

Insecticides & Miticides
Christmas Trees
2013

Read and follow all label instructions before using any pesticide product. Information derived from this publication does not constitute a label replacement or a recommendation. Before applying any pesticide, read and understand the entire pesticide label and any additional labeling related to the proposed use. **Before purchasing, be certain the product is labeled for both the host and pest you want to control.**

Active Ingredient	Insecticide & Formulation	EPA Reg#	Company	RUP	REI	Mode of Action(1)	
abamectin	Ardent 0.15 EC	100-896	Syngenta	no	12 hrs	6	
	Avid 0.15 EC	100-896	Syngenta	no	12 hrs		
	Lucid	83100-5-83979	Rotam North America,	no	12 hrs		
	Merlin	81943-29	United Phosphorus, Inc	no	12 hrs		
	Minx	1001-83	Cleary Chemical Corp.	no	12 hrs		
	Nufarm Abamectin SPC0.15 EC	228-657	Nufarm	no	12 hrs		
	Quali-Pro Abamectin 0.15EC	73220-10	Farmsaver.com	no	12 hrs		
	Quali-Pro Abamectin 0.15EC	66222-210	Makhteshim-Agan of North America, Inc	no	12 hrs		
	Timectin 0.15 EC T&O	84229-1	Tide International	no	12 hrs		
acephate* * some may only be labeled for Douglas-fir	Acephate 90 Prill	66222-123	Makhteshim-Agan of	no	24 hrs	1B	
	Acephate 90 Soluble	66330-356	Arysta LifeScience	no	24 hrs		
	Acephate 90 WDG	66330-370	Arysta LifeScience	no	24 hrs		
	Acephate 90 WDG	34704-1051	Loveland Products, Inc.	no	24 hrs		
	Acephate 90 WSP	34704-862	Loveland Products, Inc.	no	24 hrs		
	Acephate 97 UP	70506-8	United Phosphorus, Inc	no	24 hrs		
	Bracket 97	70506-8-1381	Winfield Solutions	no	24 hrs		
	Lesco-Fate	51036-236-10404	Lesco	no	24 hrs		
	Orthene TTO 97	5481-8978	Amvac	no	24 hrs		
	Orthene TTO WSP	59639-26-5481	Amvac	no	24 hrs		
	Tenkoz Acephate 97	70506-8-55467	Tenkoz, Inc	no	24 hrs		
azadirachtin	Ecozin Plus 1.2% ME	5481-559	Amvac	no	4 hrs	26	
Bacillus thuringiensis kurstaki	DiPel ES	73049-17	Valent USA	no	4 hrs	11.B2	
	DiPel PRO DF	73049-39	Valent USA	no	4 hrs		
bifenthrin	Onyx Pro	279-4269	FMC Corp	yes	12 hrs	3A	
	Quali-PRO Bifenthrin Golf & Nursery 7.9F	66222-192	Makhteshim-Agan of North America, Inc	yes	12 hrs		
bifenazate	Acramite 4SC	400-514	Chemtura	no	12 hrs	un	
	Floramite SC	400-508	Chemtura	no	12 hrs		
	Floramite SC	400-508-59807	OHP, Inc.	no	12 hrs		
	Sirocco	400-582-59807	OHP, Inc.	no	12 hrs		
buprofezin	Talus 40SC	71711-20-67690	SePRO Corp	no	12 hrs	16	
	Talus 70 DF	71711-21-67690	SePRO Corp	no	12 hrs		
carbaryl	Carbaryl 4L	34704-447	Loveland	no	12 hrs	1A	
	Drexel Carbaryl 4L	19713-49	Drexel	no	12 hrs		
	Prokoz Sevin SL	432-1227-72112	Prokoz	no	12 hrs		
	Sevin 4F	264-349	Bayer CropScience	no	12 hrs		
	Sevin 4F	61842-38	NovaSource/Tessenderlo	no	12 hrs		
	Sevin 80 WSP Carbaryl	432-1226	Bayer CropScience	no	12 hrs		
	Sevin 80S	264-316	Bayer CropScience	no	12 hrs		
	Sevin SL Carbaryl	432-1227	Bayer CropScience	no	12 hrs		
	Sevin XLR Plus	264-333	Bayer CropScience	no	12 hrs		
	Sevin XLR Plus	61842-31	NovaSource/Tessenderlo	no	12 hrs		

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chlorpyrifos	Chlorpyrifos 4E AG	66222-19	Makhteshim-Agan of North America, Inc	yes	24 hrs	1B
	Drexel Chlorpyrifos 4E AG	19713-520	Drexel	yes	24 hrs	
	Govern 4E	62719-220-55467	Tenkoz	yes	24 hrs	
	Hatchet	62719-220	Dow AgroSciences	yes	24 hrs	
	Lorsban Advanced	62719-591	Dow AgroSciences	yes	24 hrs	
	Lorsban 4E	62719-220	Dow AgroSciences	yes	24 hrs	
	Lorsban 50W WSP	62719-221	Dow AgroSciences	yes	24 hrs	
	Lorsban 75WG	62719-301-10163	Gowan	no	24 hrs	
	Nufos 4E	67760-28	Chemnova	yes	24 hrs	
	Quali-Pro Chlorpyrifos 4E	66222-19	Makhteshim-Agan of North America, Inc	yes	24 hrs	
	Quali-Pro Chlorpyrifos 4E	66222-19-73220	FarnSaver	yes	24 hrs	
	Warhawk	34704-857	Loveland	yes	24 hrs	
	Whirlwind	62719-220-5905	Helena	yes	24 hrs	
	Agrisolutions Yuma 4E Insecticide	62719-220-1381	Winfield Solutions LLC	yes	24 hrs	
	Vulcan	66222-233	Makhteshim-Agan of North America, Inc	yes	24 hrs	
chromobacterium	MBI-203 EP Bioinsecticide	84059-10	Marrone Bio Innovations	no	4 hrs	
clofentazine	Apollo SC	66222-47	Makhteshim-Agan of	no	12 hrs	10A
cyfluthrin	Baythroid XL	264-840 EPA-SLN No. MI 060003	Bayer CropScience	yes	12 hrs	3A
diflubenzuron	Dimilin 25W	400-465	Chemtura Corp.	yes	12 hrs	15
	Dimilin 4L	400-474	Chemtura Corp.	yes	12 hrs	
disulfoton * only on Fir	Di-Syston 15% Granular	264-723	Bayer CropScience	yes	48 hrs	1B
esfenvalerate	Adjourn	352-515-66222	Makhteshim-Agan of	yes	12 hrs	3A
	Asana XL	352-515	DuPont	yes	12 hrs	
	S-fenvalostar	71532-21-73006	LG International	yes	12 hrs	
etoxazole	TetraSan 5 WDG	59639-108	Valent USA	no	12 hrs	10B
fenazaquin	Magister	10163-297	Gowen	no	12 hrs	21A
	Magus Miticide	10163-297	Gowen	no	12 hrs	
flubendiamide	Belt SC	264-1025	Bayer CropScience	no	12 hrs	28
hexythiazox	Hexygon DF	10163-251	Gowan	no	12 hrs	10A
	Onager	10163-277	Gowan	no	12 hrs	
	Savey 50DF	10163-250	Gowan	no	12 hrs	
horticulture oil	Damoil	19713-123	Drexel	no	4 hrs	
	Glacial Spray Fluid	34704-849	Loveland	no	4 hrs	
	Purespray 10E	69526-5	Petro-Canada	no	4 hrs	
	Purespray Green	69526-9	Petro-Canada	no	4 hrs	

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imidacloprid	Admire Pro	264-827	Bayer CropScience	no	12 hrs	4A
	Agrisolutions Advise 2FL	1381-205	Winfield Solutions	no	12 hrs	
	Couraze 1.6F	264-763-67760	Cheminova	no	12 hrs	
	Couraze 2F	67760-91	Cheminova	no	12 hrs	
	Couraze 4F	67760-97	Cheminova	no	12 hrs	
	Mallet 75 WSP	228-588	Nufarm	no	12 hrs	
	Nuprid 1.6 F	228-488	Nufarm	no	12 hrs	
	Pasada 1.6F	264-763-66222	Makhteshim-Agan of North America, Inc	no	12 hrs	
	Prey	34704-894	Loveland	no	12 hrs	
	Provado 1.6F	264-763	Bayer CropScience	no	12 hrs	
	Sherpa	34704-983	Loveland Products	no	12 hrs	
	Widow	34704-893	Loveland Products	no	12 hrs	
Wrangler	34704-931	Loveland Products	no	12 hrs		
insecticidal soap	M-Pede	62719-515	Gowan	no	12 hrs	
	M-Pede Insecticide	10163-324	Gowan	no	12 hrs	
malathion	Gowan Malathion 8	10163-21	Gowan	no	12 hrs	1B
	Malathion 8 Aquamul	34704-474	Loveland Products	no	12 hrs	
oxydemeton-methyl	MSR Spray Concentrate	10163-220	Gowan	yes	18 days (new label) 48 hrs (old label)	1B
phosmet	Imidan 70-W	10163-169	Gowan	no	13 days	1B
propargite	Omite 30 WS	400-427	Chemtura	yes	14 days	12C
pymetrozine	Endeavor	100-913	Syngenta	no	12 hrs	9B
spinosad	Blackhawk Naturalyte	62719-523	Dow AgroSciences	no	4 hrs	5
	Conserve SC	62719-291	Dow AgroSciences	no	4 hrs	
	Entrust	62719-282	Dow AgroSciences	no	4 hrs	
	SpinTor 2SC	62719-294	Dow AgroSciences	no	4 hrs	
	Success Optim Naturalyte	62719-523	Dow AgroSciences	no	4 hrs	
spirotetrafen	Envidor 2SC Mitecide	264-831	Bayer Cropscience	no	12 hrs	5
spirotetramat	Movento	264-1050	Bayer Cropscience	no	24 hrs	23
tebufenozide	Confirm 2F	62719-420	Dow AgroSciences	no	4 hrs	18
	Mimic 2LV Specialty Insecticide	62719-439	Dow AgroSciences	no	4 hrs	
	Mimic 2L Insecticide	8033-113-73049	Nippon Soda Co.	no	4 hrs	

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<p>(1) Wherever possible, growers should rotate classes of insecticides and avoid using the same chemistry more than once per year, or better, once every other year. Note the resistance group number of each insecticides and avoid using chemistries from the same group.</p> <p>Mode of Action Groups</p> <table> <tr> <td>1A - Carbamates</td> <td>9B - Selective feeding blockers</td> </tr> <tr> <td>1B - Organophosphates</td> <td>10A and 10B - Mite growth inhibitor</td> </tr> <tr> <td>3A - Pyrethroid</td> <td>11.B2 - Bacterial larvicide</td> </tr> <tr> <td>3B - Organochlorine</td> <td>12C - Inhibition of mitochondrial ATP synthase</td> </tr> <tr> <td>4A - Neonicotinoids</td> <td>15 - Inhibitors of chitin</td> </tr> <tr> <td>5 - Spinosyns</td> <td>18 - Ecdysone receptor agonists</td> </tr> <tr> <td>6 - Chloride channel activators (Avermectins)</td> <td>21A - Fenazaquin</td> </tr> <tr> <td></td> <td>23 - Inhibitor of acetyl CoA</td> </tr> <tr> <td></td> <td>28 - Diamides</td> </tr> <tr> <td></td> <td>UN - Compounds of unknown or uncertain mode of action[@]</td> </tr> <tr> <td></td> <td>[@]A compound with an unknown or controversial mode of action or an unknown mode of toxicity will be held in category UN until evidence becomes available to enable that compound to be assigned to a more appropriate mode of action class.</td> </tr> </table>							1A - Carbamates	9B - Selective feeding blockers	1B - Organophosphates	10A and 10B - Mite growth inhibitor	3A - Pyrethroid	11.B2 - Bacterial larvicide	3B - Organochlorine	12C - Inhibition of mitochondrial ATP synthase	4A - Neonicotinoids	15 - Inhibitors of chitin	5 - Spinosyns	18 - Ecdysone receptor agonists	6 - Chloride channel activators (Avermectins)	21A - Fenazaquin		23 - Inhibitor of acetyl CoA		28 - Diamides		UN - Compounds of unknown or uncertain mode of action [@]		[@] A compound with an unknown or controversial mode of action or an unknown mode of toxicity will be held in category UN until evidence becomes available to enable that compound to be assigned to a more appropriate mode of action class.
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