



# Bulletin

Extension

## Control of Insect Pests of Field Crops

Bulletin 545 – 09

### ALFALFA

The pest complex affecting alfalfa includes a variety of insect populations of which one or more may become abundant enough to warrant insecticide treatment. In general, the alfalfa plant can tolerate a significant amount of feeding by a number of different insects before a rescue treatment is economically justified. However, insect pests such as potato leafhopper can cause significant injury to the alfalfa plant at very low population levels. Vigilance is needed to accurately determine when treatment is needed.

Following is a listing of insecticide products labeled for control of the pests that affect alfalfa. Also listed in this section is information about formulation and rates of chemicals for specific pests. An asterisk (\*) indicates that the use is restricted to certified applicators.

Pest	Product Name (Common Name)	Amount per Acre	Pre-Harvest Interval (days)	When to Treat
Alfalfa Weevil	Ambush* 25W (permethrin)	6.4 - 12.8 oz.	0 - 14	No action is warranted if no more than one late-instar weevil larvae are found per stem. If more than one larva is found per stem, early cutting or application of a rescue insecticide treatment should be implemented, depending on the value and height of the crop. Higher rates are for southern Ohio, where longer control may be required.  When possible, early cutting (alfalfa taller than 22 inches) should be practiced in place of chemical treatment to minimize upsetting populations of beneficial parasites.  For additional information about alfalfa weevil see FactSheet FC-ENT-0032.
	Arctic* 3.2 EC (permethrin)	4 - 8 fl. oz.	0 - 14	
	Baythroid* XL (β-cyfluthrin)	1.6 - 2.8 fl. oz.	7	
	Carbaryl 4L (carbaryl)	1½ qt.	7	
	Chlorpyrifos* 4E AG (chlorpyrifos)	1 - 2 pt.	14 - 21	
	Cobalt* (chlorpyrifos & gamma-cyhalothrin)	19 - 38 fl. oz.	14 - 21	
	Furadan* 4F (carbofuran)	½ - 2 pt.	7 - 28	
	Govern* 4E (chlorpyrifos)	1 - 2 pt.	14 - 21	
	Grizzly Z* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	7	
	Hatchet* (chlorpyrifos)	1 - 2 pt.	14 - 21	
	Imidan 70-W (phosmet)	1 - 1½ lb.	7	
	Kaiso* 24WG (lambda-cyhalothrin)	1.33 – 2.0 oz.	7	
	Lambda-Cy EC* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	7	
	LambdaStar* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	7	
	Lambda-T* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	7	
Lannate* (methomyl)	1 lb. SP or 3 pt. LV	7		

Pest	Product Name (Common Name)	Amount per Acre	Pre-Harvest Interval (days)	When to Treat
<b>Alfalfa Weevil</b> (cont.)	Lorsban* 4E (chlorpyrifos)	1 - 2 pt.	14 - 21	
	Malathion (malathion)	1½ - 2 pt. 5EC 1½ - 2¼ pt. 57 EC 1 - 2 pt. 8	0 0 0 - 7	
	Mustang MAX* (zeta-cypermethrin)	2.24 - 4 fl. oz.	3	
	Nufos* 4E (chlorpyrifos)	1 - 2 pt.	14 - 21	
	PermaStar* AG (permethrin)	4 - 8 oz.	14	
	Permethrin* 3.2 EC (permethrin)	4 - 8 oz.	0 - 14	
	Perm-UP* (permethrin)	4 - 8 fl. oz. 3.2 EC 6.4 - 12.8 oz. 25DF	14 14	
	Pounce* (permethrin)	6.4 - 12.8 oz. 25WP	0 - 14	
	Proaxis* (gamma-cyhalothrin)	2.56 - 3.84 fl. oz.	7	
	Respect* EC (zeta-cypermethrin)	2.24 - 4 oz.	3	
	Sevin (carbaryl)	1½ qt. 4F or XLR Plus 1⅞ lb. 80S	7 7	
	Silencer* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	7	
	Steward EC (indoxacarb) (larvae only)	6.7 - 11.3 fl. oz.	7	
	Taiga* Z (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	7	
	Tombstone Helios* (cyfluthrin)	1.6 - 2.8 fl. oz.	7	
	Warhawk* (chlorpyrifos)	1 - 2 pt.	14 - 21	
	Warrior* (lambda-cyhalothrin)	2.56 - 3.84 fl. oz.	7	
	Warrior II* (lambda-cyhalothrin)	1.28 - 1.92 fl. oz.	7	
	Whirlwind* (chlorpyrifos)	1 - 2 pt.	14 - 21	
	Yuma* 4E (chlorpyrifos)	1 - 2 pt.	14 - 21	
<b>Potato Leafhopper</b>	Ambush* 25W (permethrin)	3.2 - 12.8 oz.	0 - 14	Treatment for PLH is justified when the number of leafhoppers collected/10 sweeps is greater than the height of the alfalfa in inches.  The PLH threshold should be increased 3 times for those varieties rated greater than 50 percent PLH resistant after the stand is established.  For additional information see Fact Sheet FC-ENT-0033.
	Arctic* 3.2 EC (permethrin)	4 - 8 fl. oz.	0 - 14	
	Baythroid* XL (β-cyfluthrin)	0.8 - 1.6 fl. oz.	7	
	Carbaryl (carbaryl)	1 qt. 4L	7	
	Chlorpyrifos* 4E AG (chlorpyrifos)	1 - 2 pt.	14 - 21	
	Cobalt* (chlorpyrifos & gamma-cyhalothrin)	7-13 fl. oz.	7 - 14	
	Dimethoate (dimethoate)	½ - 1 pt. 400 or 4EC ½ - 1 pt. Dimate 4EC	10 10	
	Furadan* 4F (carbofuran)	1 - 2 pt.	14 - 21	

Pest	Product Name (Common Name)	Amount per Acre	Pre-Harvest Interval (days)	When to Treat
<b>Potato Leafhopper</b> (cont.)	Govern* 4E (chlorpyrifos)	½ - 1 pt.	7 - 14	
	Grizzly Z* (lambda-cyhalothrin)	1.92 - 3.20 fl. oz.	7	
	Hatchet* (chlorpyrifos)	½ - 1 pt.	7 - 14	
	Imidan 70-W (phosmet)	1 - 1½ lb.	7	
	Kaiso* 24WG (lambda-cyhalothrin)	1.0 - 1.67 oz.	7	
	Lambda-Cy EC* (lambda-cyhalothrin)	1.92 - 3.20 fl. oz.	7	
	LambdaStar* (lambda-cyhalothrin)	1.92 - 3.20 fl. oz.	7	
	Lambda-T* (lambda-cyhalothrin)	1.92 - 3.20 fl. oz.	7	
	Lorsban* 4E (chlorpyrifos)	½ - 1 pt.	7 - 14	
	Malathion (malathion)	1½ - 2 pt. 5EC 1½ - 2¼ pt. 57 EC 1 - 2 pt. (8)	0 0 0 - 7	
	Mustang MAX* (zeta-cypermethrin)	2.24 - 4 fl. oz.	3	
	Nufos* 4E (chlorpyrifos)	½ - 1 pt.	7 - 14	
	PermaStar* AG (permethrin)	4 - 8 oz.	14	
	Permethrin* 3.2 EC (permethrin)	4 - 8 oz.	0 - 14	
	Perm-UP* (permethrin)	4 - 8 fl. oz. 3.2EC 6.4 - 12.8 oz. 25DF	14 14	
	Pilot* (chlorpyrifos)	½ - 1 pt.	7 - 14	
	Pounce* (permethrin)	6.4 - 12.8 oz. 25 WP	0 - 14	
	Proaxis* (gamma-cyhalothrin)	1.92 - 3.20 fl. oz.	7	
	Respect* EC (zeta-cypermethrin)	2.24 - 4 oz.	3	
	Sevin (carbaryl)	1 qt. 4F or XLR PLUS 1¼ lb. 80S	7 7	
	Silencer* (lambda-cyhalothrin)	1.92 - 3.20 fl. oz.	7	
	Steward EC (indoxacarb)	9.2 - 11.3 fl. oz.	7	
	Taiga* Z (lambda-cyhalothrin)	1.92 - 3.20 fl. oz.	7	
	Tombstone Helios* (cyfluthrin)	0.8 - 1.6 fl. oz.	7	
	Warhawk* (chlorpyrifos)	½ - 1 pt.	7 - 14	
	Warrior* (lambda-cyhalothrin)	1.92 - 3.20 fl. oz.	7	
	Warrior II* (lambda-cyhalothrin)	0.96 - 1.60 fl. oz.	7	
	Whirlwind* (chlorpyrifos)	½ - 1 pt.	7 - 14	
	Yuma* 4E (chlorpyrifos)	½ - 1 pt.	7 - 14	