

Pesticide Tables for Potato Pests

Table 1. Single active ingredient products

Type	Active Ingredient	Trade Name	Target Pest(s)	Insecticide Group	Signal Word	Restricted Use?	REI	PHI (days)
FU	1,3 dichloropropene	Telone II (Dow)	symphytan, wireworm	Soil fumigant	Warning	Y WA Only	5 days	NA
F	abamectin (a.k.a. avermectin B1)	Agri-mek, Epi-Mek (Syngenta), Abacus (Rotam), Reaper (Loveland), Abba Ultra (Makhteshim Agan),	Colorado potato beetle, potato psyllid, spider mite, thrips	6	Warning	Y	12 hr	14
F	acetamiprid	Assail 30SG, Assail 70WP, Intruder Max 70WP (United Phosphorus)	aphid, beetle, leafhopper*, potato psyllid*	4A	Caution	N	12 hr	7
F	afidopyropen	Sefina (BASF)	aphid, whitefly, potato psyllid*	9D	Caution	N	12 hr	7
F	bifenazate	Acramite (UPLCrompton)	spider mite	25	Caution	N	12 hr	14
IF, F	bifenthrin	Capture LFR, Brigade 2EC (FMC), Fanfare 2EC (Makhteshim Agan), Tundra EC (Winfield) BiFenture EC (United Phosphorus)	beetle, various soil grubs, wireworm. Lepidoptera*, spider mite*, leafhopper*, lygus*, potato psyllid*	3	Warning	Y	12 hr	21
IF	carbaryl	Sevin 4F, Sevin 80S, Sevin XLR Plus (Bayer), Sevin 5 Bait (Wilbur Ellis)	beetle, Lepidoptera, stink bug, leafhopper, potato psyllid*; various soil-inhabiting arthropods (5 Bait)	1A	Caution or Warning depending on formulation	N	12 hr	7
F	chlorantraniliprole	Coragen (FMC) Vantacor (FMC)	Colorado potato beetle, Lepidoptera	28	None	N	4 hr	14
F, IF	clothianidin	Belay 50WDG, Belay (Valent)	beetle, aphid, leafhopper, psyllid	4A	Caution	N	12 hr	14
IF	cyantraniliprole	Verimark (FMC), Exirel (FMC)	Colorado potato beetle, Lepidoptera	28	Caution	N	4 hr	-2

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F	cyfluthrin	Tombstone (Loveland)	beetle, Lepidoptera, leafhopper, potato psyllid,	3	Warning	Y	12 hr	0
F	beta-cyfluthrin	Baythroid XL (Bayer)	beetle, Lepidoptera, leafhopper, potato psyllid	3	Warning	Y	12 hr	0
F	lambda-cyhalothrin	Warrior, Warrior II (Syngenta), Province (Tenkoz), Silencer (Makhteshim Agan), Lambda-Cy (United Phosphorus)	aphid, beetle, grasshopper, leafhopper, Lepidoptera, potato psyllid, stink bug	3	Warning	Y	24 hr	7
F	gamma-cypermethrin	Many brands and formulations	beetle, grasshopper leafhopper, Lepidoptera	3	Warning or Caution	Y	12 hr	1
F	cyromazine	Trigard (Syngenta)	Colorado potato beetle	17	Caution	N	12 hr	7
F	deltamethrin	Delta Gold1.5ec (Winfield Solutions)	beetle, leafhopper, Lepidoptera,	3	Danger/ Poison	N	12 hr	3
F	dimethoate	Many brands formulations	aphid, grasshopper, leafhopper, potato psyllid*	1B	Warning	N	48 hr	0
F, IF	dinotefuran	Scorpion 35 SL (Gowan), Venom (Valent)	beetle, leafhopper, potato psyllid	4A	Caution	N	12 hr	7
F	esfenvalerate	Asana (Valent), S-FenvaloStar (LG Lifesciences), Zyrate (Rotam)	beetle, grasshopper, leafhopper, Lepidoptera, potato psyllid	3	Warning	N	12 hr	7
F	fenpyroximate	Miteus (Nichino), Portal (Nichino), Portal XLO (Nichino)	leafhopper, potato psyllid, spider mite	21A	Warning	N	12 hr	7
IF	fipronil	Regent 4SC (BASF)	wireworm	2B	Warning	Y	0 hr	90
F	flonicamid	Beleaf 50 SG (FMC)	aphid, potato psyllid, thrips*, whitefly	29	Warning or Caution	N	12 hr	7

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F	flupyradifurone	Sivanto 200 SL, Sivanto Prime (Bayer)	aphid, leafhopper, potato psyllid, Colorado potato beetle, whitefly	4D	Caution	n	4 hr	7
F	hexythiazox	Many brands and formulations	potato psyllid, spider mite,	10A	Caution	N	12 hr	21
IF, F, SP	imidacloprid	Many brands and formulations	aphid, beetle, leafhopper, potato psyllid, wireworm (seed piece damage)	4A	Caution	N	12 hr	7
F	indoxacarb	Avaunt (FMC), Asvaunt eVo (FMC), Avaunt Insecticide (FMC)	Lepidoptera, Colorado potato beetle	22	Caution	N	12 hr	7
F	malathion	Many brands and formulations	aphid, blister beetle, grasshopper, leafhopper	1B	Warning or Caution	N	12 hr	0
F	methomyl	Lannate LV, Lannate SP (Corteva), Nudrin LV, Nudrin SP (Rotam)	aphid, flea beetle, leafhopper, Lepidoptera, Colorado potato beetle*, lygus*, potato psyllid*, thrips*	1A	Danger/ Poison	Y	48 hr	6
F	novaluron	Rimon (Chemtura)	Colorado potato beetle, Lepidoptera, lygus*, potato psyllid, thrips*, whitefly	15	Warning	N	12 hr	14
F, IF	oxamyl	Vydate C-LV (DuPont)	aphid, beetle, leafhopper, potato psyllid, Lepidoptera*, lygus, thrips*	1A	Danger/ Poison	Y	48 hr	7
F	permethrin	Many brands and formulations	beetle, leafhopper, Lepidoptera, potato psyllid, lygus, thrips*	3	Warning or Caution	Y	12 hr	14
IF								

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Type	Active Ingredient	Trade Name	Target Pest(s)	Insecticide Group	Signal Word	Restricted Use?	REI	PHI (days)
F	phosmet	Imidan 70-W (Gowan)	beetle, leafhopper, tuberworm, Lepidoptera*, potato psyllid	1B	Warning	N	5 days	7
F	propargite	Comite, Omite (UPL NA) Endomite (Atticus)	spider mite	12C	Danger	Y	2 days	14
F	pymetrozine	Fulfill (Syngenta, Adama)	aphid, potato psyllid	9B	Caution	N	12 hr	14
F	spinetoram	Delegate WG, Radiant SC (Corteva)	Colorado potato beetle, Lepidoptera, thrips lygus* potato psyllid,	5	Caution	N	4 hr	7
F	spiromesifen	Oberon 2SC, Oberon 4SC (Bayer)	spider mite, potato psyllid, whitefly	23	Caution	N	12 hr	7
F	spirotetramat	Movento, Movento HL, Kontos (Bayer)	aphid, potato psyllid, whitefly	23	Caution	N	24 hr	7
F	sulfoxaflor	Transform CA, Transform WG (Corteva)	aphid, leafhopper, potato psyllid, whitefly, lygus	4C	Danger	N	24 hr	7
F, IF, SP	thiamethoxam	Actara, Cruiser 5FS, Platinum, Platinum 75SG (Syngenta)	aphid, beetle, leafhopper, potato psyllid, wireworm (seed piece protection)	4A	Caution	N	12 hr	14
F	tolfenpyrad	Torac (Nichino)	aphid, Colorado potato beetle, leafhopper, potato psyllid, thrips	21A	Warning	N	12 hr	14

All trade names may not be listed here. Product application codes: F = foliar; FU = fumigant; IF = in-furrow; SP = seed protectant. PHI = Pre-harvest interval. REI = Restricted entry interval. Insecticide Group codes refer to modes of action, and should be used in managing insecticide resistance; for more on insecticide codes and resistance management, see: <http://www.nwpotatoresearch.com/>. Always consult specific pesticide labels before making recommendations or deciding on a product and treatment.

*The pesticide label does not list this pest, but the insecticide has been shown to be effective in its control.

1 PennCap has a 5-day PHI.

2 Some products do not list PHI specifically.

Table 2. Package mixes of active ingredients.

Type	Active Ingredient 1	Active Ingredient 2	Trade Name	Target Pest(s)	Signal Word	Restricted use?	REI	PHI (days)
FU	1,3 dichloropropene	chloropicrin	Telone C17 (Dow)	symphylan, wireworm	Danger	Y	5 days	NA
F	abamectin (a.k.a. avermectin B1)	bifenthrin	Athena (FMC)	aphid, beetle, grasshopper, Lepidoptera, lygus, potato psyllid, spider mite, thrips	Caution	Y	12 hr	21
F	bifenthrin	imidacloprid	Brigadier (FMC)	aphid, beetle, leafhopper, Lepidoptera, grasshopper, potato psyllid, whitefly	Warning	Y	12 hr	21
F	bifenthrin	gamma-cypermethrin	Hero (FMC)	aphid, beetle, grasshopper, leafhopper, Lepidoptera, spider mite	Caution	Y	12 hr	21
F	bifenthrin	gamma-cypermethrin	Hero EW (FMC)	aphid, beetle, grasshopper, leafhopper, Lepidoptera, spider mite	Warning	Y	12 hr	21
	bifenthrin	gamma-cypermethrin	Steed (FMC)	aphid, beetle, grasshopper, leafhopper, Lepidoptera	Warning	Y	12 hr	21
F	chlorantraniliprole	lambda-cyhalothrin	Besiege (Syngenta)	aphid, beetle, grasshopper, leafhopper, Lepidoptera, stink bug, potato psyllid	Warning	Y	24 hr	14
F	chlorantraniliprole	thiamethoxam	Voliam Flexi (Syngenta)	aphid, beetle, leafhopper, Lepidoptera	Caution	N	12 hr	14
F	beta-cyfluthrin	imidacloprid	Leverage 360 (Bayer)	aphid, beetle, Lepidoptera, psyllid, leafhopper, lygus	Caution	Y	12 hr	7
F	lambda-cyhalothrin	thiamethoxam	Endigo ZC (Syngenta)	aphid, beetle, Lepidoptera, grasshopper, lygus, stink bug, potato psyllid, leafhopper, whitefly	Warning	Y	24 hr	14

Table 2. Package mixes of active ingredients.

Type	Active Ingredient 1	Active Ingredient 2	Trade Name	Target Pest(s)	Signal Word	Restricted use?	REI	PHI (days)
SP	thiamethoxam	fludioxonil, (fungicide)	Cruiser Maxx (Syngenta)	aphid, beetle, leafhopper, potato psyllid, whitefly	Caution	N	12 hr	??
SP	thiamethoxam	fludioxonil, difenoconazole (fungicide)	Cruiser Maxx Potato Extreme (Syngenta)	aphid, beetle, leafhopper, potato psyllid, whitefly	Caution	N	12 hr	??
SP	thiamethoxam	fludioxonil, difenoconazole, Sedaxane (fungicide)	CruiserMaxx Vibrance	aphid, beetle, leafhopper, potato psyllid, whitefly	Caution	N	12 hr	??

Table 3. Biological insecticides, essential oils, etc.

Type	Active Ingredient	Trade Name	Target Pest(s)	Insecticide Group	Signal Word	Restricted Use?	REI	PHI (days)
F	azadirachtin	Many brands, and formulations	various insects	-	Caution	N	4 hr	0
	azadiractin, neem	Debug Optimo, Debug Tres, Debug Turbo (Agro Logistic Systems)	various insects	-	Caution	N	4 hr	0
F	azadiractin, pyrethrins	Azera (Valent)	various insects	3A	Warning	N	12 hr	0
F	<i>Bacillus thuringiensis</i> var. <i>aizawai</i>	Agree (Certis), XenTari (Valent), Jackpot WP (Certis)	Lepidoptera	11A	Caution	N	4 hr	0
F	<i>Bacillus thuringiensis</i> var. <i>kurstaki</i>	Many brands and formulations	Lepidoptera	11A	Caution	N	4 hr	0
F	<i>Bacillus thuringiensis</i> var. <i>tenebrionis</i>	Trident (Certis)	Colorado potato beetle	11A	Caution	N	4 hr	0
	<i>Beauveria bassiana</i> , strain ANT	BioCeres (Anatis Bioprotection)	aphid, whitefly, thrips, lygus	-	Caution	N	4 hr	0
	<i>Beauveria bassiana</i> , strain ANT, pyrethrins	BotaniGard Maxx (LAM International)	various insects	3A	Warning	N	12 hr	0

Table 3. Biological insecticides, essential oils, etc.

Type	Active Ingredient	Trade Name	Target Pest(s)	Insecticide Group	Signal Word	Restricted Use?	REI	PHI (days)
F	<i>Beauveria bassiana</i> , strain GHA	Botanigard ES, Botanigard 22 WP, BoteGHA, Mycotrol (LAM International)	various insects	--	Caution	N	4 hr	0
F	<i>Beauveria bassiana</i> , strain GHA, pyrethrins	Botanigard Maxx (LAM International)	various insects	3A	Warning	N	12 hr	0
F	<i>Beauveria bassiana</i> , strain PPRI	Velifer (BASF)	aphid, thrips, whitefly, spider mite	—	Caution	N	12 hr	0
F	<i>Burkholderia spp.</i>	Venerate XC (Pro Farm)	Lepidoptera, aphid, leafhopper, potato psyllid, whitefly, Spider mite	-	Caution	n	4 hr	0
F	extract of <i>Chenopodium ambrosioides</i>	Requiem (Bayer)	potato psyllid	--	Caution	N	4 hr	0
F	<i>Chromobacterium subsugae</i> strain PRAA4-1T	Grandevo, Grandevo CG, Grandevo WDG (ProFarm)	Lepidoptera, aphid, leafhopper, potato psyllid, whitefly	--	Caution	N	4 hr	0
F	kaolin	Surround CF, Surround WP (Novasource), Cocoon (Sipcam Agro)	beetle, grasshopper, leafhopper, lygus, spider mite	--	Caution	N	4 hr	0
F	neem oil	Trilogy (Certis), Debug ON (Agro Logistic Systems)	aphid, whitefly, thrips, spider mite	-	Caution	N	4 hr	0
F	petroleum-derived oil	Many brands	leafhopper, mite, whitefly, aphid transmission of Potato Leafroll Virus and PVY	--	Caution	N	4 hr	0
F	potassium salts of fatty acids	M-Pede (Gowan), DES-X (Certis)	leafhopper, lygus, thrips, mites, whitefly	--	Warning	N	12 hr	0
F	vegetable oils and combinations, including rosemary, peppermint, clove, thyme, garlic, sesame, soybean geraniol	Many brands and formulations	various insects	-	Caution or Warning	N	0-4 hr	0

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Type	Active Ingredient	Trade Name	Target Pest(s)	Insecticide Group	Signal Word	Restricted Use?	REI	PHI (days)
F	spinosad	Many brands and formulations	Lepidoptera,, Colorado potato beetle, thrips, potato psyllid	5	Caution	N	4 hr	7
IF	spinosad, iron phosphate	BUG-N-SLUGGO (Certis)	Lepidoptera, slug	5	Caution	N	4 hr	7

All trade names may not be listed here. In some cases the PHI is not specifically mentioned, but is implied to be 0 days, thus, the REI becomes the PHI. Product application codes: F = foliar; IF = in-furrow. Insecticide group codes refer to modes of action, and should be used in managing insecticide resistance; for more on insecticide codes and resistance management, see: <http://www.nwpotatoresearch.com/>. Always consult specific pesticide labels before making recommendations or deciding on a product and treatment.