

TABLE 1. REGISTERED USES FOR SELECTED BOTANICAL PESTICIDES

REGISTERED SITE	PESTS LISTED (NOT INCLUSIVE)	INGREDIENT(S)/PRODUCTS*				
		Nicotine sulfate	Pyrethrins	Rotenone	Pyrethrins	Rotenone + Sabadilla
I. VEGETABLES						
	aphids		P1		(RP)	
	bean beetles				(RP)	
	blister beetles		P1			
	cabbage worm, cabbage loopers	P1		(RP)		
	cucumber beetle (striped, 12 spotted)		P1		(RP)	
	fire ants (mound drench)			R2		
	flea beetle	P1		(RP)		
	corn earworm (fruitworm)		P1		(RP)	
	Harlequin bug		P1		(RP)	
	garden fleahopper				(RP)	
	leafhopper	P1		(RP)		
	leaf rollers (oblique banded), leaf tier		P1		(RP)	
	Lygus bugs				(RP)	
	melon worms				(RP)	
	mites				(RP)	
	potato beetle		P1			
	squash bugs		P1		(RP, nymphs)	
	tarnished plant bugs		P1			
	stink bugs			(RP)		
	thrips		P1		(RP)	
	vegetable weevils				(RP)	
	webworms (alfalfa, beet, sod)				(RP)	
	whiteflies				(RP)	
Asparagus	aphids			R2		
	asparagus beetle (larvae)		P1	R1, R2	RP	
Beans	aphids	N1	P1	R2	RP	
	(Mexican) bean beetles			R2	RP	
	flea beetles		P1	R1		
	leaf beetles			R2		
	leafhoppers	N1		R2	RP	
	Lygus bugs				RP	
	tarnished plant bugs			R2		
	stink bugs		R2			
	thrips	N1	P1	R1, R2	RP	
	twelve-spotted cucumber beetle		P1	R1		
	webworms (alfalfa, beet, garden)			RP		
Beets	aphids			R2	RP	
	beet webworms				RP	
	flea beetles			R2	RP	
	thrips			R2	RP	
Broccoli	aphids			R2		
	cabbageworm			R2		
	diamondback moth			R2		
	imported cabbage worm			R2		
Brussels sprouts	aphids			R2		
	imported cabbage worm			R2		
	cabbage worm			R2		
	diamondback moth			R2		

Table 1, cont.

REGISTERED SITE	PESTS LISTED (NOT INCLUSIVE)	INGREDIENT(S)/PRODUCTS*				
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		Nicotine sulfate	Pyrethrins	Rotenone	Rotenone + Pyrethrins Sabadilla	
Cabbage	aphids	N1	P1	R2	RP	
	beetles					
	flea beetles		P1	R1		
	striped cucumber beetle		P1			S1
	cabbage worms		P1	R1, R2	RP	S1
	imported cabbage worm			R2		
	green measuring worms (?)					S1
	diamondback moth			R2		S1
	stink bugs			RP		
	Harlequin bug		P1		RP	S1
	green stink bug					S1
	leafhoppers	N1	P1			
	Lygus bug				S1	
	mites				RP	
	thrips	N1	P1			
	vegetable weevils				RP	
	whiteflies				RP	
Cantaloupe	aphids			R2		
	cucumber beetle			R2		
Cauliflower	melonworm, pickleworm			R2		
	aphids				R2	
	cabbage worms			R2		
Carrots	diamondback moth			R2		
	imported cabbageworms			R2		
				R2	RP	
	carrot rust fly			R2		
Celery	aphids			R2		
	carrot rust fly			R2		
Collards	celery leaf-tier				RP	
	parsnip webworm			R2		
	tarnished plant bug			R2		
	2-spotted spider mite			R2		
	caterpillars					
	cabbageworms, looper			R2		
	green measuring worms (?)					S1
	diamondback moth					S1
	stink bugs					
	Harlequin bug		P1	R2		S1
	(green) stink bug			R2		S1
	beetles					
	flea beetle		R2			
	striped cucumber beetle		P1			S1
	leafhoppers			R2		
	Lygus bug		R2		S1	
	thrips			R2		
	whiteflies			R2		
Corn	corn earworm				RP	
Cucumber	aphids	N1	P1	R2	RP	
	cucumber beetle			P1	R2	RP
	leafhoppers		N1	P1		RP
	melonworm, pickleworm				R2	
	thrips		N1	P1		RP

Table 1, cont.

REGISTERED SITE

PESTS LISTED (NOT INCLUSIVE)

INGREDIENT(S)/PRODUCTS*

		Nicotine		Rotenone +		
		sulfate	Pyrethrins	Rotenone	Pyrethrins	Sabadilla
Eggplant	aphids	N1	P1	R2	RP	
	flea beetles			R2	RP	
	leafhoppers	N1	P1	R2	RP	
	(Colorado) potato beetle		P1	R2		
Kale, Mustard greens, Swiss chard, Kohlrabi, Endive, Salsify	thrips	N1	P1	R2	RP	
	aphids			R2		
	cabbageworm, looper		R2			
	flea beetles			R2		
	leafhoppers			R2		
	Lygus bug		R2			
	stink bugs		R2			
	thrips			R2		
	whitefly			R2		
	Lettuce	aphids			R2	RP
cabbage worms				R2	RP	
whiteflies				R2	RP	
Melons (cantaloupe, muskmelon, and others) (muskmelon, only)	melonworms	N1	P1		RP	
	aphids	N1	P1	R2	RP	
	cucumber beetle			R2		
	leafhoppers	N1	P1		RP	
	melonworm, pickleworm			R2		
	thrips	N1	P1		RP	
Mustard	Harlequin bug		P1			S1
	green stink bug					S1
	Lygus bug				S1	
	striped cucumber beetle		P1			S1
	green measuring worms (?)					S1
	diamondback moth					S1
Onion (Leeks, Garlic, Shallot)	thrips	N1	P1	R2	RP	
	thrips			R2		
Peas	aphids	N1	P1	R2	RP	
	leafhoppers	N1	P1	R2	RP	
	pea weevil		R1			
	mites				RP	
	thrips	N1	P1	R2	RP	
Peppers	aphids	N1	P1	R2	RP	
	leafhoppers	N1	P1	R2	RP	
	thrips	N1	P1	R2	RP	
				R2		
Pimentos			R2			
Potatoes	aphids			R2	RP	
	flea beetles			R2		
	leafhoppers			R2	RP	
	Lygus bugs				RP	
	Tarnished plant bugs			R2		
	flea beetles				RP	
	(Colorado) potato beetles		P1	R2		
Pumpkin	aphids			R2		
	cucumber beetle			R2		
	melonworm, pickleworm			R2		
Radishes	flea beetle		R2			
	thrips			R2		
Rutababagas, Parsnips,						

Table 1, cont.

REGISTERED SITE	PESTS LISTED (NOT INCLUSIVE)	INGREDIENT(S)/PRODUCTS*				
		Nicotine sulfate	Pyrethrins	Rotenone	Rotenone + Pyrethrins	Sabadilla

Horseradish		cabbage worms			R2		
		flea beetles			R2		
		leafhoppers			R2		
		stink bugs		R2			
		Lygus bugs			R2		
		thrips			R2		
		(parsnip) webworms			R2		
		aphids	N1	P1	R2	RP	
		leafhoppers	N1	P1	R2	RP	
		thrips	N1	P1	R2	RP	
Spinach		aphids			R2	RP	
		leafhoppers			R2	RP	
		thrips			R2	RP	
		aphids			R2	RP	
Squash		cucumber beetles			R2		
		melonworm, pickleworm			R2		
		squash bugs	N1	P1	R2	RP	S1
		(young)				(nymphs)	
Sweet corn	chinch bugs	squash vine borers				RP	
		whiteflies				RP	
		European corn borer	N1				
Sweet potatoes				R1			
Tomatoes		aphids	N1	P1	R2	RP	
		leafhoppers	N1	P1	R2	RP	
		mealybugs			R2		
		mites					RP
		stink bugs			R2	RP	
		tomato hornworms (young)			R2		
		tomato pinworm			R2		
		whiteflies			R2	RP	
		aphids	N1	P1			
		caterpillars					
Turnips		cabbage loopers, worms		P1	R2		
		green measuring worms (?)					S1
		diamondback moth					S1
		flea beetles			R2		
		stink bug			R2		
		green stink bug					S1
		Harlequin bug		P1	R2		S1
		leafhoppers	N1	P1	R2		
		Lygus bug			R2		S1
		striped cucumber beetle		P1			S1
II. FRUITS		thrips	N1	P1	R2		
		(parsnip) webworm			R2		
		Apples					
		aphids, leafhoppers, budmoth	N1				RP
		rednecked borers (adult), mites					RP
		Apricots					
		aphids, leafhoppers, thrips	N1				
		Blackberry				RP	
		aphids, leafhoppers, thrips, mites					
		raspberry sawfly, red spider (mite), leafminer, raspberry fruitworm, cane borer			R2		
Blueberry					RP		
blueberry maggots, mites							
flea beetle, grape leaf skeletonizer, leafhopper, rose chafer, blueberry maggot				R2			

Table 1, cont.

REGISTERED SITE	PESTS LISTED (NOT INCLUSIVE)	INGREDIENT(S)/PRODUCTS*				
		Nicotine sulfate	Pyrethrins	Rotenone	Rotenone + Pyrethrins	Sabadilla

Boysenberry	raspberry sawfly, red spider (mite), leafminer, raspberry fruitworm, cane borer		R2	
Cherries	aphids, leafhoppers, thrips cherry fruit flies, mite	N1		RP RP
Citrus (orange, lemons, grapefruit)	aphids, leafhoppers, thrips	N1		R2
Currants	aphids, leafhoppers, thrips imported currant worms, mites	N1		RP RP
Dewberry	aphids, imported currant worms, mites raspberry sawfly, red spider (mite), leafminer, raspberry fruitworm, cane borer		R2	
Gooseberry	gooseberry fruitworms			RP
Grape	aphids, imported currant worms, mites aphids, leafhoppers, thrips, mites fleabeetle, grape leaf skeletonizer, leafhopper, rose chafer, blueberry maggot			R2 RP R2
Huckleberry	flea beetle, grape leaf skeletonizer, leafhopper, rose chafer, blueberry maggot			R2
Loganberry	raspberry sawfly, red spider (mite), leafminer, raspberry fruitworm, cane borer		R2	
Pears	aphids, leafhoppers, budmoths	N1		RP
Peaches	aphids, leafhoppers, thrips	N1		RP
Plum	aphids, leafhoppers, thrips, mites			RP
Raspberry	aphids, leafhoppers, thrips, mites raspberry fruitworms raspberry sawfly, red spider (mite), leafminer, raspberry fruitworm, cane borer		R2	RP RP RP
Strawberries	aphids, leafhoppers, thrips strawberry rootworms (adults) strawberry leafrollers mites leafroller, weevil, red mite, spittlebug	N1		RP RP RP
Youngberry	raspberry sawfly, red spider (mite), leafminer, raspberry fruitworm, cane borer		R2 R2	
III. TURF	fire ants (mound drench)	N1	R2	

Table 1, cont.

IV. FLOWERS AND ORNAMENTALS

P1 - (on flowers) aphids, alkali beetles, asparagus beetle, aster beetles, blister beetles, cabbage worm, cabbage loopers, cucumber beetle (striped), cucumber beetle (12 spotted), fireworms, fern caterpillars, flea beetle, fruitworm, gypsy moth, Harlequin bug, leafhopper, leaf rollers, leaf tier, lice, Mexican bean beetle, midge, potato beetle, quince lace bug, rose chafer, rose slug, squash bugs, tarnished plant bugs, thrips

N1 - aphids, scale crawlers, leafhoppers, thrips, leaf miners, mealybugs, rose slugs, spider mites, lace bugs ON roses, carnations, gladioli, iris, mums, lilies, asters, petunias, nasturtium, hollyhocks, dahlias, snapdragons, pansies, tulips, cedar, and other ornamental shrubs and flowers. Do not use on violets.

R2 - (flowers and shrubs) aphids, mites, rose chafer, flea beetles, thrips, leafhoppers, red spider, and repels bagworms.

RP - (on plants such as poplar, linden, dogwood, willow, birch, boxelder, maple, oak, elm, pine, spruce, cedar, yew, spirea, rose, lilac, zinnia, aster, petunia, geranium, dahlia, gladiolus, phlox, sweet pea, marigold, carnation, chrysanthemum, and rose (do not apply within one day of collection) for aphids, leafhoppers, exposed thrips, oblique-banded leafrollers, sawfly larvae, boxelder bugs, elm leaf beetle larvae, mites, Lygus bugs, lacebugs, greenhouse whiteflies, stink bugs, garden fleahoppers, greenhouse leaf tiers, cucumber beetles, rose chafers, ants, aster beetles, flea beetles.

* Ingredient and product's label used for example:

NICOTINE SULFATE

N1 - Natural Guard™ Nicotine Sulfate (10% nicotine alkyloid). Do not use within 7 days of harvest.

PYRETHRINS

P1 - Staffel's Pyroicide® Dust - (0.20% pyrethrins)

ROTENONE -

R1 - Orthoganic® Rotenone Dust or Spray (1% rotenone from cube). Do not use within one day of harvest.

R2 - Bonide® Rotenone 5 Organic Insecticide (5.0% rotenone).

ROTENONE + PYRETHRINS

RP - Green® Light Plus Organospray™ Insect Spray (1.1% rotenone + 0.8% pyrethrins). Do not apply within 1 day of harvest.

SABADILLA

S1 - Natural Guard™ Sabadilla Dust (Red Devil Dust) (0.8% sabadilla alkaloids).
