

# Alfalfa

## Insecticides Listed By Active Ingredient

Class	Active ingredient(s)	Product/Trade Name(s)	Signal word	OMRI?	Restricted Use?	Application via		Re-Entry (hours)	Days to Harvest
						Air	Chemigation		
1A	Carbamates								
	Carbaryl	Carbaryl, Sevin	Caution	No	No	Yes	Yes	12	7
	Methomyl	Lannate LV	Danger	No	Yes	Yes	Yes	48	7
1B	Organophosphate								
	Chlorpyrifos	Lorsban Advanced, Lorsban 4E,	Warning	No	Yes	Yes	Yes	24	7, 14 or 21
		Nufos, Vulcan, Warhawk							(rate dependent)
		Lorsban 75WG	Warning	No	No	Yes	Yes	24	7, 14, or 21
	Dimethoate	Cygon, Dimethoate (several)	Warning	No	No	Yes	No	48	10
		Cygon LV, Dimethoate 400	Warning	No	No	Yes	Yes	48	10
	Malathion	Malathion (several)	Caution	No	No	No	Yes	12	0, 7
		Fyfanon ULV, Malathion ULV	Caution	No	No	Yes	No	12	0, 5, 10
	Phosmet	Imidan	Warning	No	No	Yes	Yes	120	7
3A	Pyrethroids/ pyrethrins								
	Alpha-cypermethrin	Fastac EC	Danger	No	Yes	Yes	Yes	12	3
	Beta-cyfluthrin	Baythroid XL	Warning	No	Yes	Yes	Yes	12	7
	Cyfluthrin	Renounce 20 WP	Caution	No	Yes	Yes	Yes	12	7
		Tombstone	Danger	No	Yes	Yes	Yes	12	7
		Tombstone Helios	Warning	No	Yes	Yes	Yes	12	7
	Gamma-cyhalothrin	Declare, Proaxis	Caution	No	Yes	Yes	Yes	24	1 forage, 7 hay
	Lambda-cyhalothrin	Paradigm	Caution	No	Yes	Yes	Yes	24	1 forage, 7 hay
		Silencer, Warrior, Warrior II	Warning	No	Yes	Yes	Yes	24	1 forage, 7 hay
	Permethrin	Permethrin	Caution	No	Yes	Yes	Yes	12	0, 14 above 0.1 lb ai
		Ambush, Pounce	Warning	No	Yes	Yes	Yes	12	0, 14 above 0.1 lb ai
	Zeta-cypermethrin	Mustang Maxx, Respect	Warning	No	Yes	Yes	Yes	12	3
4D	Butenolides								
	Flupyradifurone	Silvanto 200 SL	Caution	No	No	Yes	Yes	4	7
5	Spinosyn								
	Spinosad	Entrust SC	Caution	Yes	No	No	No	4	0 forage, 3 hay, fodder

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						Air	Chemigation		
1A	Carbamates								
	Carbaryl	Carbaryl, Sevin	Caution	No	No	Yes	Yes	12	7
	Methomyl	Lannate LV	Danger	No	Yes	Yes	Yes	48	7
1B	Organophosphate								
	Chlorpyrifos	Lorsban Advanced, Lorsban 4E,	Warning	No	Yes	Yes	Yes	24	7, 14 or 21
		Nufos, Vulcan, Warhawk							(rate dependent)
		Lorsban 75WG	Warning	No	No	Yes	Yes	24	7, 14, or 21
	Dimethoate	Cygon, Dimethoate (several)	Warning	No	No	Yes	No	48	10
		Cygon LV, Dimethoate 400	Warning	No	No	Yes	Yes	48	10
	Malathion	Malathion (several)	Caution	No	No	No	Yes	12	0, 7
		Fyfanon ULV, Malathion ULV	Caution	No	No	Yes	No	12	0, 5, 10
	Phosmet	Imidan	Warning	No	No	Yes	Yes	120	7
3A	Pyrethroids/ pyrethrins								
	Alpha-cypermethrin	Fastac EC	Danger	No	Yes	Yes	Yes	12	3
	Beta-cyfluthrin	Baythroid XL	Warning	No	Yes	Yes	Yes	12	7
	Cyfluthrin	Renounce 20 WP	Caution	No	Yes	Yes	Yes	12	7
		Tombstone	Danger	No	Yes	Yes	Yes	12	7
		Tombstone Helios	Warning	No	Yes	Yes	Yes	12	7
	Gamma-cyhalothrin	Declare, Proaxis	Caution	No	Yes	Yes	Yes	24	1 forage, 7 hay
	Lambda-cyhalothrin	Paradigm	Caution	No	Yes	Yes	Yes	24	1 forage, 7 hay
		Silencer, Warrior, Warrior II	Warning	No	Yes	Yes	Yes	24	1 forage, 7 hay
	Permethrin	Permethrin	Caution	No	Yes	Yes	Yes	12	0, 14 above 0.1 lb ai
		Ambush, Pounce	Warning	No	Yes	Yes	Yes	12	0, 14 above 0.1 lb ai
	Zeta-cypermethrin	Mustang Maxx, Respect	Warning	No	Yes	Yes	Yes	12	3
4D	Butenolides								
	Flupyradifurone	Silvanto 200 SL	Caution	No	No	Yes	Yes	4	7
5	Spinosyn								
	Spinosad	Entrust SC	Caution	Yes	No	No	No	4	0 forage, 3 hay, fodder

# Alfalfa

## Insecticides Listed By Active Ingredient (continued)

Class	Active ingredient(s)	Product/Trade Name(s)	Signal word	OMRI?	Restricted Use?	Application via		Re-Entry (hours)	Days to Harvest
						Air	Chemigation		
11	subspecies = aizawai								
	Strain CG-91	Agree WG	Caution	Yes	No	Yes	Yes	4	0
	subspecies = kurstaki								
	strain SA-12	CoStar, Deliver	Caution	Yes	No	Yes	No	4	0
	strain SA-11	Javelin WG	Caution	Yes	No	Yes	No	4	0
	strain EG7841	Crymax WDG	Caution	No	No	Yes	No	4	0
18	Diacylhydrazine								
	Methoxyfenozide	Intrepid 2F, Troubadour	Caution	No	No	Yes	No	4	0 grazing 7 hay
22	Indoxacarb								
	Indoxacarb	Steward	Caution	No	No	Yes	Yes	12	7
28	Diamide								
	Chlorantraniliprole	Prevathon	Caution	No	No	Yes	Yes	4	0
	Flubendiamide	Belt SC	Caution	No	No	Yes	Yes	12	0
Unclassified									
	Azadiractin	Neemix 4.5	Warning	Yes	No	Yes	Yes	4	0
Mixed									
1B + 3A	Chlorpyrifos +								
	lambda-cyhalothrin	Cobalt Advanced	Warning	No	Yes	Yes	Yes	24	(rate dependent)
1B + 3A	Chlorpyrifos +	Stallion	Warning	No	Yes	Yes	Yes	24	7
	zeta-cypermethrin								
3A + 28	Lambda-cyhalothrin +	Beseige	Warning	No	Yes	Yes	No	12	1 forage, 7 hay
	chlorantraniliprole	Volium Xpress	Warning	No	Yes	Yes	No	24	1 forage, 7 hay

# Alfalfa

## Forage or Hay Insecticides

Insecticide	Insects with Chewing Mouthparts											Insects with Piercing-Sucking Mouthparts						
	Alfalfa Caterpillar	Army Cutworm	Alfalfa Webworm	Alfalfa Weevil (Larvae)	Alfalfa Weevil (Adult)	Black Cutworm	Blister Beetle	Clover Root Curculio (Adult)	Garden Webworm	Grasshoppers	Green Cloverworm	Variiegated Cutworm	Blue Alfalfa Aphid	Cowpea Aphid	Pea Aphid	Plant Bug	Potato Leafhopper	Spotted Alfalfa Aphid
Agree™ WG	X																	
Ambush®	X	X	X	X		X			X		X	X	X		X	X	X	X
Ambush® 25W	X	X	X	X		X			X		X	X	X		X	X	X	X
Baythroid® XL	X	X	X	X		X				X	X	X	X	X	X	X	X	
Besiege®	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Belt SC	X	X	X			X					X	X	X	X		X	X	X
BT sulfur 15-50 dust	X																	
Carbaryl 4L	X	X	X	X		X	X		X		X	X					X	
Cobalt™ Advanced	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CoStar®	X										X							
Cygon™ LV										X			X	X	X	X	X	X
Declare®	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dimethoate 2.67				X						X			X	X	X	X	X	X
Dimethoate 400				X						X			X	X	X	X	X	X
Entrust® SC		X	X			X			X			X					X	
Fastec EC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fyfanon® ULV Ag	X			X						X								
Imidan® 70W				X	X					X					X	X	X	
Intrepid® 2F	X		X					X										
Javelin® WG	X	X				X					X	X						
Lannate® LV	X			X								X	X	X	X			X
Lorsban® 4E	X	X	X	X	X	X				X		X	X	X	X	X	X	
Lorsban® 75WG				X	X					X			X		X	X	X	
Lorsban® Advanced	X	X	X	X	X	X				X		X	X	X	X	X	X	
Malathion 57EC				X						X					X		X	X
Malathion 8 Aquamul										X			X	X	X		X	X
Malathion 8E				X						X			X	X	X		X	X
Malathion ULV	X			X						X								
Mustang Maxx®	X	X	X	X		X			X	X	X	X	X		X	X	X	X
Neemix® 4.5																	X	
Nufos® 4E	X		X	X	X					X			X		X	X	X	
Paradigm™	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Permethrin	X	X	X	X		X			X		X	X	X		X	X	X	X
Pounce™ 25WP	X	X	X	X		X			X		X	X	X		X	X	X	X
Prevathon®	X																X	
Proaxis™	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Renounce® 20WP	X	X		X		X				X		X	X	X	X	X	X	
Respect®	X	X	X	X		X			X	X	X	X	X		X	X	X	X
Sevin® 80S	X	X	X	X		X	X		X		X	X					X	
Silencer®	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Silencer® VC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sivanto 200 SC													X	X	X	X	X	
Stallion™	X	X	X	X		X			X	X	X	X	X		X	X	X	X
Steward® EC	X			X													X	
Tombstone™	X	X		X		X				X	X	X	X	X	X	X	X	
Tombstone™ Helios	X	X		X		X				X	X	X	X	X	X	X	X	
Troubadour 2F	X	X	X						X									
Voliam Xpress®	X	X	X	X			X	X	X	X	X		X	X	X	X	X	X
Vulcan™	X	X	X	X	X	X				X		X	X	X	X	X	X	X
Warhawk®	X	X	X	X	X	X				X		X	X	X	X	X	X	
Warrior with Zeon Technology®	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Warrion II with Zeon Technology®	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X

X = insecticide labeled for control against this pest.

# Alfalfa

## Forage or Hay Insecticides

Insecticide Active Ingredient	Mode of Action	Target Pest	Rate	Comments*
Agree WG <i>Bacillus thuringiensis</i> <i>Aizawai</i>	11	Alfalfa caterpillar	0.5-2.0 lb/A	REI is 4 hours. Use of a contact insecticide along with <i>Bt</i> product is recommended if 4th and 5th instar larvae are present.
Ambush** Permethrin	3A	1. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm, alfalfa webworm, garden webworm, blue alfalfa aphid, pea aphid, spotted alfalfa aphid, potato leafhopper 2. Plant bugs, alfalfa weevil larvae	1. 3.2-12.8 oz/A  2. 6.4-12.8 oz/A	REI is 12 hours. PHI is 14 days when rates greater than 0.1 lb active ingredient are used. Do not apply to mixed stands with intentionally grown forage grasses. Do not apply more than 0.2 lb active ingredient per cutting. Avoid application when bees are actively foraging.
Ambush 25 W** Permethrin	3A	1. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm, alfalfa webworm, garden webworm, blue alfalfa aphid, pea aphid, spotted alfalfa aphid, potato leafhopper 2. Plant bugs, alfalfa weevil larvae	1. 3.2-12.8 oz/A  2. 6.4-12.8 oz/A	REI is 12 hours. PHI is 14 days when rates greater than 0.1 lb active ingredient are used. Do not apply to mixed stands with intentionally grown forage grasses. Do not apply more than 0.2 lb active ingredient per cutting. Avoid application when bees are actively foraging.
Baythroid XL** Beta-cyfluthrin	3A	1. Black cutworm, variegated cutworm, army cutworm, green cloverworm, potato leafhopper 2. Alfalfa caterpillar, alfalfa webworm, plant bugs, alfalfa weevil larvae 3. Grasshoppers 4. Blue alfalfa aphid, cowpea aphid, pea aphid	1. 0.8-1.6 oz/A  2. 1.6-2.8 oz/A  3. 2.0-2.8 oz/A 4. 2.8 oz/A	REI is 12 hours. PHI is 7 days. Maximum of 5.6 oz per cutting, and 22.4 oz/A for crop season. Allow at least 5 days between applications. Do not exceed 0.35 lb of active ingredient per season for cyfluthrin + beta-cyfluthrin products.
Belt SC Flubendiamide	28	Alfalfa caterpillar, armyworm, alfalfa looper, alfalfa webworm, cutworms, green cloverworm, loopers	2.0-4.0 fl. oz./acre	REI = 12 hours. PHI = 0 days Do not apply more than 4 fl. oz./cutting. Do not apply within 21 days of previous treatment. Do not apply more than 12 fl. oz./acre/year. May be applied through some irrigation systems. Minimum of 10 gpa by ground, 2 gpa by aerial application
Besiege** Lambda-cyhalothrin + Chlorantraniliprole	3A, 28	1. Alfalfa caterpillar, cutworms, green cloverworm, leafhoppers, loopers, webworms and threecornered alfalfa hoppers 2. Alfalfa weevil, aphids, armyworms, bean leaf beetle adults, blister beetles, grasshoppers, weevils, stinkbugs, clover root curculio (adult), stink bugs and various adult beetles.	1. 5-8 fl oz/A  2. 6-10 fl oz/A	REI is 24 hours. PHI is 1 day for forage, 7 days for hay. Make applications when bees are not foraging by applying during early morning or evening hours. Remove bee shelters during and for 2-3 days following application. Do not exceed a total of 31 fl oz/A of Besiege or 0.12 lb/A active ingredient of lambda-cyhalothrin-containing products or 0.2 lb/A active ingredient of chlorantraniliprole-containing products per year. Do not apply more than 10 fl oz/A of Besiege per cutting, nor more than 1 application per cutting. Apply in a minimum of 5 GPA by air and 10 GPA by ground.

\*REI = Restricted Entry Interval    PHI = Preharvest Interval

\*\*Restricted Use Insecticide

# Alfalfa

## Forage or Hay Insecticides (continued)

Insecticide Active Ingredient	Mode of Action	Target Pest	Rate	Comments*
<i>Bt</i> Sulfur 15-50 dust <i>Bacillus thuringiensis</i> <i>Urstaki</i>	11	Alfalfa caterpillar	1. 10.0-20.0 lb/A	REI is 24 hours. Use of a contact insecticide along with a <i>Bt</i> product is recommended if 4th and 5th instar larvae are present. Do not apply materials containing sulfur just prior to or during periods of excessively high temperatures or within 2 weeks of an oil spray.
Carbaryl 4L Carbaryl	1A	1. Alfalfa weevil larvae 2. Blister beetles 3. Alfalfa caterpillar, green cloverworm, potato leafhopper 4. Black cutworm, variegated cutworm, army cutworm, alfalfa webworm, garden webworm	1. 24.0 oz/A 2. 16.0-32.0 oz/A 3. 32.0 oz/A 4. 32.0-48.0 oz/A	REI is 12 hours. PHI is 7 days. Do not apply more than once per cutting. Do not apply this product to crops or weeds in bloom.
Cobalt Advanced* Chlorpyrifos + Gamma-cyhalothrin	1B, 3A	1. Grasshoppers, potato leafhopper 2. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm, alfalfa webworm, garden webworm, blue alfalfa aphid, pea aphid 3. Cowpea aphid, plant bugs, alfalfa weevil adult, alfalfa weevil larvae, blister beetle, clover root curculios adult	1. 6.0-13.0 oz/A 2. 11.0-26.0 oz/A 3. 16.0-38.0 oz/A	REI is 24 hours. PHI is 7 days for less than 13.0 oz, 14 days for 13.0-26.0 oz, and 21 days for more than 26.0 oz. Do not apply if nearby bees are clustered outside hives and are actively foraging in the treated area. Do not irrigate within 24 hours of application. Do not exceed 0.06 lb of active ingredient per year for gamma cyhalothrin. Do not make a second application of a product containing chlorpyrifos within 10 days of first application.
Costar <i>Bacillus thuringiensis</i> <i>Kurstaki</i>	11	Alfalfa caterpillar, green cloverworm	0.25-1.5 lb/A	REI is 4 hours. Use of a contact insecticide along with a <i>Bt</i> product is recommended if 4th and 5th instar larvae are present.
Cygon LV Dimethoate	1B	Aphids, grasshoppers, leafhoppers, lygus bugs. Reduction of alfalfa weevil larvae	9.6-19.1 fl oz/A	REI is 48 hours. PHI is 10 days. Do not apply to alfalfa in bloom. Do not apply if bees are visiting areas to be treated when crop or weeds are in bloom. Make only one application per cutting. Make no more than 3 applications per year.

\*REI = Restricted Entry Interval      PHI = Preharvest Interval

\*\*Restricted Use Insecticide

# Alfalfa

## Forage or Hay Insecticides (continued)

Insecticide Active Ingredient	Mode of Action	Target Pest	Rate	Comments*
Declare** Gamma-cyhalothrin	3A	1. Army cutworm 2. Alfalfa caterpillar, cutworms, green cloverworm, leafhoppers, loopers, threecornered alfalfa hopper, webworms 3. Alfalfa weevil, armyworm, bean leaf beetle, blister beetles, blue alfalfa aphid, clover leaf weevils, clover root curculios, cowpea aphid, grasshoppers, pea aphid, plant bugs (including Lygus), spotted alfalfa aphid, stinkbugs	1. 0.51-0.77 fl oz / A 2. 0.77-1.28 fl oz / A  3. 1.02-1.54 fl oz / A	REI is 24 hours. PHI is 1 day for forage, 7 days for hay.  Apply only to fields planted to pure stands of alfalfa. Apply in a minimum of 2 gpa by air and 10 gpa by ground. Use higher gallons per acre when foliage is dense and/or pest populations are high.  Avoid application when bees are actively foraging by applying during early morning or evening hours. Avoid direct application to bee shelters. It may be advisable to remove bee shelters during and for up to 2-3 days following application.  Do not apply more than 0.015 lb active ingredient (0.096 pt) per acre per cutting. Do not apply more than 0.06 lb active ingredient (0.038 pint) per acre per year.  If both gamma-cyhalothrin and lambda-cyhalothrin products are used on a crop during the same growing season, refer to charts found on labels for maximum total annual allowance of cyhalothrin-containing products.
Dimethoate 2.67 Dimethoate	1B	Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, plant bugs, potato leafhopper, alfalfa weevil adult, grasshoppers	12.0-20.0 oz / A	REI is 48 hours. PHI is 10 days. Do not apply if bees are actively visiting the field or if weeds or alfalfa are in bloom. Maximum of 0.5 lb active ingredient per year. Only one application of 2.67 EC per year is allowed.
Dimethoate 400 Dimethoate	1B	Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, plant bugs, potato leafhopper, alfalfa weevil adult, grasshoppers	8.0-16.0 oz / A	REI is 48 hours. PHI is 10 days. Do not apply if bees are actively visiting the field or if weeds or alfalfa are in bloom. Maximum of 0.5 lb active ingredient per year.
Entrust SC Spinosyn	5	Alfalfa caterpillar, cutworms, loopers, webworms, armyworms	2-4 fl oz. / A	REI is 4 hours. PHI is 3 days for hay or fodder, 0 days forage. Do not apply more than 12 oz./acre/season. Do not allow cattle to graze until spray has dried.
Fastac CS** Alpha-cypermethrin	3A	1: Alfalfa caterpillar, alfalfa weevil, aphids, cutworms, green cloverworms, potato leafhoppers, webworms 2. Armyworms, grasshoppers, plant bugs	1. 2.2-3.8 fl. oz. / A 2. 2.8-3.8 fl oz. / A	REI is 12 hours. PHI is 3 days. Do not apply any products containing cypermethrin and zeta-cypermethrin during a crop season when using this product. Do not apply more than 11.4 fl. oz./season.
Fyfanon ULV AG Malathion	1B	Alfalfa caterpillars, western yellow striped armyworm, alfalfa weevil larvae, beet armyworms, grasshoppers	8 fl oz / A	REI is 12 hours. PHI is 0 days. Do not apply to alfalfa in bloom. For beet armyworm and alfalfa caterpillar control, apply when caterpillars are small. For alfalfa weevil larvae, apply when day temperature is expected to be above 65°F. Maximum of 2 applications per cutting, with minimum of 14 days between applications.

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\*\*Restricted Use Insecticide

# Alfalfa

## Forage or Hay Insecticides (continued)

Insecticide Active Ingredient	Mode of Action	Target Pest	Rate	Comments*
Imidan 70 W Phosmet	1B	Pea aphid, plant bugs, potato leafhopper, alfalfa weevil adult, alfalfa weevil larvae, grasshoppers	1.0-1.33 lb/A	REI is 5 days. PHI is 7 days. Do not apply more than once per cutting. Do not apply to alfalfa in bloom. Do not apply when bees are in the area. Do not use with latex- or pineolene-based adjuvants or any agricultural sticker or extender.
Intrepid 2F Methoxyfenozide	18	Alfalfa caterpillar, alfalfa webworm, garden webworm	4.0-8.0 oz/A	REI is when dry. PHI is 7 days. No more than 1 application per cutting, 32.0 oz per year.
Javelin WG <i>Bacillus thuringiensis</i> <i>Kurstaki</i> strain SA-11	11	Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm	0.25-1.5 lb/A	REI is 4 hours. Use of a contact insecticide along with a <i>Bt</i> product is recommended if 4th and 5th instar larvae are present.
Lannate LV Methomyl	1A	1. Variegated cutworm 2. Alfalfa caterpillar, blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid 3. Alfalfa weevil larvae	1. 12.0-48.0 oz/A 2. 24.0-48.0 oz/A 3. 48.0 oz/A	REI is 48 hours. PHI is 7 days. Do not apply to dormant or semi-dormant alfalfa when minimum daily temperature is less than 50°F. Do not apply more than 12.0 pints or 10 applications of product per acre per crop.
Lorsban 4E Chlorpyrifos	1B	1. Potato leafhopper, grasshoppers 2. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, blue alfalfa aphid, cowpea aphid, pea aphid, plant bugs, alfalfa weevil adult, alfalfa weevil larvae 3. Alfalfa webworm	1. 8.0-16.0 oz/A 2. 16.0-32.0 oz/A 3. 24.0 oz/A	REI is 24 hours. PHI is 7 days for less than 8.0 oz, 14 days for 8.0-16.0 oz, and 21 days for more than 16.0 oz/A. Do not make a second application of a product containing chlorpyrifos within 10 days of first application. One application per cutting, no more than 4 applications per acre per crop. Do not apply if nearby bees are clustered outside hives and are actively foraging in the treated area.
Lorsban 75 WG Chlorpyrifos	1B	1. Potato leafhopper, grasshoppers 2. Blue alfalfa aphid, pea aphid, plant bugs, alfalfa weevil adult, alfalfa weevil larvae	1. 0.33-0.67 lb/A 2. 0.67-1.33 lb/A	REI is 24 hours. PHI is 7 days for less than 0.33 lb, 14 days for 0.33-0.67 lb, and 21 days for more than 0.67 lb/A. Do not make a second application of a product containing chlorpyrifos within 10 days of first application. One application per cutting, no more than 4 applications per acre per crop. Do not apply if nearby bees are clustered outside hives and are actively foraging in the treated area.
Lorsban® Advanced Chlorpyrifos	1B	1. Potato leafhopper, grasshoppers 2. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, blue alfalfa aphid, cowpea aphid, pea aphid, plant bugs, alfalfa weevil adult, alfalfa weevil larvae 3. Alfalfa webworm	1. 8.0-16.0 oz/A 2. 16.0-32.0 oz/A 3. 24.0 oz/A	REI is 24 hours. PHI is 7 days for less than 8.0 oz, 14 days for 8.0-16.0 oz, and 21 days for more than 16.0 oz/A. Do not make a second application of a product containing chlorpyrifos within 10 days of first application. One application per cutting, no more than 4 applications per acre per crop. Do not apply if nearby bees are clustered outside hives and are actively foraging in the treated area.
Malathion 57 EC Malathion	1B	Pea aphid, spotted alfalfa aphid, potato leafhopper, alfalfa weevil larvae, grasshoppers	20.0-36.0 oz/A	REI is 12 hours. Apply to alfalfa in bloom only when bees are not working in the field.
Malathion 8 Aquamul Malathion	1B	Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, potato leafhopper, grasshoppers	20-32 oz/A	REI is 12 hours. PHI is 7 days for rates greater than 24.0 oz/A. Apply to alfalfa in bloom only when bees are not working in the field.

\*REI = Restricted Entry Interval    PHI = Preharvest Interval



# Alfalfa

## Forage or Hay Insecticides (continued)

Insecticide Active Ingredient	Mode of Action	Target Pest	Rate	Comments*
Malathion 8E Malathion	1B	Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, potato leafhopper, alfalfa weevil larvae, grasshoppers	16.0-24.0 oz/A	REI is 12 hours. PHI is 7 days for rates greater than 24.0 oz/A. Apply to alfalfa in bloom only when bees are not working in the field.
Malathion ULV Malathion	1B	1. Alfalfa caterpillar, grasshoppers 2. Alfalfa weevil larvae	1. 8 oz/A 2. 16 oz/A	REI is 12 hours. PHI is 0 days for 8.0 oz/A rate and 10 days for 16.0 oz/A rate. Apply to alfalfa in bloom only when bees are not working in the field.
Mustang Maxx** Zeta-cypermethrin	3A	1. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm, alfalfa webworm, garden webworm, blue alfalfa aphid, pea aphid, spotted alfalfa aphid, potato leafhopper, alfalfa weevil larvae 2. Plant bugs, grasshoppers	1. 2.24-4.0 oz/A  2. 2.8-4.0 oz/A	REI is 12 hours. PHI is 3 days. Do not make applications less than 7 days apart. Do not apply more than 4.0 oz/A per cutting. Do not apply more than 12.0 oz/A per year.
Neemix 4.5 Azadirachtin	U***	Potato leafhopper	7.0-16.0 oz/A	REI is 12 hours. Do not apply when weather conditions favor drift or likelihood of runoff is high.
Nufos 4E Chlorpyrifos	1B	1. Corn rootworm adults, grasshoppers, leafhoppers 2. Alfalfa caterpillar, alfalfa weevil adults and larvae, armyworms, blue alfalfa aphid, cowpea aphid, pea aphid, cutworms, plant bugs, (suppression of spotted alfalfa aphid)	1. 8-16 fl oz/A 2. 16-32 fl oz/A	REI is 24 hours. PHI is 7 days for 8.0 fl oz, 14 days for 16.0 fl oz, 21 days for more than 16.0 fl oz. Highly toxic to bees exposed to direct treatment on alfalfa. Do not apply if nearby bees are clustered outside of hives and bees are foraging in the treated areas. Do not flood irrigate within 24 hours following application of Nufos 4E to avoid contamination of irrigation tail waters. Do not make more than 4 applications per season of products containing chlorpyrifos, or apply such products more than once per cutting. Do not make a second application of a product containing chlorpyrifos within 10 days of first application.
Paradigm** Lambda-cyhalothrin	3A	1. Alfalfa caterpillar, army cutworm, black cutworm, variegated cutworm, green cloverworm, alfalfa webworm, garden webworm, potato leafhopper 2. Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, plant bugs, alfalfa weevil larvae, blister beetle, clover root curculio adult, grasshoppers	1. 1.92-3.2 oz/A  2. 2.56-3.84 oz/A	REI is 24 hours. PHI is 1 day for forage and 7 days for hay harvest. Do not apply more than 3.84 oz/A per cutting or more than 15.36 oz/A per year. Do not apply when bees are actively foraging.
Permethrin** Permethrin	3A	1. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm, alfalfa webworm, garden webworm, blue alfalfa aphid, pea aphid, spotted alfalfa aphid 2. Plant bugs, potato leafhopper, alfalfa weevil larvae	1. 2.0-8.0 oz/A  2. 4.0-8.0 oz/A	REI is 12 hours. PHI is 14 days when rates greater than 0.1 lb active ingredient are used. Do not apply to mixed stands with intentionally grown forage grasses. Do not apply more than 0.2 lb active ingredient per cutting. Avoid application when bees are actively foraging.

\*REI = Restricted Entry Interval    PHI = Preharvest Interval

\*\*Restricted Use Insecticide

\*\*\*Unclassified

# Alfalfa

## Forage or Hay Insecticides (continued)

Insecticide Active Ingredient	Mode of Action	Target Pest	Rate	Comments*
Pounce 25WP** Permethrin	3A	1. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm, alfalfa webworm, garden webworm, blue alfalfa aphid, pea aphid, spotted alfalfa aphid 2. Plant bugs, potato leafhopper, alfalfa weevil larvae	1. 3.2-12.8 oz/A  2. 6.4-12.8 oz/A	REI is 12 hours. PHI is 14 days when rates greater than 0.1 lb active ingredient are used. Do not apply to mixed stands with intentionally grown forage grasses. Do not apply more than 0.2 lb active ingredient per cutting. Avoid application when bees are actively foraging.
Prevathon Chlorantraniliprole	28	1. Alfalfa caterpillar, armyworms, loopers 2. Grasshoppers	1. 14-20 oz./A  2. 8-20 oz./A	REI is 4 hours. PHI is 0 days. Do not apply more than 0.2 lb active ingredient of chlorantraniliprole containing products/acre/year. For best grasshopper control, add methylated seed oil adjuvant at 1% v/v and when majority of nymphs are 2nd-3rd instars. Make only one application/cutting.
Proaxis** Gamma-cyhalothrin	3A	1. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm, alfalfa webworm, garden webworm, potato leafhopper 2. Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, plant bugs, alfalfa weevil larvae, blister beetle, clover root curculios adult	1. 1.92-3.2 oz/A  2. 2.56-3.84 oz/A	REI is 24 hours. PHI is 1 day for forage and 7 days for hay. Do not apply more than 0.24 pt per cutting or 0.96 pt/A per year. Apply only to fields planted to pure stands of alfalfa. Avoid application when bees are actively foraging.
Renounce®20WP** Cyfluthrin	3A	1. Black cutworm, variegated cutworm, army cutworm 2. Alfalfa caterpillar, alfalfa weevil larvae, plant bugs 3. Grasshoppers 4. Blue alfalfa aphid, cowpea aphid, pea aphid	1. 1.0-2.0 oz/A 2. 2.0-3.5 oz/A 3. 2.5-3.5 oz/A 4. 3.5 oz/A	REI is 12 hours. PHI is 7 days. Do not exceed 0.35 lb of active ingredient per season. Do not apply more than 7.0 oz per cutting/A, 28.0 oz/A per year. Do not apply to alfalfa stands with intentionally grown forage grasses.
Respect** Zeta-cypermethrin	3A	1. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm, alfalfa webworm, garden webworm, blue alfalfa aphid, pea aphid, spotted alfalfa aphid, potato leafhopper, alfalfa weevil larvae 2. Plant bugs, grasshoppers	1. 2.24-4.0 oz/A 2. 2.8-4.0 oz/A	REI is 12 hours. PHI is 3 days. Do not make applications less than 7 days apart. Do not apply more than 4.0 oz/A per cutting. Do not apply more than 12.0 oz/A per year.
Sevin 80S Carbaryl	1A	1. Blister beetle 2. Alfalfa caterpillar, green cloverworm, potato leafhopper 3. Black cutworm, variegated cutworm, army cutworm, alfalfa webworm, garden webworm 4. Alfalfa weevil larvae	1. 0.625-1.25 lb/A 2. 1.25 lb/A  3. 1.25-1.625 lb/A  4. 1.875 lb/A	REI is 12 hours. PHI is 7 days. Do not apply more than once per cutting. Do not apply this product to crops or weeds in bloom.
Silencer** Lambda-cyhalothrin	3A	1. Alfalfa caterpillar, army cutworm, black cutworm, variegated cutworm, green cloverworm, alfalfa webworm, garden webworm, potato leafhopper 2. Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, plant bugs, alfalfa weevil larvae, blister beetle, clover root curculio adult, grasshoppers	1. 1.92-3.2 oz/A  2. 2.56-3.84 oz/A	REI is 24 hours. PHI is 1 day for forage and 7 days for hay harvest. Do not apply more than 3.84 oz/A per cutting or more than 15.36 oz/A per year. Do not apply when bees are actively foraging.

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\*\*Restricted Use Insecticide

# Alfalfa

## Forage or Hay Insecticides (continued)

Insecticide Active Ingredient	Mode of Action	Target Pest	Rate	Comments*
Silencer VC** Lambda-cyhalothrin	3A	1. Alfalfa caterpillar, army cutworm, black cutworm, variegated cutworm, green cloverworm, alfalfa webworm, garden webworm, potato leafhopper 2. Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, plant bugs, alfalfa weevil larvae, blister beetle, clover root curculio adult, grasshoppers	1. 1.92-3.2 oz/A  2. 2.56-3.84 oz/A	REI is 24 hours. PHI is 1 day for forage and 7 days for hay harvest. Do not apply more than 3.84 oz/A per cutting or more than 15.36 oz/A per year. Do not apply when bees are actively foraging.
Sivanto 200 SL Flupyradiflurone	4D	1. Aphids, leafhoppers 2. Threecornered alfalfa hopper, whiteflies	7.0-10.5 fl. oz./acre  10.5-14 fl. oz./acre	REI = 4 hours. PHI = 7 days Do not apply within 10 days of previous treatment. Do not apply more than 28 fl. oz./acre/year. May be applied through some irrigation systems. Minimum of 10 gpa by ground, 2 gpa by aerial application
Stallion** Chlorpyrifos + Zeta-cypermethrin	1B, 3A	1. Black cutworm, variegated cutworm, army cutworm 2. Alfalfa caterpillar, green cloverworm, alfalfa webworm, garden webworm, potato leafhopper 3. Blue alfalfa aphid, pea aphid, spotted alfalfa aphid, alfalfa weevil larvae, grasshoppers 4. Plant bugs	1. 2.5-11.75 oz/A  2. 5.0-11.75 oz/A  3. 9.25-11.75 oz/A  4. 11.75 oz/A	REI is 24 hours. PHI is 7 days. Do not make applications less than 10 days apart. Do not make more than 4 applications per season or apply more than once per cutting. Do not apply if bees are actively foraging in the treated area.
Steward EC Indoxacarb	22	1. Grasshoppers 2. Alfalfa caterpillar, alfalfa weevil larvae, granulate cutworm 3. Western yellow striped armyworm, suppression of potato leafhoppers.	1. 4.6-11.3 oz./A 2. 6.7-11.3 oz./A 3. 9.2-11.3 oz./A	REI is 12 hours. PHI is 7 days. Do not apply more than 11.3 oz/A per cutting or 45.0 oz/A per year.
Tombstone** Cyfluthrin	3A	1. Black cutworm, variegated cutworm, army cutworm, green cloverworm, potato leafhopper 2. Alfalfa caterpillar, plant bugs, alfalfa weevil larvae 3. Grasshoppers 4. Blue alfalfa aphid, cowpea aphid, pea aphid	1. 0.8-1.6 oz/A  2. 1.6-2.8 oz/A  3. 2.0-2.8 oz/A 4. 2.8 oz/A	REI is 12 hours. PHI is 7 days. Do not apply more than 3.2 oz per cutting/A, 12.8 oz/A per year. Do not apply to alfalfa stands with intentionally grown forage grasses.
Tombstone Helios** Cyfluthrin	3A	1. Black cutworm, variegated cutworm, army cutworm, green cloverworm, potato leafhopper 2. Alfalfa caterpillar, plant bugs, alfalfa weevil larvae 3. Grasshoppers 4. Blue alfalfa aphid, cowpea aphid, pea aphid	1. 0.8-1.6 oz/A  2. 1.6-2.8 oz/A  3. 2.0-2.8 oz/A 4. 2.8 oz/A	REI is 12 hours. PHI is 7 days. Do not apply more than 3.2 oz/A per cutting, 12.8 oz/A per year. Do not apply to alfalfa stands with intentionally grown forage grasses.
Troubadour 2F Methoxyfenozide	18	Armyworms, alfalfa caterpillars, alfalfa loopers, webworms	4.0-8.0 fl. oz./acre	REI = 4 hours PHI = 0 days for grazing, 7 days for hay harvest Do not apply more than 32 fl. oz./year. Do not make more than 1 application/cutting. Apply in a minimum of 10 gpa by ground, 5 gpa by air.

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# Alfalfa

## Forage or Hay Insecticides (continued)

Insecticide Active Ingredient	Mode of Action	Target Pest	Rate	Comments*
Voliam Xpress** Lambda-cyhalothrin + Chlorantraniliprole	3A, 28	1. Alfalfa caterpillar, army cutworm, green cloverworm, alfalfa webworm, garden webworm, potato leafhopper 2. Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, plant bugs, alfalfa weevil larvae, blister beetle, clover root curculios adult, grasshoppers	1. 5.0-8.0 oz/A  2. 6.0-9.0 oz/A	REI is 24 hours. Do not apply more than 9.0 oz/A per cutting or 31.0 oz/A per year. Do not exceed 0.12 lb ai/A of lambda-cyhalothrin or 0.2 lb ai of chlorantraniliprole-containing products per acre per growing season.
Vulcan Chlorpyrifos	1B	1. Grasshoppers, leafhoppers 2. Alfalfa caterpillar, alfalfa weevil (adults and larvae), armyworms, blue alfalfa aphid, cutworms, pea aphid, plant bugs, spotted alfalfa aphid 3. Alfalfa webworm	1. 8.0-16.0 oz/A 2. 16.0-32.0 oz/A  3. 24.0 oz/A	REI is 24 hours. PHI is 7 days after application of 8.0 oz/A, 14 days after application of 16.0 oz/A, and 21 days if rate is above 16.0 oz/A. Do not make more than four applications of products containing chlorpyrifos per year, or apply more than once per cutting. Do not make a second application within 10 days of first application. Do not apply if bees are clustered outside of hives and are foraging.
Warhawk Chlorpyrifos	1B	1. Potato leafhopper, grasshoppers 2. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, blue alfalfa aphid, cowpea aphid, pea aphid, plant bugs, alfalfa weevil adult, alfalfa weevil larvae 3. Alfalfa webworm	1. 8-16 oz/A 2. 16-32 oz/A  3. 24 oz/A	REI is 24 hours. PHI is 7 days for less than 8.0 oz, 14 days for 8.0-16.0 oz, and 21 days for more than 16.0 oz/A. Do not make a second application of a product containing chlorpyrifos within 10 days of first application. One application per cutting, no more than 4 applications per acre per crop. Do not apply if nearby bees are clustered outside hives and are actively foraging in the treated area.
Warrior with Zeon Technology** Lambda-cyhalothrin	3A	1. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm, alfalfa webworm, garden webworm, potato leafhopper 2. Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, plant bugs, alfalfa weevil larvae, blister beetle, clover root curculios adult, grasshoppers	1. 1.92-3.2 oz /A  2. 2.56-3.84 oz/A	REI is 24 hours. PHI is 1 day for forage and 7 days for hay. Do not apply more than 0.03 lb ai/A per cutting or 0.12 lb ai/A per year. Do not make applications when bees are actively foraging.
Warrior II with Zeon Technology** Lambda-cyhalothrin	3A	1. Alfalfa caterpillar, black cutworm, variegated cutworm, army cutworm, green cloverworm, alfalfa webworm, garden webworm, potato leafhopper 2. Blue alfalfa aphid, cowpea aphid, pea aphid, spotted alfalfa aphid, plant bugs, alfalfa weevil larvae, blister beetle, clover root curculios adult, grasshoppers	1. 0.96-1.6 oz/A  2. 1.28-1.92 oz/A	REI is 24 hours. PHI is 1 day for forage and 7 days for hay. Do not apply more than 0.03 lb ai/A per cutting or 0.12 lb ai/A per year. Do not make applications when bees are actively foraging.

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