Relative Effectiveness of Insecticides and Miticides for Insect and Mite Control on Cucurbit Vegetables

E = Excellent; G = Good; F = Fair; I = Ineffective or Insufficient Data

Chemical class (IRAC)[1]	Common name	Example Product	Preharvest Interval (days)	Aphids	Cucumber beetle	Pickleworm, looper, sqush vine borer	Squash bug	Whitefly	Thrips	Spider Mites	Bee toxicity[4]
1A	carbaryl	Sevin	1	F	G	F	I	F	G	I	H
1A	methomyl	Lannate	0	I	G	F	I	I	I	I	H
3	Pyrethroids	numerous[2]	1-7	F	E	E	G	I	F	I	H-M
4A	imidacloprid	Admire[3]	21	E	E	I	G	G	G	I	H
4A	acetamiprid	Assail	0	E	G	G	F	G	F	I	M
4A	clothianidin	Belay[3]	7, >21	E	G	I	G	F	F	I	H
4A	thiamethoxam	Platinum/Actara[3]	30, 0	E	G	I	G	G	F	I	H
4A	dinotefuran	Venom[3]	1	E	I	I	E	G	G	I	H
4D	flupyradifurone	Sivanto	21	E	I	I	G	E	I	I	M
5	spinetoram	Radiant	1	I	I	E	I	I	E	F	M
6	abamectin	AgriMek	7	I	I	I	I	I	F	E	H
7C	pyriproxyfen	Knack	7	I	I	I	I	E	I	I	L
10B	etoxazole	Zeal	7	I	I	I	I	I	I	G	L
21A	fenpyroximate	Portal	1	I	I	I	I	I	I	G	L
22	indoxacarb	Avaunt	3	I	F	E	I	I	I	I	H
23	spiromesifen	Oberon	7	I	I	I	I	G	I	F	L
25	bifenazate	Acramite	3	I	I	I	I	I	I	E	M
28	chlorantraniliprole	Coragen[3]	1	I	I	E	I	G	F	I	M

[1]Insecticides within the same chemical class have the same mode of action.
[2]There are several pyrethroids registered on cucurbits; certain products may differ slightly in efficacy. Commercial products include, but are not limited to: Asana, Baythroid, Brigade, Danitol, Karate, Mustang Max, and Perm-Up. Check label for preharvest intervals because they vary among products.
[3]These insecticides can also be applied to the soil, including via drip irrigation. Soil applications provide much longer residual control. Soil applications of neonicotinoids ave longer preharvest intervals than foliar applications. Check labels.
[4]Bee toxicity rating is based on Cornell EIQ rating for bees, which is based on bee toxicity and plant surface half-life of pesticide: H = Highly toxic, M = Moderately toxic, L = Low to no toxicity. Among the pyrethroids, fenpropathrin (Danitol) and permethrin (Perm-up) are moderately toxic; all others are highly toxic.