0.24 lb.	1	Apply to seedling or established alfalfa with an NIS at 0.25% v/v or a COC/MISO at 1% v/v.	Annual and perennial grasses	For repeat applications make on a minimum of a 14-d interval. See label for tank-mix recommendations including AMS and other legumes in which it may be applied.
Poast Plus, Poast	sethoxydim	12 hr /hay 20 d, forage 7d	1.5–3.75 pt. (1.0 lb. ai) 1.0–2.5 pt. (2.5 lb. ai)	0.19–0.47 lb.	1	Apply before mowing for best control	Annual Grasses	Always add a COC at 0.5% v/v. See label for general tank-mix partners, application timings, and rates.

Table 2. Estimated Effectiveness of Herbicides for Forage Crops on Selected Weeds ¹

WEEDS ²	NEW SEEDLINGS Legume Only			ESTABLISHED FORAGE STANDS				FORAGE SORGHUMS	
	Eptam (PPI)	Gramoxone SL	Pursuit	Legume Only	Select	Poast	2,4-D amine (POST)	Atrazine (POST)	
GRASSES									
Crabgrass	E	G	F	F	E	E	P	F	
Fall panicum	E	G	F	P	E	E	P	F	
Foxtails	E	G	E	P	E	E	P	G	
Signalgrass	F	G	G	P	E	G-E	P	P	
Texas panicum	F	G	P	P	G-E	G	P	P	
SEDGES									
Nutsedge	G	P	F	P	P	P	P	P	
BROADLEAVES									
Bitterweed	P	E	F	P	P	P	G	P	
Curly dock	P	E	F	P	P	P	F	P	
Dogfennel	P	F	P	P	P	P	F	P	
BROADLEAVES									
Field buttercup	P	E	F	P	P	P	G	P	
Field dodder	P	G	P	G	P	P	P	P	
Goldenrod	P	E	G	P	P	P	F	P	
Horsenettle	P	E	P	P	P	P	P	P	
Horseweed	F	P	P	P	P	P	G	E	
Musk thistle	P	P	P	P	P	P	F-G	P	
Plantains	P	E	F	P	P	P	E	E	
Pokeberry	P	E	F	P	P	P	F	P	
Redroot pigweed	G	E	E	P	P	P	G	E	
Shepherdspurse	P	E	G	G	P	P	E	E	
Smartweed	P	E	E	P	P	P	F	E	
Wild garlic	P	P	P	P	P	P	F	F	
Wild mustard	F	E	G	P	P	P	E	E	
Surface-Loss Potential²	M	S	S	L	S	S	M	M	
Leaching Potential³	M	S	S	S	S	S	M	M	

¹Ratings are based on observations of research plots and field use under average weather conditions for several years by weed control workers in Alabama and the South. ² In general for postemergence applications, many annual grasses and broadleaf weeds are best controlled when young and actively growing. For many annual grass weeds, this target is less than 2 to 4 inches in height. For many perennial species, control is generally more effective when applications are made when weeds are fully leafed or at bloom to fruit set.
KEY TO CONTROL RATINGS AND ABBREVIATIONS E = Excellent control; G = Good control; F = Fair control; P = Poor control; — = Information not available.
 S = Small; M = Medium; L = Large. POST = Postemergence.

Table 2. Estimated Effectiveness of Postemergence Herbicides for Forage Crops on Selected Grasses and Grasslike Weeds
¹ (cont.)

TARGET GRASSES AND WEEDS	ESTABLISHED FORAGE STANDS										
	2, 4-D	Banvel/ Clarity	Chaparral	Cimmaron Max	Cimmarron Plus	Cross- bow	Grazon- Next	Grazon P+D	Impose/ Panoramc	Maverick/ Outrider	
Barnyardgrass	P	P	P	P	P	P	P	P	—	P	
Bahiagrass, Pensacola	P	P	G	G	G	P	P	P	G-E	P	
Centipede	P	P	P	P	P	P	P	P	G-E	G	
Crabgrass	P	P	P	P	P	P	P	P	G	P	
Dallisgrass	P	P	P	P	P	P	P	P	F	P	
Foxtails, Annual	P	P	P	P	P	P	P	P	G	P	
Foxtail, Knotroot	P	P	P	P	P	P	P	P	F	P	
Goosegrass	P	P	P	P	P	P	P	P	F	P	
Johnsongrass, Rhizome	P	P	P	P	P	P	P	P	G	E	
Johnsongrass, Seedling	P	P	P	P	P	P	P	P	E	E	
Nutsedge	P	P	P	P	P	P	P	P	G	G	
Panicum, Fall	P	P	P	P	P	P	P	P	G	P	
Panicum, Texas	P	P	P	P	P	P	P	P	F-G	P	
Ryegrass, Italian	P	P	P	P	P	P	P	P	G	P	
Sandbur	P	P	P	P	P	P	P	P	G	P	
Signalgrass	P	P	P	P	P	P	P	P	G	P	
Smutgrass	P	P	P	P	P	P	P	P	P	P	
Vaseygrass	P	P	P	P	P	P	P	P	G	P	

¹Ratings are based on observations of research plots and field use under average weather conditions for several years by weed control workers in Alabama and the South.

² In general for postemergence applications, many annual grasses and broadleaf weeds are best controlled when young and actively growing. For many annual grass weeds, this target is less than 2 to 4 inches in height. For many perennial species, control is generally more effective when applications are made when weeds are fully leafed or at bloom to fruit set.

KEY TO CONTROL RATINGS AND ABBREVIATIONS

E = Excellent control; G = Good control; F = Fair control; P = Poor control; — = Information not available.
 POST = Postemergence.

Table 2. Estimated Effectiveness of Postemergence Herbicides for Forage Crops on Target Grass and Grasslike Weeds ¹ (cont.)

TARGET GRASSES AND WEEDS	Pastora	Pasture-Gard	Prowl H ₂ O	Prescott/ Redeem R+P	Remedy Ultra	Roundup Powermax	Sharpen	Surmount	Velpar	Weedmaster
Barnyardgrass	E	P	G	P	P	G	P	P	P	P
Bahiagrass, Pensacola	G	P	P	P	P	F	P	P	P	P
Crabgrass	F	P	G	P	P	G	P	P	P	P
Centipede	P	P	P	P	P	F	P	P		P
Dallisgrass	F	P	P	P	P	F	P	P	P	P
Foxtails, Annual	G	P	G	P	P	G	P	P	P	P
Foxtail, Knotroot	F	P	P	P	P	G	P	P	P	P
Goosegrass	F	P	G	P	P	G	P	P	P	P
Johnsongrass, Rhizome	G	P	P	P	P	G	P	P	P	P
Johnsongrass, Seedling	E	P	G	P	P	E	P	P	P	P
Nutsedge	P	P	P	P	P	F	P	P	P	P
Panicum, Fall	G	P	G	P	P	G	P	P	P	P
Panicum, Texas	G	P	G	P	P	G	P	P	P	P
Ryegrass, Italian	G	P	F-G	P	P	P	P	P	P	P
Sandbur	F	P	G	P	P	G	P	P	P	P
Signalgrass	G	P	F	P	P	G	P	P	P	P
Smutgrass	P	P	P	P	P	G	P	P	P	P
Vaseygrass	G	P	P	P	P	F	P	P	P	P

¹Ratings are based on observations of research plots and field use under average weather conditions for several years by weed control workers in Alabama and the South.

² In general for postemergence applications, many annual grasses and broadleaf weeds are best controlled when young and actively growing. For many annual grass weeds, this target is less than 2 to 4 inches in height. For many perennial species, control is generally more effective when applications are made when weeds are fully leaved or at bloom to fruit set.

KEY TO CONTROL RATINGS AND ABBREVIATIONS

E = Excellent control; G = Good control; F = Fair control; P = Poor control; — = Information not available.

Table 3. Estimated Effectiveness of Postemergence Herbicides for Forage Crops on Selected Broadleaf Weeds

WEEDS	ESTABLISHED FORAGE STANDS							
	2,4-D	Banvel/ Clarity	Chaparral	Cimarron Max	Crossbow	Duracor	Grazon Next	Grazon P+D
Amaranth, Spiny	F	G	G-E	G	G-E	G-E	G	G
Bitterweed	F	E	—	E	—	E	E	E
Blackberry	P	P	G	F	G	F-G	P	F-G
Buttercup	G	E	G	E	F	E	E	E
Cherokee and Macartney Rose	P	P	F	—	—	F	F	F
Crotalaria, Showy	G	G	—	—	—	G-E	E	E
Croton, Wooly	G	E	E	E	E	E	E	E
Curly Dock	E	E	E	E	E	E	E	E
Dewberry	P	P	—	—	—	F	P	F
Dogfennel	F	G	P	E	F-G	F	F	E
Goldenrod	F	G	—	E	F-G	G	F	G
Ground cherry	—	—	E	—	F	G	E	F-G
Henbit	F	G	E	E	F-G	G	G	F
Horsenettle	F	F	E	G	F	G-E	G	G
Horseweed	G	E	E	E	F-G	E	G	E
Ironweed	F	G	G	P	F	G-E	F	P
Jimsonweed	F	F-G	G	F	G-E	E	E	F
Lambsquarters	—	G	E	E	E	E	E	E
Milkweed	—	—	P	P	P-F	P	P	P
Perilla Mint	G-E	G-E	E	E	E	E	E	E
Pigweed	F	E	G	G	E	G	G	E
Plantain	G	P	E	E	G-E	E	E	E
Poison Ivy	P-F	—	—	P	G-E	—	—	G-E
Pricklypear	P	P	P	—	—	—	P	F-G
Ragweed	E	E	E	G	E	G	G	E
Red Sorrel	P	G	G	G	F-G	—	—	E
Rose, Multiflora	P-F	G	G	F	F-G	F	P-F	F-G
Prickly Sida	F	G	G	—	—	G	F	P
Smartweed	F	G	E	E	G-E	G-E	E	E
Stinging Nettle	P	P	G	F	—	E	E	E
Thistle, Musk, Bull, Yellow, Milk	F	G	E	E	F-G	G-E	F-G	E
Tropical Soda Apple	P	F	G	P	—	E	E	E
Vervain, Blue	G	—	—	—	—	E	G-E	G-E
Wild Garlic	G	G	F-G	G	—	—	—	F-G
Wild Mustard	G	—	—	—	—	G	G	E

² In general for postemergence applications, many annual grasses and broadleaf weeds are best controlled when young and actively growing. For many annual grass weeds, this target is less than 2 to 4 inches in height. For many perennial species, control is generally more effective when applications are made when weeds are fully leafed or at bloom to fruit set.

KEY TO CONTROL RATINGS AND ABBREVIATIONS

E = Excellent control; G = Good control; F = Fair control; P = Poor control; — = Information not available.

Table 3. Estimated Effectiveness of Postemergence Herbicides for Forage Crops on Selected Broadleaf Weeds (cont.)

WEEDS	ESTABLISHED FORAGE STANDS						
	Impose/ Panoramac	Pasture -Gard	Prescott/ Redeem R+P	Remedy	Sharpen	Surmount	Weed -master
Amaranth, Spiny	P	F	G-E	F	E	E	G-E
Bitterweed	—	E	E	G	E	E	E
Blackberry	P	F-G	F-G	F-G	P	P-F	—
Buttercup	F	F	G	F	E	G	E
Cherokee and Macartney Rose	—	—	—	F	P	F	—
Crotalaria, Showy	—	E	—	—	P	—	G
Croton, Wooly	E	E	E	E	G	E	E
Curly Dock	P	G	G	E	G	E	E
Dewberry	P	F-G	P	F-G	P	F	—
Dogfennel	P	E	G	F	P	G	G
Goldenrod	P	G	F-G	G	E	F-G	G
Ground cherry	—	—	—	—	E	—	—
Henbit	P	E	E	G	P	E	P
Horsenettle	P	F	F	P	G	E	F
Horseweed	P	G	G	G	E	E	E
Ironweed	P	G	G	F	G	G	—
Jimsonweed	P	—	G	G	E	F-G	—
Lambsquarters	F	E	E	E	E	E	—
Milkweed	P	P	F	F	G	F-G	—
Perilla Mint	G	G	—	—	F-G	E	E
Pigweed	F	P	E	G	E	E	E
Plantain	P	G	G	E	G	G	G
Poison Ivy	—	P	G	G-E	G	G	—
Pricklypear	P-F	P	—	P	P	G	P
Ragweed	P	G	G	G	E	E	E
Red Sorrel	P	P	F-G	—	E	G	F
Rose, Multiflora	P	F-G	P	G	P	G	F
Prickly Sida	P	P	—	—	E	P	E
Smartweed	G	F	—	G	E	E	E
Stinging Nettle	—	E	E	E	F	E	P
Thistle, Musk, Bull, Yellow, Milk	P	G	G	G	G	E	G
Tropical Soda Apple	P	P	—	G	—	E	F
Vervain, Blue	P	—	—	—	G	E	—
Wild Garlic	P	P	—	—	P	P	G
Wild Mustard	G-E	G	—	—	E	E	—

² In general for postemergence applications, many annual grasses and broadleaf weeds are best controlled when young and actively growing. For many annual grass weeds, this target is less than 2 to 4 inches in height. For many perennial species, control is generally more effective when applications are made when weeds are fully leafed or at bloom to fruit set.

KEY TO CONTROL RATINGS AND ABBREVIATIONS

E = Excellent control; G = Good control; F = Fair control; P = Poor control; — = Information not available.

Table 4. Hay and Grazing Restriction				
HERBICIDE	WAITING PERIOD IN DAYS			
	Grazing Beef/ Nonlactating Animals	Grazing Dairy Animals	Delay in Hay Cutting	Removal Ahead of Slaughter
2,4-D ¹	0-7	7-14	30	7
Aim	0	0	0	N/A
Atrazine	21	21	21	N/A
Banvel/Clarity	0	7-40	37-70	30
Chaparral	0	0	14	N/A
Cimarron Max	0	0	0	0
Cimarron Plus	0	0	0	N/A
Crossbow	0	14	7	3
Distinct	0	0	7	N/A
Diuron	70	70	70	N/A
Duracor	0-3	0-3	14	N/A
EPTC	45	45	45	N/A
Facet L	0	0	7	N/A
Forefront HL	0	0	7	0
Freelexx	0	0	7	N/A
Glyphosate	7	7	7	N/A
Gramoxone SL	0	0	40	N/A
GrazonNXT HL	0	0	7	N/A
Grazon P+D	0	7	30	3
Impose/ Panoramic	0	0	7	0
Graslan L	0	7	30	N/A
Maverick	0	0	30	N/A
Metsulfuron	0	0	0	N/A
Milestone	0	0	0	0
NovaGraz	0	3	14	3
Outrider	0	0	14	N/A
Overdrive	0	0	0	0
Pastora	0	0	0	0
PasturAll	0	0	7	0
PastureGard HL	0	next season	14	3
Prowl H2O	0	0	0	0
Remedy Ultra	0	0	14	3
Rezilon ²	0	0	0	N/A
Sandea	0	0	37	0
Sharpen	0	0	0	N/A
Velpar	0	0	38	N/A

¹Restrictions vary among manufactured products. Refer to particular product label for specific restrictions.

²Rezilon restrictions apply to applications of 3 fl oz or less. Hay cutting and heavy grazing immediately following application may reduce activity.



FOR MORE INFORMATION on pesticides, pesticide safety, or submitting samples for analysis, see the following publications in the IPM series:
IPM 1293, "Safety." Safety contact information; worker protection standards; the safe use, handling, and storage of pesticides
IPM 1294, "Submitting Samples." Procedures for submitting samples for diagnosis, analysis, and identification
IPM 1295, "General Pesticide Information." Federal and state restricted use pesticide lists; pesticides and water quality
IPM 1317, "Appendix." Pesticide guidelines for agronomic crops, including preharvest intervals; rain-free requirements; grazing restrictions; crop rotation guidelines; and the names, classifications, and toxicities of pesticides.

2026 IPM-0028

Revised by **David Russell**, *Associate Extension Professor*, Crop, Soil, and Environmental Sciences, Auburn University.

For more information, contact your county Extension office. Visit www.aces.edu/counties or look in your telephone directory under your county's name to find contact information.

Use pesticides **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label

The pesticide rates in this publication are recommended **only** if they are registered with the Environmental Protection Agency or the Alabama Department of Agriculture and Industries. If a registration is changed or canceled, the rate listed here is no longer recommended. Before you apply **any** pesticide, check with your county Extension agent for the latest information.

Trade names are used **only** to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.

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