

FORAGE CROPS

MSMA is **not** recommended nor labeled for application to bermudagrass or other forage grasses grown for livestock consumption.

REPLANTING RESTRICTIONS FOR FORAGES *(See product labels for crops not listed.)*¹

Product	Legumes		Pasture Grasses			
	Alfalfa	Clover	Bahia	Bermuda	Fescue	Rye
Arsenal Powerline	12 m + bioassay	12 m + bioassay	12 m + bioassay	12 m + bioassay	12 m + bioassay	12 m + bioassay
Chaparral	bioassay	bioassay	ns	ns	fall	ns
Cimarron Max at 0.25 oz/A plus 1 pt/A	4 m	4 m	-	4 m	4 m	4 m
Cimarron Plus at 0.25 oz/A	4 m	4 m	-	4 m	4 m	4 m
Clarity/Banvel (per pint applied per acre)	120 d	120 d	30 d	30 d	30 d	30 d
Crossbow	3 w	3 w	3 w	3 w	3 w	3 w
Diuron	2 y	2 y	2 y	2 y	2 y	2 y
Glyphosate	1 w	1 w	1 w	1 w	1 w	1 w
Grazon Next	bioassay	bioassay	-	-	-	-
Grazon P+D	1 y	1 y	3 w	3 w	3 w	3 w
Lineage Clearstand	12 m + bioassay	12 m + bioassay	12 m + bioassay	12 m + bioassay	12 m + bioassay	12 m + bioassay
Metsulfuron	bioassay	bioassay	ns	ns	fall	fall
Milestone	bioassay	bioassay	-	-	-	-
Outrider	12 m + bioassay	12 m + bioassay	12 m + bioassay	12 m + bioassay	12 m + bioassay	12 m + bioassay
Overdrive	30 d	30 d	30 d	30 d	30 d	30 d
Paraquat	0 d	0 d	0 d	0 d	0 d	0 d
Pastora	12 m	12 m	-	4 m	-	4 m
Pasturegard	1 m	1 m	3 w	3 w ²	3 w	3 w
Pursuit	4 m	4 m	40 m	40 m	40 m	4 m
Redeem R&P	bioassay	bioassay	14 d	14 d	14 d	14 d
Remedy	3 w	3 w	3 w	3 w	3 w	3 w
Surmount	bioassay	bioassay	12 m	12 m	12 m	12 m
Telar	bioassay	bioassay	bioassay	bioassay	bioassay	bioassay
Velpar	2 y	2 y	2 y	2 y	2 y	2 y

¹D, m, w, and y following numbers in this table indicate days, months, weeks, and years, respectively.

²Interval applies to seeded bermudagrass cultivars.

WEED RESPONSE RATINGS FOR FORAGE HERBICIDES

Herbicides	Weeds																																						
	Bahiagrass	Bitterweed	Blackberry	Bulrush	Bullthistle	Buttercup	Chickweed	Cogongrass	Common Ragweed	Crabgrass	Curly Dock	Dogfennel	Eastern Red Cedar	Foxtail	Goldenrod	Groundsel	Henbit	Horsenettle	Horseweed	Johnsongrass	Lanceleaf Ragweed	Little Barley	Mullein	Multiflora Rose	Nutsedge	Osage Orange	Red Sorrel	Smartweed	Smooth Pigweed	Smutgrass	Tall Fescue	Tropical soda apple	Vaseygrass	Wild Garlic					
Preplant Incorporated																																							
Balan	N	N	N	N	N	N	H	N	R	H	N	N	N	H	N	N	R	N	N	N	N	R	N	N	N	N	N	R	H	N	N	N	N	N	N	N	N		
Preemergence																																							
Diuron	N	H	N	-	N	H	H	N	H	H	N	N	-	H	N	N	H	N	H	N	N	H	N	N	N	N	R	H	H	N	N	N	N	N	N	N	N		
Postemergence																																							
2,4-D amine	N	H	N	H	H	H	N	N	H	N	R	N	R	N	R	N	R	N	R	N	R	N	N	N	N	R*	N	R	R	N	N	N	N	N	N	N	N		
2,4-D ester	N	H	N	R	H	H	R	N	H	N	R	N	R	N	R	N	R	N	R	N	R	N	N	N	R	N	R	N	R	R	N	N	N	N	N	N	N	R	
2,4-DB	N	R	N	-	R	R	R	N	R	N	R	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	R	N	N	N	N	N	N	N	N	
Arsenal	N	N	N	N	N	R	R	R	R	N	N	R	N	R	N	N	R	N	N	R	R	R	R	R	R	R	R	N	R	R	R	N	R	N	R	N	R	N	
Buctril	N	N	N	-	N	R	R	N	R	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	R	R	N	N	N	N	N	N	N	N	N	
Chaparral	N	N	H	N	R	H	R	N	R	N	R	N	R	N	H	-	R	R	R	N	R	N	N	R	N	-	R	R	H	N	N	H	N	R	N	H	N	R	
Cimarron Max	H	H	H	R	H	H	H	N	H	N	H	H	H	N	H	H	H	R	H	N	H	N	H	H	N	N	H	H	H	N	R	N	N	N	N	N	H	N	
Clarity/Banvel	N	H	R	N	H	H	H	N	H	N	H	H	R	N	H	N	H	R	H	N	R	N	N	R	N	R	H	H	H	N	N	N	N	N	N	N	N	N	
Crossbow	N	H	R	-	H	H	R	N	H	N	H	R	R	N	H	N	R	R	H	N	R	N	N	N	R	N	N	R	H	H	N	N	N	N	N	N	N	N	
Diuron	N	N	N	N	N	N	N	N	N	R	N	N	N	R	N	N	N	N	N	N	R	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Glyphosate	H	R	R	R	N	R	R	R	R	R	R	R	R	R	N	N	N	N	N	R	R	N	R	N	R	N	R	R	R	R	R	N	R	R	R	H	R	R	H
Gramoxone Inteon	N	N	N	N	N	H	H	N	R	N	N	N	N	H	N	N	H	N	N	-	N	H	N	N	-	N	N	N	N	N	N	H	N	-	H	N	-	H	
Grazon Next	N	R	R	-	R	R	R	-	R	N	R	N	-	N	R	N	R	R	R	N	R	N	-	N	N	N	N	-	-	N	N	N	N	N	N	N	N	N	
Grazon P+D	N	H	R	H	H	H	R	N	R	N	H	H	H	N	H	R	R	R	H	N	R	N	R	R	N	H	H	H	H	N	N	R	N	N	N	R	N	R	
Maverick	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	H	N	N	N	N	R	N	N	N	N	N	N	N	N	N	N	N	N	N
Metsulfuron	H	H	R	N	R	H	H	N	N	N	H	N	R	N	N	H	H	N	R	N	N	N	H	R	N	N	H	H	H	N	N	N	N	N	N	N	N	H	N
Milestone	N	R	N	N	R	R	-	N	R	N	R	N	N	N	-	-	R	R	R	N	R	N	-	N	N	N	-	R	-	N	N	H	N	N	N	N	N	N	
Overdrive	N	R	N	N	R	H	R	N	R	N	R	R	N	N	R	N	R	N	R	N	R	N	N	N	N	N	R	R	R	N	N	N	N	N	N	N	N	N	R
Pastora	R	-	R	N	N	H	R	N	-	N	-	-	N	R	-	-	R	R	R	R	-	-	-	N	N	-	-	-	-	-	-	-	-	-	-	N	R	-	
Poast	N	N	N	N	N	N	N	N	N	R	N	N	N	R	N	N	N	N	N	N	N	N	R	N	N	N	N	N	N	N	N	N	N	N	N	R	N	N	N
PastureGard	R	R	H	N	R	R	R	N	R	N	H	R	R	N	R	R	R	R	R	N	R	N	R	H	N	H	R	R	R	N	R	H	N	R	H	N	R	N	
Pursuit	-	-	-	N	N	N	-	H	N	R	N	N	N	N	-	-	N	-	-	R	R	R	-	-	N	R	N	-	H	N	N	N	N	N	N	N	N	N	
Redeem R+P	N	H	N	N	H	H	H	N	H	N	H	H	R	N	H	R	H	R	R	N	H	N	R	N	N	N	R	H	R	N	N	N	N	N	N	N	N	H	
Remedy	R	R	H	N	R	R	R	N	R	N	H	R	R	N	R	R	R	R	R	N	R	N	R	H	N	H	R	R	R	N	R	H	N	R	H	N	R	N	
Surmount	N	H	H	N	H	H	R	N	R	N	H	H	H	N	H	R	R	H	H	N	R	N	R	H	N	H	H	H	H	N	N	R	N	N	N	R	N	R	
Telar	N	N	N	N	R	N	R	N	N	N	R	N	N	N	N	R	R	N	R	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Velpar	N	N	R	N	N	R	R	N	N	N	N	N	H	N	N	N	R	N	N	N	N	N	N	H	N	R	N	N	N	N	H	N	N	N	N	N	N	N	
Weedmaster	N	H	R	H	H	H	H	N	H	N	H	H	H	N	H	N	H	R	H	N	H	N	R	R	N	N	R	H	H	N	N	N	N	N	N	N	N	R	

H = Highly recommended

R = Recommended

N = Not recommended

*Cut surface treatment

HAYING, GRAZING, AND SLAUGHTER RESTRICTIONS FOR LIVESTOCK

Product	Dairy Animals				Meat Animals		Slaughter
	Lactating		Nonlactating		Grazing	Haying	
	Grazing	Haying	Grazing	Haying			
------(days)-----							
2,4-D amine ³	7	30	7	30	0	30	3
2,4-D ester ³	7	30	7	30	7	30	3
Arsenal Powerline	0	7	0	7	0	7	-
Buctril							
spring treatment	30	30	30	30	30	30	-
fall/winter treatment	60	60	60	60	60	60	-
Butyrac							
established alfalfa	30	30	30	30	30	30	-
seedling alfalfa, clover	60	60	60	60	60	60	-
Chaparral	0	0	0	0	0	0	-
Cimmaron Max	7	37	0	37	0	37	30
Cimarron Plus	0	0	0	0	0	0	-
Clarity/Banvel							
1/2 qt/A or less	7	37	0	0	0	0	30
1-2 qt/A	40	70	0	0	0	0	30
Crossbow							
2 gal or less/A	14	NS ¹	0	7	0	7	3
2-4 gal/A	NS	NS	14 ²	14	14 ²	14	3
Diuron	70	70	70	70	70	70	-
Glyphosate							
legumes							
preplant, preemerge, at-plant <44 oz/A	0	0	0	0	0	0	-
>44 oz/A	56	56	56	56	56	56	-
alfalfa preharvest	1.5	1.5	1.5	1.5	1.5	1.5	-
spot treatment (<10% total acres)	14	14	14	14	14	14	-
renovation < 44 oz	1.5	1.5	1.5	1.5	1.5	1.5	-
renovation > 44 oz	56	56	56	56	56	56	-
grass pastures							
preplant, preemerge, renovation	56	56	56	56	56	56	-
spot or wiper treatment	14	14	14	14	14	14	-
Gramoxone							
alfalfa/clover							
dormant/clover	-	60	-	60	-	60	-
between cuttings	30	30	30	30	30	30	-
bermudagrass, dormant	-	40	-	40	-	40	-
Gramoxone							
alfalfa	-	30	-	30	-	30	-
dormant bermudagrass	-	40	-	40	-	40	-
Grazon Next	0	7	0	7	0	7	-
Grazon P+D	7	30	0	30	0	30	3
Journey	0	7	0	7	0	7	-
Lineage Clearstand	0	7	0	7	0	7	-
Metribuzin	28	28	28	28	28	28	-
Metsulfuron	0	0	0	0	0	0	-
Milestone	0	0	0	0	0	0	-
Outrider	0	14	0	14	0	14	-
Overdrive	0	0	0	0	0	0	-
Pastora	0	0	0	0	0	0	0
PastureGard	NS	14	0	14	0	14	3
Poast	7	20	7	20	7	20	-
Pursuit	30	30	30	30	30	30	30
Redeem R+P	14	NS	0	7	0	7	3
Remedy							
2 qt or less/A	14	NS	0	7	0	7	3
2-4 qt/A	NS	NS	14 ²	14	14 ²	14	3
4-6 qt/A	NS	NS	14 ²	NS	14 ²	NS	3
Select	15	15	15	15	15	15	-
Surmount	14	7	0	7	0	7	3
Telar	0	0	0	0	0	0	-
Velpar	0	38	0	38	0	38	-
Weedmaster	7	37	0	37	0	37	30

¹NS indicates next season.

²If the area treated is less than 25 percent of grazing area, there is no restriction for nonlactating or meat animals.

³Restrictions vary among manufactured products. Refer to particular product label for specific restrictions.

Weed resistance to recommended use-rates of certain herbicides has been documented in Mississippi — SEE PAGE 9.

Consult labels for approved adjuvants.

Herbicide use may require some waiting period before haying or grazing — SEE ABOVE.

Forage Crops, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed for 1 acre treated broadcast	Time of application	Weeds controlled	Special instructions and remarks
Preplant				
<i>Alfalfa</i>				
benefin at 1.1 to 1.5 lb/A	1.5 lb/gal formulation Balan at 6 to 8 pt in 10 to 20 gal water.	Incorporate immediately after application fall or spring.	Certain annual grasses and broadleaves.	Do not use if grain or grass crop is to be planted with alfalfa. See label.
Preemergence				
<i>Bermudagrass, at planting</i>				
diuron at 0.8 to 2.4 lb/A	80 WP at 1 to 3 lb, or 4L at 1.6 to 4.8 pt/A in 25 gal water.	At sprigging.	Many annuals including signalgrass and some seedling perennials.	May temporarily burn emerged bermuda and permanently injure Alicia. For control of small emerged weeds, use low rate plus surfactant. SEE PAGE 106.
<i>Sorghum-sudan hybrids</i>				
atrazine at 1.6 lb/A	1.8 lb 90DF or 2 lb 80WP or 3.2 pt 4L in 25 gal water.	Sorghum should be completely germinated and emerged and weeds not more than 1.5 inches high.	Annual grass and broadleaf weeds.	Do not use on sand or loamy sand. May injure winter annuals that follow high rates.
Postemergence				
<i>Alfalfa seedling</i>				
bromoxynil at 0.25 to 0.37 lb/A	Buctril at 1 to 1.5 pt/A.	Fall or spring when majority of alfalfa has a minimum of 4 trifoliolate leaves.	Annual broadleaf weeds.	Do not add surfactant or crop oil unless specifically recommended. SEE PAGE 106.
<i>Alfalfa only</i>				
clethodim at 0.094 to 0.125 lb/A	Select 2EC at 6 to 8 oz/A in up to 20 gal water with 1 qt/A crop oil concentrate.	To actively growing annual or perennial grasses.	Most grasses.	Do not apply more than 32 ounces per acre to alfalfa. Do not apply a broadleaf herbicide within 1 day before or after application.
<i>Alfalfa, Clover, seedling and established</i>				
imazethapyr at 0.05-0.09 lb/A	Pursuit at 3 to 6 oz/A with 0.25% nonionic surfactant or 1 qt/A crop oil concentrate and 1-2 qt/A liquid N fertilizer or 2.5 lb/A spray grade ammonium sulfate.	Seedling legumes with at least 2 fully expanded trifoliolate leaves or established, dormant or semi-dormant alfalfa or between cuttings.	Broadleaf weeds and certain grasses.	Do not exceed 6 ounces per acre per year. Do not apply during the last year of the stand. Do not feed, graze, or harvest alfalfa within 30 days of application. In the event of stand failure, do not reseed alfalfa within 4 months after application. This treatment will suppress growth of grasses, such as fescue, ryegrass, and small grains seeded with legumes.
sethoxydim at 0.19 to 0.47 lb/A	Poast 1.5E at 1 to 2.5 pt in up to 20 gal water at 40-60 psi by ground. Add 2 pt/A oil concentrate.	To actively growing grasses.	Most grasses.	Apply no more than 5 pints per acre in one season. SEE PAGE 106.

Forage Crops, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed for 1 acre treated broadcast	Time of application	Weeds controlled	Special instructions and remarks
<i>Alfalfa, established</i>				
metribuzin at 0.38 to 0.75 lb/A	Sencor/Lexone 75DF at 0.5 to 1 lb or 4L at 0.8 to 1.5 pt in 20 to 40 gal water.	Winter dormant established	Chickweed, henbit and other winter annuals.	Apply only to winter dormant alfalfa no earlier than 12 months after seedling. SEE PAGE 106.
paraquat at 0.28 lb/A	Gramoxone Max (3 lb/gal) 0.75 pt/A or Boa (2.5 lb/gal) 0.78 pt/A in 20 gal water.	After cuttings.	Annual grasses and broadleaf weeds.	Apply to stands at least 1 year old and within 5 days after cutting. Add 1 quart of non-ionic surfactant per 100 gallons of spray solution. SEE PAGE 106.
<i>Grass pastures, established</i>				
2,4-D at 0.5 to 1 lb/A	1 to 2 pt/A (4 lb/gal formulation) in 10 to 20 gal water.	To actively growing weeds.	Buttercup, bitter weed, woolly croton, and others, except dogfennel, horsenettle, and smartweed.	Do not treat during long droughts and to annual legumes until after seed production. SEE PAGE 106.
2,4-D LV ester at 0.5 to 1 lb/A	1 to 2 pt/A (4 lb/gal formulation) in 10 to 20 gal water.	November to March when crop is well established, weeds are young, but before flowering of weeds.	Mustard, turnips, dock, buttercup, and others.	Apply during a clear, warm, sunny period when weeds are young and tender. May injure young, tender ryegrass. Add 0.5 to 1 quart of surfactant per 100 gallons of spray solution for improved control especially when applied during cool weather. SEE PAGE 106.
2,4-D at 0.38 to 1.4 lb/A plus dicamba at 0.12 to 0.5 lb/A	Weedmaster at 1 to 4 pt/A.	When weeds are young and actively growing.	Most broadleaf weeds and some hard-to-control weeds, such as dogfennel and smartweed.	Weeds should be less than 10 inches tall for lower rates. Same precautions as for dicamba alone. Clipping large weeds not dead in 2 to 3 weeks will improve control. SEE PAGE 106.
2,4-D at 0.24 to 2 lb/A plus picloram at 0.06 to 0.54 lb/A	Grazon P+D at 1 to 8 pt/A or 1 to 2% solution.	When weeds are actively growing and not stressed.	Most broadleaf weeds and some hard-to-control weeds, such as dogfennel, horsenettle, and woody brush.	Use lower rates early in the season when weeds are very small. Use higher rates for larger annual weeds or established perennials or woody brush. SEE PAGE 106.
aminopyralid at 0.06 to 0.11 lb/A	Milestone at 4 to 7 oz/A in 20 gal water with 0.25% v/v nonionic surfactant.	To actively growing broadleaf weeds.	Tropical soda apple, others.	Milestone will severely damage legumes. Do not plant legumes until successful field bioassay proves concentrations will not damage crop. Manure and urine from animals grazed on treated sites or fed treated hay within the last 3 days will injure legume or broadleaf plants. Manure should not be used in areas where sensitive broadleaf plants will be placed.
aminopyralid at 0.06 to 0.11 lb/A + 2,4-D at 0.5 to 0.9 lb/A	Grazon Next at 1.5 to 2.6 pt/A in 20 gal water with 0.25% v/v nonionic surfactant.	To actively growing weeds.	Broadleaf weeds.	Grazon Next will severely damage legumes. Do not plant legumes in treated areas until field bioassay proves herbicide residues will not damage crop. Manure and urine from animals grazed on treated sites or fed treated hay within the last 3 days will injure legumes or damage broadleaf plants. Manure should not be used in areas sensitive broadleaf plants will be placed.

Forage Crops, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed for 1 acre treated broadcast	Time of application	Weeds controlled	Special instructions and remarks
aminopyralid at 0.04 to 0.13 lb/A plus Metsulfuron at 0.006 to 0.02 lb/A	Chaparral at 1 to 3.3 oz/A for broadcast or 2.5 to 3.3 oz/100 gal for spot treatments	Use lower rate for young, annual weeds and higher rate for older or perennial weeds.	Broadleaf weeds.	Treatments will severely injure legumes, bahiagrass, or fescue. Use nonionic surfactant at 1 quart per 100 gallons of spray; however, applications to tall fescue should not exceed 1 pint per 100 gallons. Do not rotate to any crop within 1 year after treatment. Do not plant forage legumes until bioassay verifies residues will not injure crop. Do not seed ryegrass within 4 months after application. Do not use treated plants or manure around desirable broadleaf plants. Do not move animals from treated fields onto fields with legumes without first moving into untreated field for 3 days.
chlorsulfuron at 0.01 to 0.06 lb/A	Telar at 0.25 to 1.33 oz/A.	Apply to young, actively growing annual weeds and while biennial or perennial weeds are still in rosette.	Annual and some biennial and perennials.	Make only one application per season. Do not exceed 1.3 ounces per acre per season. Add 1 to 2 quarts nonionic surfactant per 100 gallons of spray.
dicamba at 0.25 to 2 lb/A	Clarity at 0.5 to 2 pt/A in 20 to 40 gal water for broadcast treatments or 25 to 50% solution with oil for individual stem or cut surface treatments.	When weeds are actively growing for foliar treatments or prior to active spring growth for stem applications with oil.	Most broadleaf weeds and small brush.	Do not broadcast spray more than 1 quart per acre in one season. Do not exceed 1 pint per acre on small grains grown for pasture. SEE PAGE 106.
diflufenzopyr at 0.005 to 0.01 lb/A plus dicamba at 0.015 to 0.03 lb/A	Overdrive at 4 to 8 fl oz/A.	Apply to young, actively growing weeds.	Annual and perennial broadleaf weeds.	Use low rate for annuals, high rate for biennials and perennials. Add 1 quart of nonionic surfactant per 100 gallons of spray or 1.5 to 2 pints per acre of methylated seed oil. Do not exceed 8 ounces per acre per season. Do not plant any rotational crop within 30 days of application. Do not apply to small grains grown for grazing. SEE PAGE 106.
imazapyr at 0.03 to 0.75 lb/A	Arsenal Powerline at 2 to 48 oz per treated acre spot broadcast or 0.5 to 5% solution for handgun spot treatment with 0.25% nonionic surfactant (v/v).	To actively growing weeds and woody species as foliar spray or to dormant trees and brush as injection, hack and squirt, or cut stump treatment.	Several annual and perennial grasses and broadleaf weeds plus vines and undesirable woody plants.	Do not treat more than 10% of the area grazed or cut for hay. Treatments will damage desirable forage species. Do not apply more than 48 ounces per acre per year.
imazapyr + metsulfuron at 0.03 to 0.4 + 0.005 to 0.06 lb/A	Lineage Clearstand at 0.8 to 10 oz in 20 gal water plus 0.25% nonionic surfactant (v/v).	To actively growing weeds and brush as foliar spray or to dormant trees and brush as injection, hack and squirt, or cut stump treatment.	Annual and perennial grasses and broadleaf weeds and brush.	Do not exceed 10 ounces per acre per year. Do not treat more than 10% of the area grazed or cut for hay. Treatments will damage desirable forage species.
picloram at 0.44 to 0.89 lb/A plus fluroxypyr at 0.36 to 0.72 lb/A	Surmount at 3 to 6 pt/A or 0.5 to 2% solution for spot treatment.	Apply to actively growing weeds.	Many broadleaf weeds and hard-to-control perennial weeds and woody plants.	Use lower rate for small annual weeds, higher rates for larger annuals or established perennials. Add 1 to 2 quarts of nonionic surfactant per 100 gallons of spray. SEE PAGE 106.

Forage Crops, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed for 1 acre treated broadcast	Time of application	Weeds controlled	Special instructions and remarks
triclopyr at 0.25 to 2 lb/A	Remedy at 1 to 4 pt/A for broadcast treatments or 1 to 1.5% solution with water for spot spraying perennial weeds or 20 to 33% solution with oil for dormant woody stem treatments.	When weeds are actively growing for broadcast or spot sprays or before bud break for applications with oils to woody stems.	Broadleaf weeds and woody vines, shrubs, and trees.	Add 1 to 2 quarts nonionic surfactant per 100 gallons with broadcast sprays. SEE PAGE 106.
triclopyr at 0.42 to 1.1 lb/A + clopyralid at 0.14 to 0.38 lb/A	Redeem R&P at 1.5 to 4 pt/A	To actively growing grasses.	Broadleaf weeds.	Use lower rates for weeds such as bitter sneezeweed, ragweed, thistle, marshelder, and croton; higher rates for spiny pigweed, horsenettle, and dogfennel.
triclopyr at 0.38 to 1.5 lb/A plus fluroxypyr at 0.125 to 0.5 lb/A	PastureGard at 2 to 8 pt/A for broadcast applications, or 1 to 2% solution for spot treatment, or 50:50 mix with oil and 10% penetrant for individual woody stem or cut stump treatment.	Apply foliar treatments to weeds that are actively growing and not stressed, and mixtures with oils to dormant stems.	Broadleaf annual and perennial weeds, including tropical soda apple, or woody perennials, such as vines, brambles, shrubs, and trees.	Use low rates for small annual weeds, higher rates for large annuals or perennials. Add 1 to 2 quarts of nonionic surfactant per 100 gallons of spray for applications. SEE PAGE 106.
triclopyr at 0.25 to 1 lb/A + 2,4-D at 0.5 to 2 lb/A	Crossbow at 1 to 4 qt/A or 1 to 1.5% solution for broadcast treatments, or 1 to 4% solution with oil for dormant woody stem treatments.	When weeds are actively growing for broadcast applications or just before breaking dormancy for woody stem treatments.	Annual and perennial broadleaf weeds and some woody vines and shrubs.	Adding 1 to 2 quarts of nonionic surfactant per 100 gallons of spray may enhance control. Do not reseed pastures within 3 weeks after treatment. Do not exceed 4 quarts per acre per season. Do not apply to newly seeded grasses until after tillering. SEE PAGE 106.
<i>Bermuda and Bahiagrass, established</i>				
hexazinone 0.69 to 1.13 lb/A	Velpar L 2.75 to 4.5 pt/A.	To actively growing smutgrass from May to October 15.	Smutgrass and many broadleaf weeds.	Do not apply near the root system of desirable woody plants such as oak trees. Apply with 1 quart of surfactant per 100 gallons of water. SEE PAGE 106.
sulfosulfuron at 0.06 to 0.09 lb/A	Maverick at 1.3 to 2 oz in 20 gal water with 0.25% nonionic surfactant (v/v).	To actively growing weeds.	Johnsongrass, sedges, ryegrass, mustards, and buttercup.	Sequential applications can be made no sooner than 40 days after the previous treatment. Do not exceed 2.66 ounces per acre per year.
<i>Bermudagrass, established</i>				
imazapic + glyphosate at 0.06 to 0.19 + 0.1 to 0.4 lb/A	Journey at 10 to 32 oz/A broadcast or as 0.625 to 13% solution for spot treatments.	To actively growing weeds	Vaseygrass, Johnsongrass, crabgrass, signalgrass, barnyardgrass, sandbur, and nutsedge	Methylated seed oil is preferred over nonionic surfactant. Use 1.5 to 2 pints per acre for broadcast or 1% for spot applications. Do not apply during transition from dormant to active growth. Do not apply to 'World Feeder,' Tifton 85, or hybrid bermudagrass. Do not exceed 21 ounces per acre on Coastal bermudagrass. Do not apply within 30 days of aeration. Bermudagrass growth will likely be suppressed 30 days.

Forage Crops, Continued

Crop, weed, or

chemical per treated land acre	Formulation needed for 1 acre treated broadcast	Time of application	Weeds controlled	Special instructions and remarks
metsulfuron methyl 0.0038 to 0.015 lb/A	Metsulfuron at 0.1 to 0.4 oz/A in a minimum of 10 gal/A or 1 oz/100 gal for spot applications.	To actively growing weeds. For bahiagrass control, use 0.3 oz after green-up and before seed-head formation.	Pensacola bahia, wild garlic, buttercup, bitter sneezeweed, pigweed, and woolly croton.	Add 0.5 to 1 quart of nonionic per 100 gallons of spray solution surfactant. Will not control Argentine bahiagrass. Do not apply to Bahiagrass pastures. Following Cimarron applications at 0.1 to 0.3 ounce per acre, red, white, or sweet clover, bermudagrass, ryegrass, or tall fescue can be planted after 4 months; wheat after 1 month; barley or oats after 10 months. Do not apply more than 1.67 ounce per acre per season. Do not use on soils with pH above 7.9.
metsulfuron + 2,4-D + dicamba 0.004 to 0.011 + 0.36 to 0.72 to 1.4 + 0.125 to 0.25 to 0.5	Cimarron Max 0.1 to 0.3 oz/A Part A + 1 to 2 to 4 pt/A Part B	To actively growing weeds	Bahiagrass, woolly croton, bitter sneezeweed, vetch, dock, garlic dogfennel, marestail, blackberry, multiflora rose, and many other annual and perennial weeds	Add 1 quart of nonionic surfactant per 100 gallons of finished spray solution. Does not control 'Argentine' bahiagrass. Do not apply more than 1.67 ounces of Part A per acre per season.
Nicosulfuron at 0.35 to 0.53 lb/A + metsulfuron methyl at 0.009 to 0.014 lb/A	Pastora at 1 to 1.5 oz/A with 0.25% nonionic surfactant (v/v)	To actively growing annual grassy weeds less than 2 inches tall, annual broadleaf weeds less than 4 inches tall, and some perennial weeds.	Johnsongrass, vaseygrass, ryegrass, and many broadleaf weeds	Crop oil concentrate at 1% (v/v) may increase weed control but may also increase potential for bermudagrass injury. Bermudagrass must be established for at least one season before application.
<i>Bermudagrass, dormant</i>				
paraquat at 0.25 to 0.5 lb/A	Gramoxone Inteon at 1 to 2 pt in 20 gal of water.	Mid-March.	Emerged annual broadleaf weeds and grasses in dormant bermuda.	Add 1 quart of nonionic surfactant per 100 gallons of spray solution. Must be applied prior to seed head emergence for satisfactory control of little barley. SEE PAGE 106.
<i>Bermudagrass and Bahiagrass, sod suppression</i>				
paraquat at 0.25 to 0.5 lb/A	Gramoxone Inteon at 1 to 2 pt in 20 gal of water. Add 0.25% surfactant (v/v).	Early fall to sods not exceeding 3 inches in height.	Suppresses summer grass while winter annuals establish.	Add 1 quart of nonionic surfactant per 100 gallons of spray. SEE PAGE 106.
<i>Endophyte-Infested Tall Fescue Destruction</i>				
paraquat 0.25 to 0.5 lb/A	Gramoxone Inteon at 1 to 2 pt in 20 gal of water followed by second application 10 to 21 days later at the same formulation.	When fescue is actively growing.	Endophyte-infected fescue and annuals.	Add 0.5 or 1 quart of nonionic surfactant per 100 gallons of spray solution. If new growth appears within 10-14 days, make a second application. Do not exceed 3 pints per acre. SEE PAGE 106.
glyphosate at 0.75 lb/A	Glyphosate 4/5 lb/gal at 2/1.2 pt in 3 to 10 gal water plus 0.5 to 1% surfactant	When fescue is actively growing in the fall and plants are 6 to 12 inches tall.	Endophyte-infected fescue and other annual plants.	A sequential application of 1 pint plus surfactant will improve long-term control. SEE PAGE 106.