## PERENNIAL GRASS: PERENNIAL GRASS INSECT CONTROL

(Including bermudagrasses, bahiagrasses, fescues, and other perennial pasture grasses)

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PEST	MATERIAL AND FORMULATION <sup>1</sup>	MOA	AMOUNT PER ACRE	REMARKS AND PRECAUTIONS
Bahiagrass borer, billbug larvae, white grubs, white- fringed beetle larvae				No effective insecticides labeled for control of these insects in pastures. If practical, rotate fields to crops where preplant or at-planting insecticides can be used to control these insects.
inigeo coore ini tuo				Exception: Deep turning of infested pastures usually reduces bahiagrass borer populations to the point that bahiagrass or other grasses can be reseeded into the pasture.
Bermudagrass Stem Maggot	Various pyrethroids (zeta-cypermethrin, cyfluthrin, lambda-cyhalothrin, etc)	3A	Lowest label rate	Apply 7-10 days after cutting if significant damage was noted.
Chinch bug	Mow or burn.			WHEN TO TREAT FOR INSECTS IN PERENNIAL-GRASS PASTURES
	lambda-cyhalothrin Karate	3A	1.28-1.92 oz	FOLIAGE FEEDING CATERPILLARS (armyworm, fall armyworm, mocis grassworms, sod webworms, yellowstriped armyworm): Treat when larval populations of these insects (any one or any combination) exceed
	zeta-cypermethrin Mustang Max	3A	2.24-4 oz	larvae (1/2" long or larger) per square foot.         APHIDS: Treat if heavy infestations are causing leaf discoloration over large areas of the field.
Cutworms	Materials applied for armyworms will give helpful control.			CHINCH BUGS: Treat if populations are causing grass leaves to wilt over large areas of the field.
Armyworm, Caterpillars, Fall armyworm, Striped Grass Looper	<i>carbaryl</i> Sevin 80S 50WP	1A	1½-1 7/8 lb 2-3 lb	CUTWORMS, FLEA BEETLES, GRASSHOPPERS: Treat if heavy populations appear to be defoliating grass excessively.
	<i>chlorantraniliprole</i> Prevathon	28	14-20 oz	FIRE ANTS: Treat in pastures where heavy livestock birthing will occur. In hay pastures, treat when mounds are so numerous they interfere with haying operations.
	<i>cyfluthrin</i> Baythroid XL	3A	2.6-2.8	GREEN JUNE BEETLE LARVAE: Treat when populations average 1 larva per square yard.
	<i>diflubenzuron</i> Dimilin 2L	15	1-2 oz	LEAFHOPPERS: Treat if heavy infestations are causing the grass to appear off-color or unthrifty.
	lambda-cyhalothrin Karate	3A	1.28-1.92 oz	SPITTLEBUGS: Treat when 1 or more adult spittlebug is found per square foot.
	lambda-cyhalothrin +	28	5-9 oz	THRIPS: Treat if heavy infestations are causing discolorations and damage over large areas of the field. PESTICIDE USE PRECAUTIONS Apply any of the pesticides listed in this table with aerial or ground equipment as label directs. Where a range of rates is given for a material, use the low rate on low-growth grass or small larvae and the high rate on dense gras growth or large larvae.
	<i>chlorantraniliprole</i> Voliam Xpress			
	methoxyfenozide Intrepid 2F	18	4-8 oz	
	<i>spinosad</i> Tracer	5	1-2 oz	<u>Amdro</u> : 7 day PHI for hay. Okay for grazing.
	<i>methomyl</i> Lannate2.4 LV	1A	1-2 pt 0.25-0.5 lb	Baythroid: 0 day PHI for hay and grazing, see label for other restrictions.
	90SP (Use methomyl on			carbaryl (Sevin, etc.): Do not graze or cut for hay for 14 days after application.
	bermudagrass only.) zeta-cypermethrin	3A		<u>cypermethrin (Mustang MAX)</u> : 0 day PHI for hay or forage; Do not apply more than 0.10 lb/A/season.
	Mustang Max	511	2.24-4 oz	diflubenzuron (Dimilin): 0 day for grazing; 1 day PHI for hay; no more than 2 oz/cutting.

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Fire ants	Hydramethylnon	20A	1-1.5 lb	PESTICIDE USE PRECAUTIONS
	Amdro			Apply any of the pesticides listed in this table with aerial or ground equipment as label directs. Where a range of rates is given for a material, use the low rate on low-growth grass or small larvae and the high rate on dense grass growth or large larvae.
	Methoprene Extinguish	7A		Intrepid: 0 day grazing interval, 7 day PHI for hay. One application per cutting.
				Karate: 0 day grazing restriction, 7 day PHI for hay, see label for application restrictions.
	spinosad Justice	5	mound treatment only	<u>methomyl</u> : Do not cut for hay within 3 days, or graze or feed treated crop within7 days of last application. Do not apply more than 0.9 lb ai/acre/crop. Do not make more than 4 applications per crop.
				methyl parathion: Do not graze or cut for hay within 15 days of application.
				spinosad (Tracer): Do not harvest hay or fodder for 3 days. Do not graze until spray has dried. Do not apply more than 6 ozs. per season.
				Voliam Xpress and Prevathon (chlorantraniliprole): 0 day PHI for forage or grazing; 7 day PHI for hay.
Flea beetles	Carbaryl as applied for arm	iyworm may	give helpful control.	
	<i>lambda-cyhalothrin</i> Karate	3A	1.28-1.92 oz	
Grasshoppers	malathion 8EC		20 fl oz	
	<i>cyfluthrin</i> Baythroid XL	3A	2.6-2.8	
	<i>lambda-cyhalothrin</i> Karate	3A	1.28-1.92 oz	
	Sevin 4L Sevin 80S	1A	1 qt 1.5 lb	
	zeta-cypermethrin Mustang Max	3A	2.24-4 oz	
Green June beetle larvae	carbaryl Sevin 80S 50WP	1A	1 7/8 lb 3 lb	
	lambda-cyhalothrin + chlorantraniliprole Voliam Xpress	28	5-9 oz	
Leafhoppers	lambda-cyhalothrin Karate	3A	1.28-1.92 oz	
	zeta-cypermethrin Mustang Max	3A	2.24-4 oz	
Mole crickets	No economically effective	materials cu	rrently labeled.	

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<i>carbaryl</i> Sevin 80S 50WP	1A	1 ¼ lb 2 lb	
<i>diflubenzuron</i> Dimilin 2L	15	1-2 oz	
<i>lambda-cyhalothrin</i> Karate	3A	1.28-1.92 oz	
<i>carbaryl</i> Sevin 80S 50WP	1A	1 ¼ lb 2 lb	
<i>diflubenzuron</i> Dimilin 2L	15	1-2 oz	
<i>lambda-cyhalothrin</i> Karate	3A	1.28-1.92 oz	
<i>carbaryl</i> (Sevin) as applied control. (Control of immat	d for armywor tures may requ	rm may give helpful iire cut and burn approach.)	
<i>lambda-cyhalothrin</i> Karate	3A	1.28-1.92 oz	
<i>zeta-cypermethrin</i> Mustang Maxx	3A	2.24-4 oz	
	carbaryl         Sevin 80S         50WP         diflubenzuron         Dimilin 2L         lambda-cyhalothrin         Karate         carbaryl         Sevin 80S         50WP         diflubenzuron         Dimilin 2L         lambda-cyhalothrin         Karate         carbaryl (Sevin) as applied         control. (Control of immate         lambda-cyhalothrin         Karate         zeta-cypermethrin	carbaryl Sevin 80S 50WP1Adiflubenzuron Dimilin 2L15lambda-cyhalothrin Karate3Acarbaryl Sevin 80S 50WP1Adiflubenzuron Dimilin 2L15lambda-cyhalothrin L3Adiflubenzuron Dimilin 2L15lambda-cyhalothrin Karate3Acarbaryl (Sevin) as applied for armywor control. (Control of immatures may required lambda-cyhalothrin Karate3Acarbaryl (Sevin) as applied for armywor control. (Control of immatures may required lambda-cyhalothrin Karate3A	carbaryl Sevin 80S 50WP1A 1 ¼ lb 2 lbdiflubenzuron Dimilin 2L151-2 ozlambda-cyhalothrin Karate3A1.28-1.92 ozcarbaryl SowP1A1 ¼ lb 2 lbcarbaryl diflubenzuron Dimilin 2L1Acarbaryl Dimilin 2L1Acarbaryl Dimilin 2L1Acarbaryl 2 lb1Acarbaryl 2 lb14diflubenzuron Dimilin 2L15lambda-cyhalothrin Karate3Acarbaryl (Sevin) as applied for armyworm may give helpful control. (Control of immatures may require cut and burn approach.)lambda-cyhalothrin Karate3Alambda-cyhalothrin Karate3Acarbaryl (Sevin) as applied for armyworm may give helpful control. (Control of immatures may require cut and burn approach.)lambda-cyhalothrin Karate3Acarbaryl (Sevin) as applied for army or may give helpful control. (Control of immatures may require cut and burn approach.)lambda-cyhalothrin Karate3A