

HERBICIDES FOR PASTURES*

Crop and Application Timing	Herbicide	Rate/Acre Broadcast		Weeds Controlled, Remarks and Precautions
		Active Ingredient	Formulation	
Pasture, Bermudagrass - (only) DORMANT	Gramoxone Inteon 2SL (paraquat)	0.25-0.5 lb.	1.0-2.0 pts.	Apply to dormant bermudagrass for control or suppression of emerged winter annual weeds. For control of little barley, apply before the mid-boot stage. Add nonionic surfactant at 0.25% by volume.
Pasture, Bermudagrass - (only) ESTABLISHED	Cimarron 60DF (metsulfuron)	0.0038-0.011 lb.	0.1-0.3 oz.	Bermudagrass should be established at least 60 days prior to application. Apply before weeds are 4 inches tall or in diameter. Use 0.1 to 0.2 ozs./A for control of bitter sneezeweed, buttercup, Carolina geranium, common chickweed, dandelion, horseweed, plantain, curly dock and several others. For dogfennel, common yarrow, and musk thistle, use 0.2 to 0.3 ozs./A. Add nonionic surfactant at 1 to 2 pts./100 gal. of spray mix. Avoid application during spring green-up.
Pasture - Seedling, GRASS ONLY	Aim 2EC (carfentrazone)	0.016-0.023 lb.	1.0-1.5 oz.	Apply to seedling forage grasses no sooner than 7 days following emergence. Use for control of a limited number of broadleaved weeds, under 4 inches tall, such as pigweeds, black nightshade, lambsquarters, and velvetleaf. Do not make applications less than 7 days apart. Always add nonionic surfactant at the rate of 1 quart/100 gal. of spray mix.
Pasture - Seedling, GRASS ONLY	2,4-D Amine 4L	0.5- 0.75 lb.	1- 1.5 pts.	Can be used on all forage grasses for control of buttercup, thistles, wild turnip, horseweed and plantain. Apply when weeds are less than 4 in. tall and actively growing. This treatment will kill clovers and other legumes in the seedling stage. Do not apply if seedling grasses do not show good vigor.
Pasture – Newly Established, GRASS ONLY	ForeFront R&P (aminopyralid + 2,4-D)	0.06 + 0.5 – 0.11 + 0.87 lbs.	1.5 – 2.6 pts.	During the year of establishment, apply after grasses have begun to tiller, develop a good secondary root system, and show good vigor. Use for control of buttercups, thistles, cocklebur, pigweeds, bitter sneezeweed, horsenettle, tall ironweed, plantains, and several others. See label for individual weed rates. Will kill pasture legumes, but reseeding may be possible one year later (see label). Always add a nonionic surfactant at the rate of 1 quart /100 gal. of spray mix.
Pasture - Newly Established, GRASS ONLY	Grazon P+D (picloram + 2,4-D) For use only in approved TN counties. See page 77.	0.14 + 0.5 – 0.2 + 0.75 lb.	2-3 pts.	This is a Restricted Use Pesticide (RUP) which requires a license to purchase and apply. Apply after newly seeded grasses have begun to tiller and develop a secondary root system (usually around the 4-leaf stage of grasses). Use for thistles, horsenettle, ragweed, cocklebur, buttercup and others. Will kill pasture legumes, but reseeding may be possible one year later. On most weeds apply in March to mid-summer when actively growing. Most perennials will require higher rates (see label). Always add nonionic surfactant at the rate of 1 quart/100 gal. of spray mix.
Pasture - Newly Established, GRASS ONLY	Milestone (aminopyralid)	0.063 - 0.11 lb.	4 - 7 oz.	During the year of establishment, apply after grasses have begun to tiller and develop a secondary root system, and show good vigor. Use for control of buttercups, thistles, cocklebur, pigweeds, bitter sneezeweed, horsenettle, tall ironweed, and several others. Weak on plantains. Control may be improved by tank mixing with 2,4-D. A limited number of weeds such as cocklebur and smartweed may be controlled with 3 oz./A. See label for individual weed rates. Will kill pasture legumes, but reseeding may be possible one year later. Always add a nonionic surfactant at the rate of 1 quart/100 gal. of spray mix.

HERBICIDES FOR PASTURES*

Crop and Application Timing	Herbicide	Rate/Acre Broadcast		Weeds Controlled, Remarks and Precautions
		Active Ingredient	Formulation	
Pasture, Bermudagrass - (only) DORMANT	Gramoxone Inteon 2SL (paraquat)	0.25-0.5 lb.	1.0-2.0 pts.	Apply to dormant bermudagrass for control or suppression of emerged winter annual weeds. For control of little barley, apply before the mid-boot stage. Add nonionic surfactant at 0.25% by volume.
Pasture, Bermudagrass - (only) ESTABLISHED	Cimarron 60DF (metsulfuron)	0.0038-0.011 lb.	0.1-0.3 oz.	Bermudagrass should be established at least 60 days prior to application. Apply before weeds are 4 inches tall or in diameter. Use 0.1 to 0.2 ozs./A for control of bitter sneezeweed, buttercup, Carolina geranium, common chickweed, dandelion, horseweed, plantain, curly dock and several others. For dogfennel, common yarrow, and musk thistle, use 0.2 to 0.3 ozs./A. Add nonionic surfactant at 1 to 2 pts./100 gal. of spray mix. Avoid application during spring green-up.
Pasture - Seedling, GRASS ONLY	Aim 2EC (carfentrazone)	0.016-0.023 lb.	1.0-1.5 oz.	Apply to seedling forage grasses no sooner than 7 days following emergence. Use for control of a limited number of broadleaved weeds, under 4 inches tall, such as pigweeds, black nightshade, lambsquarters, and velvetleaf. Do not make applications less than 7 days apart. Always add nonionic surfactant at the rate of 1 quart/100 gal. of spray mix.
Pasture - Seedling, GRASS ONLY	2,4-D Amine 4L	0.5- 0.75 lb.	1- 1.5 pts.	Can be used on all forage grasses for control of buttercup, thistles, wild turnip, horseweed and plantain. Apply when weeds are less than 4 in. tall and actively growing. This treatment will kill clovers and other legumes in the seedling stage. Do not apply if seedling grasses do not show good vigor.
Pasture – Newly Established, GRASS ONLY	ForeFront R&P (aminopyralid + 2,4-D)	0.06 + 0.5 – 0.11 + 0.87 lbs.	1.5 – 2.6 pts.	During the year of establishment, apply after grasses have begun to tiller, develop a good secondary root system, and show good vigor. Use for control of buttercups, thistles, cocklebur, pigweeds, bitter sneezeweed, horsenettle, tall ironweed, plantains, and several others. See label for individual weed rates. Will kill pasture legumes, but reseeding may be possible one year later (see label). Always add a nonionic surfactant at the rate of 1 quart /100 gal. of spray mix.
Pasture - Newly Established, GRASS ONLY	Grazon P+D (picloram + 2,4-D) For use only in approved TN counties. See page 77.	0.14 + 0.5 – 0.2 + 0.75 lb.	2-3 pts.	This is a Restricted Use Pesticide (RUP) which requires a license to purchase and apply. Apply after newly seeded grasses have begun to tiller and develop a secondary root system (usually around the 4-leaf stage of grasses). Use for thistles, horsenettle, ragweed, cocklebur, buttercup and others. Will kill pasture legumes, but reseeding may be possible one year later. On most weeds apply in March to mid-summer when actively growing. Most perennials will require higher rates (see label). Always add nonionic surfactant at the rate of 1 quart/100 gal. of spray mix.
Pasture - Newly Established, GRASS ONLY	Milestone (aminopyralid)	0.063 - 0.11 lb.	4 - 7 oz.	During the year of establishment, apply after grasses have begun to tiller and develop a secondary root system, and show good vigor. Use for control of buttercups, thistles, cocklebur, pigweeds, bitter sneezeweed, horsenettle, tall ironweed, and several others. Weak on plantains. Control may be improved by tank mixing with 2,4-D. A limited number of weeds such as cocklebur and smartweed may be controlled with 3 oz./A. See label for individual weed rates. Will kill pasture legumes, but reseeding may be possible one year later. Always add a nonionic surfactant at the rate of 1 quart/100 gal. of spray mix.

	Rage D-Tech (carfentrazone + 2,4-D ester)	0.008 +0.25 – 0.033+1.0	0.5 – 2.0 pts.	Broader spectrum control than Carfentrazone (Aim) applied alone. May be applied to newly established grasses beginning at the 5-leaf stage. Add non-ionic surfactant at the rate of 1qt./100 gal. of spray mix.
	Redeem R&P (triclopyr + clopyralid)	0.56 + 0.19 - 0.84 + 0.28 lb.	2-3 pts.	For use when products containing 2,4-D are not an option. Apply after newly seeded grasses have begun to tiller and develop a secondary root system (usually around the 4-leaf stage of grasses). Use for thistles, ragweed, cocklebur, buttercup and others. Will kill pasture legumes, but reseeding is usually possible the next growing season. On most weeds apply in March to mid-summer when actively growing. Most perennials will require higher rates (see label). Always add nonionic surfactant at the rate of 1 quart/100 gal. of spray mix.
Pasture - Established, GRASS and WHITE CLOVER	2,4-D Amine 4L OR 2,4-D Low Volatile Ester 4EC	0.75-1.0 lb.	1.5-2 pts.	Can be used on all established mixtures of grass and white clover. Apply in March to early April for control of buttercup, musk thistle, dandelion and plantain. Apply in June for control of cocklebur, bitter sneezeweed, pigweed, spiny amaranth and ragweed. NOTE: The amine formulation is less volatile than low volatile ester formulations, but is less effective on hard-to-control species such as thistles, plantain and other perennials.
Pasture - Established, GRASS and ANNUAL LESPEDEZA	2,4-D Amine 4L	0.5-0.75 lb.	1-1.5 pts.	Can be applied when lespedeza is 3 to 7 inches tall (normally mid-June). Earlier applications will result in more severe injury.
Pasture – Established GRASS ONLY	Aim 2 EC (carfentrazone)	0.016 - 0.023 lb.	1 – 1.5 oz.	Use for control of a limited number of broadleaf weeds under 4 inches tall, such a pigweeds, black nightshade, and velvetleaf. Do not make applications less than 7 days apart. Always add nonionic surfactant at the rate of 1 quart/100 gal. of spray mix.
Pasture - Established, GRASS ONLY	2,4-D Ester 4EC	2.0 lbs.	2 qts.	For wild garlic control, apply in October to mid-November or March to mid-April when daytime temperature is at least 65 F. Repeat twice annually for 2 years to eliminate wild garlic. This same program is effective on buckhorn plantain. This rate of 2,4-D will kill all legumes, including established white clover.
Pasture –Established, GRASS ONLY	ForeFront R&P (aminopyralid + 2,4-D)	0.06 + 0.5 – 0.11 + 0.87 lbs.	1.5 – 2.6 pts.	Use for control of buttercups, thistles, cocklebur, pigweeds, bitter sneezeweed, horsenettle, tall ironweed, plantains, beggarweed, and several others. See label for individual weed rates. Will kill pasture legumes, but reseeding may be possible one year later (see label). Always add a nonionic surfactant at the rate of 1 quart /100 gal. of spray mix.
	Grazon P+D (picloram + 2,4-D) For use only in approved TN counties. See page 77.	0.14 + 0.5 – 0.2 + 0.75	2-3 pts.	This is a Restricted Use Pesticide (RUP) which requires a license to purchase and apply. Use for thistles, horsenettle, ragweed, cocklebur, buttercup and others. Will kill pasture legumes, but reseeding may be possible one year later. On most weeds apply in March to mid-summer when actively growing. Most perennials will require higher rates (see label). Always add nonionic surfactant at the rate of 1 quart/100 gallons of spray mix.
	Milestone (aminopyralid)	0.063 - 0.11 lb.	4 - 7 oz.	Use for control of buttercups, thistles, cocklebur, pigweeds, bitter sneezeweed, horsenettle, tall ironweed, and several others. Weak on plantains. Control may be improved by tank mixing with 2,4-D. A limited number of weeds such as cocklebur and smartweed may be controlled with 3 oz./A. See label for individual weed rates. Will kill pasture legumes, but reseeding may be possible one year later. Always add a nonionic surfactant at the rate of 1 quart/100 gallons of spray mix.

	Rage D-Tech (carfentrazone + 2,4-D ester)	0.008 +0.25 – 0.033+1.0	0.5 – 2.0 pts.	Broader spectrum control than Carfentrazone (Aim) applied alone. Applications to the established grasses may be made up to the boot stage. Add non-ionic surfactant at the rate of 1qt./100 gal. of spray mix.
	Redeem R&P (triclopyr + clopyralid)	0.56 + 0.19 - 0.84 + 0.28	2-3 pts.	For use when products containing 2,4-D are not an option. Use for thistles, ragweed, cocklebur, buttercup and others. Will kill pasture legumes, but reseeding is usually possible the next growing season. On most weeds apply in March to mid-summer when actively growing. Most perennials will require higher rates (see label). Always add nonionic surfactant at the rate of 1 quart/100 gallons of spray mix.
	Surmount (picloram + fluroxypyr) For use only in approved TN counties. See page 77.	0.13 + 0.13- 0.5 + 0.5	1.5 – 6 pts.	This is a Restricted Use Pesticide (RUP) which requires a license to purchase and apply. Use for brush control plus residual broadleaf weed control. Especially good on blackberry, ironweed, hosenettle, thistles, etc. For woody plant control, apply in summer after plants have fully leafed out. For blackberry, apply in summer after fruit drop when good moisture is available. Usual broadcast rates for woody plant control: 3-4 pints/acre. Always add nonionic surfactant at the rate of 1 quart/100 gallons of spray mix.
	PastureGard (triclopyr + fluroxypyr)	0.38 + 0.13 - 1.5 + 0.5	2-8 pts.	Use when brush or woody plants have begun to establish in pasture. May be tank-mixed with other products to improve control of herbaceous weeds. Excellent control of sericia lespedeza. Especially good on blackberry and other woody plants. For woody plant control, apply in summer after plants have fully leafed out. For blackberry, apply in summer after fruit drop when good moisture is available. Usual broadcast rates for woody plant control: 3-4 pints/acre. May be used on fencerows and for individual plant treatments of trees and brush. Always add nonionic surfactant at the rate of 1 quart/100 gallons of spray mix.
Sorghum-Sudangrass Hybrids - POSTEMERGENCE	Weedmaster 3.87SL (dicamba + 2,4-D Amine)	(0.125 + 0.36) to (0.5 + 1.4 lbs.)	1-4 pts.	Will usually give control of a wider range of weeds than either herbicide alone. Only partially effective on difficult-to-control perennials such as dock, brambles and hosenettle. High rates (see label) required for difficult-to- control species. Will kill all pasture legumes.
	AAtrex 4L or 90WDG (atrazine)	2.0 lbs.	2 qts. or 2.2 lbs.	Apply overtop once a stand is obtained and before weeds exceed 1.5 inches in height. Do not apply after crop is 12 inches in height. See label for surface and groundwater protection measures. Atrazine is not labeled on sweet sorghum.

*See Table for Grazing, Hay Cutting and Slaughter Restrictions.