

TEMPORARY SUMMER GRAZING INSECT CONTROL

(Millets, sudan grass, sorghum-sudan hybrids)

Will Hudson, Extension Entomologist and David Buntin, Research Entomologist

PEST	MATERIAL AND FORMULATION ¹	AMOUNT PER ACRE	REMARKS AND PRECAUTIONS
Aphids	malathion 8EC	15 to 20 fl. ozs.	WHEN TO TREAT FOR INSECTS IN FORAGE GRASSES
	zeta-cypermethrin (Mustang Max)	2.24 to 4.0 ozs.	
Armyworm, Fall Armyworm, Cutworms, Yellowstriped armyworm	carbaryl (Sevin) 80S 50WP	1 1/4 to 1 7/8 lbs. 2 to 3 lbs.	APHIDS: Treat for corn leaf aphid if heavy infestations are causing leaves to dry and die over large areas of a field. Treat for greenbug or yellow sugarcane aphid if populations of these aphids are killing 3 or more leaves per plant.
	Lorsban 4E	1 to 2 pts.	"BUDWORMS" (usually fall armyworm and corn earworm): Treat when more than 75 percent of the plants are infested with larvae.
	Tracer	1.5 to 3 ozs.	CHINCH BUG: Treat if bugs become numerous and wilting leaves are noticed.
	zeta-cypermethrin (Mustang Max)	2.24 to 4.0 ozs.	EUROPEAN CORN BORER: If plants are heavily infested (central growing shoots dying or breaking over on a high percentage of the plants), salvage crop by grazing or cutting for fodder.
Chinch bug	Lorsban 4E	1 to 2 pts.	FLEA BEETLES, GRASSHOPPERS: Treat if heavy populations are causing excessive foliage loss.
	zeta-cypermethrin (Mustang Max)	2.24 to 4.0 ozs.	GREEN JUNE BEETLE LARVAE: Treat when populations average 1 larva per square yard.
Corn earworm	The materials listed for armyworm give control.		PESTICIDE USE PRECAUTIONS
Flea beetles	carbaryl (Sevin) as applied for armyworm may give helpful control.		
Grasshoppers	carbaryl (Sevin) 80S 50 WP	1 7/8 lbs. 3 lbs.	
	malathion 8EC	15 to 20 fl. ozs.	<u>chlorpyrifos (Lorsban)</u> : Check label for grazing and crop restrictions.
	zeta-cypermethrin (Mustang Max)	2.24 to 4.0 ozs.	<u>Cypermethrin (Mustang Max)</u> : 0 day PHI for sorghum, 45 day PHI for millets for forage.
			<u>malathion</u> : Apply as needed up to day of grazing or harvest for hay.
			<u>methomyl</u> : 3-day harvest interval. Do not apply more than twice per crop. Do not apply more than 0.9 lb/acre/crop.
Green June beetle larvae	carbaryl (Sevin) 80S 50 WP	1 7/8 lbs. 3 lbs.	<u>spinosad (Tracer)</u> : Not labeled on all millets. Do not apply within 7 days of grain harvest or 14 days of forage harvest.
<p>CAUTION: Check labels carefully. Labeling varies, and not all formulations of these materials can be used on forage grasses.</p> <p>¹Abbreviations used are: EC = emulsifiable concentrate, SP = soluble powder, S = sprayable powder, WP = wettable powder</p> <p>Numbers following liquid formulations indicate lbs. active ingredient per gallon; those following solids indicate percent active ingredient.</p>			

TEMPORARY SUMMER GRAZING WEED CONTROL

(Millets, Sudan Grasses and Sorghum-Sudan Hybrids)

Tim R. Murphy, Extension Agronomist-Weed Science

USE STAGE/ AND HERBICIDE	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
	AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
TEMPORARY SUMMER GRAZING CROPS - Millets, Sorghum, Sudan Hybrids, etc.			
2,4-D (various trade names) 4 lbs./gal.	1.0 pt.	0.5	Apply to emerged broadleaf weeds when crop is 8 to 12 inches tall. Do not graze lactating dairy animals for 14 days after treatment, or cut for hay for all types of livestock for 30 days after treatment. (Grazing and haying restrictions may vary - refer to product label). Refer to specific herbicide label for use restrictions. A 2,4-D formulation labeled on millet is Formula 40.
2,4-D + dicamba (Weedmaster) 2.9 lbs. + 1 lb./gal.	1.0 pt. to 2.0 pts.	0.36 + 0.125 to 0.72 + 0.25	Apply to emerged broadleaf weeds when crop is 8 to 12 inches tall. Do not graze lactating dairy animals within 7 days. There is no restriction between application and grazing for non-lactating animals. Do not cut for hay within 37 days after treatment. Do not graze meat animals in treated areas within 30 days of slaughter. Weedmaster and Outlaw will severely injure or kill clovers or alfalfa.
Outlaw 1.45 + 1.1 lbs./gal.	1.0 pt. to 2.0 pts.	0.18 + 0.14 to 0.36 + 0.27	
FORAGE SORGHUM			
metolachlor (Dual) 8E	1.5 - 2.0 pts.	1.5 - 2.0	Apply after planting seed treated with Concep or Screen seed protectant. Apply before crop and weeds emerge.
FORAGE SORGHUM AND SORGHUM-SUDAN			
atrazine 80W atrazine 4L atrazine 90DG (various trade names)	1.5 lbs. 1.2 qts. 1.3 lbs.	1.2 1.2 1.2	Apply with 1.0 gal./A of emulsifiable oil or 1.0 qt./A of crop oil concentrate after sorghum reaches the 3-leaf growth stage but before it exceeds 12 inches in height. Controls broadleaf weeds 2 to 3 inches tall and newly-emerged (1-leaf) annual grasses. DO NOT apply with fluid fertilizers or when sorghum is under stress from cold, wet weather, poor fertility or other factors, or when sorghum is wet and tender from a recent rainfall. DO NOT graze or feed treated forage for 21 days after application.

TEMPORARY WINTER GRAZING INSECT CONTROL

(Rye, Oats, Wheat and Ryegrass)

David Buntin, Research/Extension Entomologist

PEST	MATERIAL AND FORMULATION ¹	AMOUNT OF FORMULATION PER ACRE	LB. ACTIVE INGREDIENT PER ACRE	REMARKS AND PRECAUTIONS
Aphids	Seed Treatments Gaucho XT Gaucho 600, Attendant 600	3.4 fl. oz./100 lb. seed 0.8 - 2.4 oz./100 lb. seed	0.03 lb / 100 lb seed 0.03 - 0.09 lb./ 100 lb seed	Treat for aphids if large numbers occur and cause leaves to dry and die over large areas. Bird cherry oat aphids also can infect wheat and oats with barley yellow dwarf virus which may reduce later forage growth. NOTE: Gaucho, Attendant are not labeled for use on ryegrass. Gaucho XT also contains Raxil and Apron fungicides.
	Post Emergence Karate II Zeon (2.08)	1.28 - 1.92 fl. oz.	0.02 - 0.03	
	Malathion 57EC / 5EC Malathion 8EC	1.5 pt. 1.0 - 1.25 pt.	0.94 1.0 - 1.25	
	Methyl 4EC (parathion)	1.0 - 1.5 pt.	0.5 - 0.75	
	Mustang MAX	3.2 - 4.0 fl. oz.	0.02 - 0.025	
Fall armyworm, True armyworm	Karate II Zeon (2.08)	1.28 - 1.92 fl. oz.	0.02 - 0.03	Fall armyworm and other foliage feeding caterpillars generally occur in the fall before first freeze. True armyworm infests fields in late winter and early spring. Treat if defoliation is occurring and 3 or more larvae per square foot are present. Use 20-30 gal. of liquid per acre. Tracer and methyl parathion are most effective against small larvae.
	Lannate 2.4LV Lannate 90SP	0.75 - 1.5 pt. 0.25 - 0.5 pt.	0.225 - 0.45 0.225 - 0.45	
	Methyl 4EC	1.0 - 1.5 pt.	0.5 - 0.75	
	Mustang MAX	2.8 - 4.0 fl. oz.	0.0175 - 0.025	
	Tracer 4SC	1.5 - 2.0 fl. oz.	0.0465 - 0.063	
Grasshoppers	Karate II Zeon (2.08)	1.28 - 1.92 fl. oz.	0.02 - 0.03	Generally early fall before freeze and along field edge. Treat if large numbers are causing excessive foliage loss.
	Malathion 57EC, 5EC Malathion 8EC	1.5 pt. 1.0 - 1.25 pt.	0.94 1.0 - 1.25	
	Mustang MAX	3.2 - 4.0 fl. oz.	0.02 - 0.025	
Green June beetle larvae	Sevin 80S Sevin XLR Plus, 4F	1.875 lb. 1.5 qt.	1.5 1.5	Sevin is not labeled for use in rye, oats, or ryegrass. Therefore, treat soil surface before planting if populations average 1 or more grub per square yard. This treatment will not control other beetle grub species.
Lesser corn-stalk borer				No feasible chemical control available. Gaucho XT or 600 as applied for aphid control may provide useful suppression.
Water grain mite	Karate II Zeon (2.08)	1.92 fl. oz.	0.03	Treat when mites are present and plants are stunted and discolored.
	Mustang MAX	4.0 fl. oz.	0.025	

See Pesticide Precautions for temporary winter grazing next page

TEMPORARY WINTER GRAZING INSECT CONTROL (continued)

PESTICIDE USE PRECAUTIONS

Apply materials with aerial or ground equipment as label directs. When range of rates is given, use the lowest rate on small plant or small larvae and the high rates on larger plants or larger larvae. Use sufficient gallonage of spray for thorough acreage especially of large amount of foliage is present.

CAUTION: Labeling of carbaryl, malathion and methyl parathion products varies and not all formulations are labeled for use on forage grasses.

Gauche XT, 600, Attendant 600 (imidacloprid): Do not graze or feed livestock on treated areas for 45 days after planting. Imidacloprid is not labeled for use on ryegrass. REI = 12 hours.

Karate Zeon (lambda cyhalothrin): Apply up to 0 days for grazing; Do not harvest for hay until 7 days after last application. Do not apply more than 5.76 fl. oz. per season. REI = 24 hours.

Lannate (methomyl): Do not make more than 4 applications per crop. Do not apply more than 1.8 lbs. AI per acre per crop. Do not graze or harvest forage within 10 days of last application. REI = 48 hours.

Malathion, others (malathion): Do not apply within 7 days of grazing or forage harvest. REI = 12 hours.

Methyl 4EC (methyl parathion): Do not graze with 15 days of last application. Penncap M brand is not labeled for use on rye. REI = 4 days.

Mustang MAX (zeta cypermethrin): Apply up to 0 days for forage and hay; and 7 days for straw. Do not apply directly to livestock. Do not make applications less than 7 days apart for forage or hay. Do not apply more than 0.025 lbs. (AI) per acre per cutting. REI = 12 hours.

Sevin (carbaryl): Apply before planting. Carbaryl is not labeled for use on plant stands, rye, oats or ryegrass. Do not graze or harvest within 7 days of application. REI = 12 hours.

Tracer (spinosad): Do not apply within 14 days of grazing or forage harvest. Most effective against small caterpillars. REI = 4 hours.

TEMPORARY WINTER GRAZING WEED CONTROL

Tim R. Murphy, Extension Agronomist-Weed Science

USE STAGE/ AND HERBICIDE	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
	AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
TEMPORARY WINTER GRAZING CROPS - Small Grains, Ryegrass			
2,4-D (various trade names) 4 lbs./gal.	1 pt. - 1 qt.	0.5 - 1.0	Apply in December, January or February to control swinecress, blessed thistle, wild garlic, curly dock and similar winter weeds after small grain tillering but before jointing. Grazing restrictions may vary among the different 2,4-D products. Several 2,4-D labels restrict grazing for dairy animals or meat animals being finished for slaughter for 14 days after treatment. For Banvel, restrict grazing for lactating dairy animals for 7 days after treatment and remove meat animals from treated areas 30 days prior to slaughter. For Banvel, there is no waiting period between treatment and grazing for non-lactating animals. Refer to specific herbicide label for additional use information.
dicamba (Banvel) 4.0 lbs./gal.	0.5 pt.	0.25	
2,4-D + dicamba (Weedmaster) 2.9 lbs. + 1 lb./gal.	1.0 pt. to 2.0 pts.	0.36 + 0.125 to 0.72 + 0.25	Apply to emerged broadleaf weeds when crop has 2 to 4 tillers. Do not graze lactating dairy animals within 7 days. There is no restriction between application and grazing for non-lactating animals. Do not cut for hay within 37 days after treatment. Do not graze meat animals in treated areas within 30 days of slaughter. Weedmaster and Outlaw will severely injure or kill clovers or alfalfa.
Outlaw 1.45 + 1.1 lbs./gal.	1.0 pt. to 2.0 pts.	0.18 + 0.14 to 0.36 + 0.27	
SUPPRESSION OF BERMUDAGRASS OR BAHIA GRASS SODS			
paraquat (Gramoxone Inteon) 3.0 lbs./gal.	1.0 - 2.0 pts..	0.25 - 0.5	Apply in early fall to sod not more than 3 inches tall, just prior to or at the time of seeding clovers or winter grasses. Add surfactant according to label directions.

