



Bulletin

Extension

Control of Insect Pests of Field Crops

Bulletin 545 – 09

SMALL GRAINS

Management of insect pests of small grains often emphasizes non-chemical control measures. Hessian fly on wheat is controlled primarily by timing of sowing dates and the use of resistant varieties. Cereal leaf beetle on oats usually is controlled by beneficial parasites introduced from the beetle's native land.

However, populations of some pests, especially armyworms, may occur in numbers warranting rescue treatment with an insecticide. Following is a listing of insecticide products labeled for control of the pests that affect small grains. An asterisk (*) indicates use is restricted to certified applicators only.

Pest	Product Name (Common Name)	Amount per Acre	Pre-Harvest Interval (days)	When to Treat
Aphids	Baythroid * XL (β-cyfluthrin)	1.8 - 2.4 fl. oz.	30	Of the various aphid species that occur on small grains, only the greenbug causes damage that may warrant rescue treatment. Rescue treatment is warranted if an average of 50 greenbugs are found per linear ft of row on small plants in the fall or 100 per linear ft of row in the spring.
	CruiserMaxx (thiamethoxam) + Cruiser 5FS (thiamethoxam)	5 fl oz./100 lb. seed+ 0.48 - 1.00 fl. oz./100 lb. seed	AP - CST AP - CST	
	Dimethoate (dimethoate)	½ - ¾ pt. 400, 4EC or Dimate 4E 0.75 - 1.13 pt. 2.67	35 35	
	Grizzly Z* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Kaiso* 24WG (lambda-cyhalothrin)	1.33 - 2.0 oz	30	
	Lambda* (lambda-cyhalothrin)	1.28 - 1.92 fl. oz.	30	
	Lambda-Cy* EC (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	LambdaStar* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Lambda-T* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Lannate* (methomyl)	¼ - ½ lb. SP or ¾ - 1½ pt. LV	7	
	Malathion (malathion)	1½ pt. 5EC or 1 - 1¼ pt. 8-E 1½ - 2 pt. 57 EC	7 7	
	Mustang MAX* (zeta-cypermethrin)	3.20 - 4.0 oz.	14	
	Mystic Z* (lambda-cyhalothrin)	1.92 fl. oz.	30	
	PennCap-M* (methyl parathion)	2 - 3 pt.	15	

Pest	Product Name (Common Name)	Amount per Acre	Pre-Harvest Interval (days)	When to Treat
Aphids (cont.)	Proaxis* (gamma-cyhalothrin)	3.84 fl. oz.	30	
	Prolex* (gamma-cyhalothrin)	1.02 - 1.54 fl. oz.	30	
	Respect* EC (zeta-cypermethrin)	3.2 - 4 oz.	14	
	Senator 600 FS (imidacloprid)	0.4 - 2.8 fl. oz./cwt seed	AP - CST	
	Silencer* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Taiga* Z (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Tombstone Helios* (cyfluthrin)	1.8 - 2.4 fl. oz.	30	
	Warrior* (lambda-cyhalothrin) Warrior II* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz. 1.28 - 1.92 fl. oz.	30 30	
Armyworm on Wheat	Baythroid * XL (β-cyfluthrin)	1.8 - 2.4 fl. oz.	30	Rescue treatment is recommended if 6 or more armyworm larvae are found per foot of row or if head cutting occurs. Where larvae are abundant enough - justify action, treatment should be applied when larvae are in their early stage of development.
	Carbaryl 4L (carbaryl)	1 - 1½ qt.	21	
	Entrust ^a (spinosad)	1 - 2 oz.	21	
	Grizzly Z* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Kaiso* 24WG (lambda-cyhalothrin)	1.33 - 2.0 fl. oz.	30	
	Lambda* (lambda-cyhalothrin)	1.28 - 1.92 fl. oz.	30	
	Lambda-Cy* EC (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	LambdaStar* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Lambda-T* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Lannate* (methomyl)	¼ - ½ lb. SP or ¾ - 1½ pt. LV	7	
	Malathion (malathion)	2 pt. 57 EC or 1 - 1¼ pt. 8	7	^a Listed by the Organic Materials Review Institute (OMRI) for use in organic production.
	Mustang MAX* (zeta-cypermethrin)	1.76 - 4.0 oz.	14	
	Mystic Z* (lambda-cyhalothrin)	1.28 - 1.92 fl. oz.	30	
	PennCap-M* (methyl parathion)	2 - 3 pt.	15	
	Proaxis* (gamma-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Prolex* (gamma-cyhalothrin)	1.02 - 1.54 fl. oz.	30	
	Radiant SC (spinetoram)	3 - 6 fl. oz.	21	
	Respect* EC (zeta-cypermethrin)	3.2 - 4 oz.	14	
	Sevin (carbaryl)	1 - 1½ qt. 4F or XLR Plus	21	
	Silencer* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	

Pest	Product Name (Common Name)	Amount per Acre	Pre-Harvest Interval (days)	When to Treat
Armyworm on Wheat (cont.)	Taiga* Z (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Tracer (spinosad)	1 - 3 fl. oz.	21	
	Tombstone Helios* (cyfluthrin)	1.8 - 2.4 fl. oz.	30	
	Warrior* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Warrior II* (lambda-cyhalothrin)	1.28 - 1.92 fl. oz.	30	
Cereal Leaf Beetle	Baythroid*.b XL (β-cyfluthrin)	1.0 - 1.8 fl. oz.	30	Rescue treatment is warranted when two or more larvae are found per stem. a Listed by the Organic Materials Review Institute (OMRI) for use in organic production. b Labeled for use on wheat but not oats.
	Carbaryl 4L (carbaryl)	1 qt.	21	
	Entrust ^a (spinosad)	0.5 - 2 oz.	21	
	Grizzly Z* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Kaiso*.b 24WG (lambda-cyhalothrin)	1.33 - 2.0 fl. oz.	30	
	Lambda*.b (lambda-cyhalothrin)	1.28 - 1.92 fl. oz.	30	
	Lambda-Cy* EC (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	LambdaStar*.b (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Lambda-T*.b (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Lannate* (methomyl)	¼ - ½ lb. SP or ¾ - 1½ pt. LV	7	
	Malathion (malathion)	1 - 1½ pt. 5EC	7	
	Mustang MAX*.b (zeta-cypermethrin)	1.76 - 4.0 oz.	14	
	Mystic*.b (lambda-cyhalothrin)	1.28 - 1.92 fl. oz.	30	
	Proaxis*.b (gamma-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Prolex*.b (gamma-cyhalothrin)	1.02 - 1.54 fl. oz.	30	
	Radiant SC (spinetoram)	2 - 6 fl. oz.	21	
	Respect*.b EC (zeta-cypermethrin)	1.76 - 4 oz.	14	
	Sevin ^b (carbaryl)	1qt. 4F or XLR PLUS 1¼ lbs. 80S	21 21	
	Silencer*.b (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Taiga*.b Z (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30	
	Tracer (spinosad)	1 - 3 fl. oz.	30	
	Tombstone Helios*.b (cyfluthrin)	1.0 - 1.8 fl. oz.	21	
Warrior* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	30		
Warrior II* (lambda-cyhalothrin)	1.28-1.92 fl. oz.	30		

HESSIAN FLY

The problem of Hessian fly on wheat has been minimized by the development of resistant varieties and widespread adherence to planting wheat on or after fly-safe sowing date. The accompanying map depicts Ohio fly-free dates by county.

Wheat sown on or after the date indicated for each county will escape most egg deposition by the fall brood of Hessian fly. Egg-laying is completed within the 2- to 3-day female lifespan. Therefore, it is important to time autumn wheat sowing to escape most egg deposition on the plants.

CruiserMaxx Cereals (thiamethoxam) at 5 fl. oz./100 lb. seed + Cruiser 5FS (thiamethoxam) at 0.48 - 1.00 fl. oz./100 lb. seed and Senator 600 FS (imidacloprid) at 0.4 - 2.8 fl. oz./100 lb. of seed are also labeled for control of Hessian fly.

