GRAIN MILLET: GRAIN MILLET INSECT CONTROL

(Pearl millet for grain production)

David Buntin, Research/Extension Entomologist

PEST	INSECTICIDE	MOA	AMOUNT PER ACRE	LB ACTIVE INGREDIENT PER ACRE	REI/PHI (Hours or Days)	WHEN TO TREAT, REMARKS AND PRECAUTIONS
Soil insects: wireworms	*imidacloprid* Gaucho 600, Attendant 600, Axcess, other brands	4C	6.4 fl oz/ 100 lb of seed	–	12H/ 45 D grazing	Seed treatments also may suppress aphids for 2-3 weeks after planting.
	thiamethoxam Cruiser 5FS	4C	0.75-1.33 fl oz/ 100 lb seed	–	12 H/ 45 D	
Chinch bug, False chinch bug	*alpha-cypermethrin* Fastac CS, other brands 0.83	3A	3.8 fl oz	0.025	12 H/ 45 D forage	Inspect seedlings soon after emergence. Apply after planting when stunting and discoloration are visible and bugs are present. In wide rows, direct spray at base of plants. In narrow rows, broadcast application. Use at least 10 gal of spray mix/A. Spray for thorough coverage. Applications to dense foliage and after boot stage may not be effective. **NOTE:** *Imidacloprid* seed treatment also may suppress chinch bugs on seedlings for 2-3 weeks.
	beta-cyfluthrin Baythroid XL 1	3A	2.4 fl oz	0.019	12 H/ 30 D	
	spinosad + gamma cyhalothrin Consero	5 + 3A	3.05 fl oz	–	24 H/ 30 D	
	zeta-cypermethrin Mustang Maxx 0.8	3A	4 fl oz	0.025	12 H/ 14 D	
Lesser cornstalk borer	*zeta-cypermethrin* Mustang Maxx 0.8	3A	4 fl oz	0.025	12 H/ 14 D	Very difficult to control. Broadcast application may provide some control. Do not plant millet into burnt crop stubble.
Fall armyworm and other worms in the whorl	*alpha-cypermethrin* Fastac CS, other brands 0.83	3A	3.8 fl oz	0.025	12 H/ 14 D	Millet is very tolerant of whorl stage defoliation. Treat when 50% of whorls are infested and larvae are present. Blackhawk/Tracer is most effective against smaller larvae.
	chlorantraniliprole Prevathon 0.43	28	14-20 fl oz	0.047-0.067	4 H/ 1 D	
	beta-cyfluthrin Baythroid XL 1	3A	2.4 fl oz	0.019	12 H/ 30 D	
	spinosad + gamma cyhalothrin Consero	5 + 3A	3.05 fl oz	–	24 H/ 30 D	
	spinosad Blackhawk (36%)	5	1.7-3.3 oz	0.038-0.075	4 H/ 7 D	
	zeta-cypermethrin Mustang Maxx 0.8	3A	4 fl oz	0.025	12 H/ 14 D	

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Headworms: corn earworm, fall armyworm, sorghum webworm	*alpha-cypermethrin* Fastac CS, other brands 0.83	3A	3.8 fl oz	0.025	12 H/ 14 D	Larvae chew and damage or destroy seed. Treat when 1 or more earworms and armyworms, or 5 or more sorghum webworms per grain head are present. Blackhawk/Tracer is most effective against smaller larvae.
	chlorantraniliprole Prevathon 0.43	28	14-20 fl oz	0.047-0.067	4 H/ 1 D	
	spinosad + *gamma cyhalothrin* Consero	5 + 3A	3.05 fl oz	–	24 H/ 30 D	
	spinosad Blackhawk (36%)	5	1.7-3.3 oz	0.038-0.075	4 H/ 7 D	
	zeta-cypermethrin Mustang Maxx 0.8	3A	4 fl oz	0.025	12 H/ 14 D	
Stink bugs, Leaffooted bugs	*alpha-cypermethrin* Fastac CS, other brands 0.83	3A	1.8-3.8 fl oz	0.012-0.025	12 H/ 14 D	Infest grain heads, feeding causes shriveled seed. Threshold: 3 bugs/ head at milk stage; 5 bugs/head at dough stage. Do not treat after medium dough stage.
	beta-cyfluthrin Baythroid XL 1	3A	1.8-2.4 fl oz	0.014-0.019	12 H/ 30 D	
	spinosad + *gamma cyhalothrin* Consero	5 + 3A	2.0-3.05 fl oz	–	24 H/ 30 D	
	zeta-cypermethrin Mustang Maxx 0.8	3A	3.2-4 fl oz	0.02-0.025	12 H/ 14 D	
False chinch bugs on seed heads	*alpha-cypermethrin* Fastac CS, other brands 0.83	3A	3.2-3.8 fl oz	0.02-0.025	12 H/ 14 D	Treat when 100 bugs/head are present in milk to soft dough stage.
	zeta-cypermethrin Mustang Maxx 0.8	3A	3.2-4 fl oz	0.02-0.025	12 H/ 14 D	

Disease Control – Except for seed treatments, there are no fungicides labeled for use on pearl millet at this time.

PEARL MILLET FOR GRAIN WEED CONTROL

Eric P. Prostko, Extension Agronomist – Weed Science

HERBICIDE	MOA	BROADCAST RATE/ACRE		REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT		
PRE-EMERGENCE					
mesotrione Callisto 4SC	27	3-6 oz/A	0.188	12 H/ –	Callisto will provide pre-emergence control of large crabgrass and various pigweed species. Apply after planting but before crop emergence. Callisto may cause temporary crop injury in the form of bleaching or whitening. **Applications of Callisto to emerged pearl millet will result in severe crop injury.** Callisto rotational crop restrictions: field corn, grain sorghum – 0 months; small grains and sugarcane – 4 months; soybeans, cotton, peanuts, sunflowers, canola, tobacco – 10 months; other crops – 18 months.
POST-EMERGENCE					
2,4-D amine Various trade names 3.8 SL	4	16 oz	0.475	48 H/ Forage 7 D	*2, 4-D* is very effective on common broadleaf weeds such as pigweed and morningglory. Apply when weeds are small and after crop is tillered but before jointing stage of growth. Do not apply before tillering stage or during early boot through milk stage of growth.