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Insect Controls for the Michigan Greenhouse Industry
Michigan State University Extension Service
David Smitley and Terrance Davis (Research assistant), Department of Entomology
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3 pages

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Insect Controls for the Michigan Greenhouse Industry

MAJOR INSECT CATEGORIES

PLANT	APHIDS	CATERPILLARS	CYCLAMEN MITES	LEAF-HOPPERS	LEAF-MINERS	PLANT BUGS	SCALE INSECTS	SPIDER MITES	THRIPS	WHITEFLY	MEALYBUG	PHYTOTOXIC COMPOUNDS
AFRICAN VIOLET (<i>Saintpaulia</i>)	2, 7, 17, 24, 25, 28	6	7, 8, 9					1, 9, 15	1, 3, 6, 7, 11, 14, 17	6, 7, 17, 21, 26, 28	6, 7, 8, 11, 17, 24, 25, 28, 29	10, 12, 13, 16, 21, 25 Floral Parts: 2, 5
AGERATUM	7, 10, 12, 13, 16, 17, 21, 24, 25, 26, 28	6, 7, 13, 16, 19, 21, 22, 23, 25, 28, 29	7, 9, 26					1, 9, 15	1, 3, 6, 7, 11, 14, 17	6, 7, 11, 12, 16, 17, 21, 24, 26, 28, 29		
AGLAONEMA	7, 10, 12, 13, 16, 17, 21, 24, 25, 26, 28	6						1, 9, 15	1, 3, 6, 7, 11, 14, 17	6, 7, 17, 21, 26, 28	6, 7, 8, 11, 12, 13, 17, 23, 24, 28	2, 5
ALYSSUM (<i>Lobularia</i>)	2, 10, 12, 16, 17, 21, 24, 25, 26, 28	6, 8, 16, 19, 28, 29	9, 26, 28	8, 10, 12, 16				1, 9, 15	1, 3, 6, 7, 11, 14, 17			13
ANTHURIUM	2, 7, 10, 12, 13, 16, 17, 21, 24, 25, 26, 28						5, 6, 12, 16, 17, 24	1, 3, 9, 12, 15, 27			3, 5, 6, 7, 12, 17, 23, 24	
APHELANDRA								1, 9, 15			6, 7, 8, 10, 12, 17, 24	16, 21
ARALIA							12, 16, 17, 23, 24	1, 9, 15, 27			6, 7, 8, 12, 17, 24	
ASTER (<i>Callistephus</i>)	11, 16, 17, 19, 21, 23, 25, 26, 29	4, 6, 19, 29	9, 26	16, 23, 29		11, 13, 14, 16, 17, 19, 24, 25, 29		1, 3, 9, 15, 25, 27, 29	1, 3, 6, 7, 11, 14, 17	6, 7, 16, 17, 21, 24, 26, 28, 29	6, 7, 17, 24, 25, 29	2, 5, 10, 12
AZALEA (<i>Rhododendron</i>)	10, 12, 13, 16, 17, 21, 23, 24, 25, 26, 28, 29	4, 6, 13, 19, 23, 25, 28	9, 20, 26	10, 13, 16, 17, 28, 29	1, 6		10, 12, 16, 17, 24, 28, 29	1, 3, 9, 12, 13, 15, 17, 18, 27	1, 3, 6, 7, 10, 11, 14, 17, 28	6, 7, 12, 16, 17, 21, 24, 26, 28, 29	6, 7, 10, 12, 17, 23, 24, 25, 28, 29	2, 5
BABY'S BREATH (<i>Gypsophila</i>)								1, 9, 15				
BEGONIA	7, 8, 13, 17, 22, 23, 24, 25, 26, 28, 29	3, 4, 6, 8, 13	9, 26, 28	7, 13			3, 7, 17, 24, 25, 28	1, 3, 8, 9, 12, 13, 15, 25, 27	1, 3, 6, 7, 8, 11, 14, 17, 28	6, 7, 8, 17, 22, 23, 24, 25, 26, 28, 29	6, 7, 8, 12, 13, 17, 22, 23, 24	2, 5, 10, 12, 16, 21
BULB CROPS (Daffodil, Hyacinth, Crocus, Narcissus)	16, 17, 21, 26, 28	6						1, 9, 15	1, 3, 6, 7, 11, 14, 17	6, 7, 16, 17, 21, 26, 28	6, 7, 17, 21, 24, 28	2, 5, 12
CACTUS	2, 10, 12, 13, 16, 17, 21, 24, 25, 26, 28						5, 6, 10, 16, 17, 24, 29	1, 3, 9, 12, 15, 27			3, 5, 6, 7, 10, 12, 17, 22, 24, 29	
CALADIUM	2, 7, 10, 12, 13, 16, 17, 21, 24, 25, 26, 28							1, 9, 15		5, 6, 7, 16, 17, 21, 26, 28		
CALCEOLARIA	8, 16, 17, 21, 24, 26, 29	4, 6, 8, 19						1, 3, 9, 15, 27	1, 3, 6, 7, 11, 14, 17	6, 7, 16, 17, 21, 24, 26, 28, 29	6, 7, 8, 17, 24	12, 23 Floral parts: 2, 5
CALENDULA	7, 10, 12, 16, 17, 21, 24, 25, 28, 29	6, 7, 13, 16, 19, 21, 23	9, 12, 26, 28			12, 13, 16, 17, 19, 24, 25, 28		1, 9, 15	1, 3, 6, 7, 10, 11, 14, 17, 21, 28	5, 6, 7, 12, 16, 17, 21, 26, 28	6, 7, 10, 12, 17, 21, 23, 24, 28, 29	
CAMELLIA	7, 10, 12, 16, 17, 21, 24, 28, 29	6, 7, 19, 29					7, 10, 16, 17, 23, 24, 28, 29	1, 9, 15	1, 3, 6, 7, 8, 10, 11, 14, 17, 28	5, 6, 7, 8, 12, 16, 17, 21, 26, 28, 29	6, 7, 8, 10, 12, 16, 17, 24, 28, 29	
CARNATION (<i>Dianthus</i>)	17, 22, 24, 26, 29	6, 22, 29		10, 29				1, 3, 9, 15, 17, 18, 27	1, 3, 6, 7, 10, 11, 14, 17, 26	5, 6, 7, 17, 26		16, 19, 21, 23, 28
CELERY (<i>Apium</i>)	3, 12, 26	3, 4, 6, 19		12	6	12, 19		9, 15				
CELOSIA	7, 16, 17, 21	6, 7		10, 12, 16, 29				1, 9, 15, 23, 27	1, 3, 6, 7, 11, 14, 17	5, 6, 7, 16, 17, 21, 26, 28	6, 7, 17	24
CHRISTMAS CACTUS (<i>Schlumbergera</i>)							5, 6, 16, 17, 21, 24, 28	1, 3, 9, 12, 15, 27			3, 5, 6, 7, 12, 17, 21, 22, 23, 24	13
CHRYSANTHEMUM	6, 7, 16, 17, 22, 24, 25, 28, 29	4, 6, 11, 14, 19, 22, 25, 29	9, 14, 28	10, 16, 29	1, 6	11, 12, 13, 16, 17, 19, 23, 24, 25	3, 8, 16, 17, 24, 28, 29	1, 9, 11, 15, 17	1, 3, 6, 7, 11, 14, 17, 28	5, 6, 7, 11, 16, 17, 24, 28, 29	6, 7, 11, 17, 22, 24, 25, 28	21, 26
CINERARIA (<i>Senecio</i>)	3, 5, 6, 7, 9, 12, 16, 17, 21, 24	6, 7, 19		10, 12, 16	1, 6		7, 16, 17, 24	1, 9, 12, 15, 27	1, 3, 6, 7, 11, 14, 17	5, 6, 7, 11, 12, 16, 17, 21, 26, 27	6, 7, 12, 17, 24	
COLEUS	10, 12, 13, 16, 17, 21, 24, 25, 26, 27	6		10, 12, 16, 29			10, 16, 17, 21, 23, 24, 28, 29	1, 8, 9, 10, 12, 15, 27	1, 3, 6, 11, 14, 17	6, 8, 12, 16, 17, 21, 24, 26, 28, 29	6, 8, 10, 12, 16, 17, 21, 22, 23, 24, 25, 28, 29	2, 5, 7
COSMOS	12, 16, 17, 21, 24, 29	6, 19	9, 26	10, 12, 16		12, 13, 16, 17, 19, 24, 25		1, 9, 12, 15	1, 2, 3, 5, 6, 7, 11, 14, 17	5, 6, 7, 16, 17, 21, 26, 28		
CRUCIFERS (Cabbage, Broccoli, Cauliflower)	3	3, 4, 6						9				
CUCURBITS (Cucumbers, Melons, Squash)	3, 6, 12, 24, 26	2, 3, 6, 19, 26				12, 19, 24		3, 9, 12, 27	3, 6			
CYCLAMEN	3, 5, 6, 16, 17, 21, 24		9, 26					1, 9, 15, 27	1, 3, 5, 6, 7, 11, 14, 17	6, 7, 16, 17, 21, 26, 28		10, 12, 18
DAHLIA	7, 16, 17, 21, 23, 24, 25, 28	6, 7, 16, 19, 23, 25, 29		10, 16, 29		13, 16, 17, 19, 25		1, 9, 15, 27				
DAISY	3, 4, 5, 6, 10, 12, 16, 17, 21, 23, 24, 29				1, 6			1, 3, 9, 12, 15, 27	1, 3, 5, 6, 7, 10, 16, 17, 24			13
DIFFENBACHIA	16, 17, 21							1, 8, 9, 11, 15, 17, 18, 25, 27		6, 7, 16, 17, 21, 26, 28	6, 7, 8, 11, 13, 16, 17, 21, 24, 25, 26, 28	2, 5, 12
DRACAENA	16, 17, 21							1, 9, 15, 27	1, 3, 6, 7, 11, 14, 16, 17, 28	5, 6, 7, 16, 17, 21, 26, 28	6, 7, 11, 13, 17, 23, 24, 25	12
EGGPLANT	3, 14, 26, 28	3, 4, 6, 19		3	6			3, 9, 27		3, 6, 26, 28		
FERNS	7, 12, 13, 16, 17, 21, 22, 23, 24, 25, 26, 28, 29	6, 13					7, 16, 17, 23, 24, 28	1, 9, 15	3, 6, 11, 14, 16, 28	5, 6, 12, 16, 17, 21, 25, 26, 28, 29	6, 7, 12, 17	1, 7, 24
FICUS							7, 11, 16, 17, 23, 24, 28	1, 9, 15	1, 3, 6, 7, 8, 11, 14, 17		7, 8, 11, 17, 23, 24, 25, 28	2, 5, 6, 12, 13, 16, 21
FLOWERING TOBACCO (<i>Nicotiana</i>)		3, 4, 6, 7, 19, 26										
FUSCHIA	7, 16, 17, 21, 23, 24, 25, 28, 29							1, 8, 9, 15, 27	1, 3, 6, 7, 11, 14, 17	5, 6, 7, 16, 17, 21, 26, 28	6, 7, 16, 17, 23, 24, 25, 28	12, 24
GERANIUM (<i>Pelargonium</i>)	3, 6, 7, 8, 10, 12, 17, 22, 23, 24, 25, 26, 28, 29	4, 6, 7, 8, 19, 22, 29				12, 13, 17, 19, 25	3, 17, 24	1, 3, 8, 9, 12, 15, 25, 27	1, 3, 6, 7, 8, 10, 11, 14, 17, 28	6, 7, 8, 12, 17, 24, 26, 28, 29	6, 7, 8, 10, 12, 22, 23, 24, 25, 28, 29	2, 5, 16, 21
GERBERA	13, 16, 17, 21, 24, 28, 29				1, 6			1, 9, 13, 15, 20	1, 3, 6, 7, 11, 14, 17	5, 6, 7, 16, 17, 21, 26, 28		12
GLADIOLUS	2, 5, 7, 8, 11, 12, 14, 16, 17, 21, 24, 26, 28, 29	6, 7, 19		8, 10, 12, 16, 28		12, 13, 16, 17, 19, 25, 28	1, 3, 7, 8, 9, 11, 15, 16, 17, 24	1, 15, 17, 27	1, 2, 3, 6, 7, 8, 11, 14, 16, 17, 26, 28	5, 6, 7, 16, 17, 21, 26, 28	6, 7, 8, 12, 17, 24, 28	
GLOXINIA (<i>Sinningia</i>)	16, 17, 21, 24, 26, 29							1, 3, 9, 15, 27	1, 3, 6, 11, 14, 17	6, 16, 17, 21, 26, 28		2, 5, 7, 12
HYDRANGEA	2, 5, 16, 17, 21, 24, 26, 29	6, 29						1, 3, 9, 15, 27				10, 12, 18
IMPATIENS	7, 8, 10, 12, 16, 17, 21, 22, 23, 25, 28, 29	8, 19, 22		8, 10, 16		12, 16, 17, 19, 25		1, 8, 9, 15, 25, 27	1, 3, 6, 7, 11, 14, 17	5, 7, 16, 17, 21, 26, 28	7, 17	6, 13, 24
IRIS	7, 12, 16, 17, 21, 23, 24, 26, 28, 29	6, 19					8, 16, 17, 23, 24	1, 9, 15	1, 3, 6, 7, 11, 14, 17, 28	5, 6, 7, 12, 16, 17, 21, 26, 28		
IVY (<i>Hedera</i>)	16, 17, 21	6, 11, 13, 17, 19, 25, 28	9, 26				7, 11, 16, 17, 23, 24, 25, 28	1, 9, 11, 13, 15, 18, 27	1, 3, 6, 7, 11, 14, 17	6, 7, 16, 17, 21, 26, 28	6, 7, 11, 13, 16, 23, 24, 25, 28	2, 5, 12
IVY, GRAPE (<i>Cissus</i>)								1, 9, 15			3, 5, 6, 7, 8, 10, 12, 17, 21, 23, 24, 29	
KALANCHOE	16, 17, 21, 24, 25, 26, 28, 29		9, 26, 28					1, 3, 9, 15, 27	1, 3, 6, 7, 11, 14, 17, 27	6, 7, 16, 17, 21, 26, 28	24, 25, 28	2, 5, 12
LARKSPUR	3, 5, 6, 12, 16, 17, 21, 24	4, 6, 19	3, 9, 26	10, 12, 16	1, 6			1, 3, 9, 12, 15, 27	1, 3, 6, 7, 11, 14, 17	5, 6, 7, 12, 16, 17, 21, 26, 28	3, 5, 6, 7, 12, 17, 23, 24	
LETTUCE	16, 17, 21, 26	4, 6, 19, 26						9				
LIATRIS								1, 9, 15				
LILY	8, 16, 17, 21, 24, 26, 29	6, 7, 19					3, 16, 17, 24	Bulb Mites = Vydate Drench 1, 9, 12, 15	1, 3, 6, 7, 8, 11, 14, 17	6, 7, 16, 17, 21, 26, 28		2, 5, 10, 12
LOBELIA	16, 17, 21	6		10, 12, 16		6, 12, 13, 16, 17, 19, 25				5, 6, 7, 16, 17, 21, 26, 28		
MARIGOLD (<i>Tagete</i>)	16, 17, 21	6, 8, 16, 19, 21, 28, 29		8, 10, 12, 16	1, 6		3, 16, 17, 24	1, 8, 9, 12, 15, 18, 21, 27	1, 3, 6, 7, 11, 14, 17	5, 6, 7, 8, 12, 16, 17, 21, 26, 28, 29		13
NASTURTIUM (<i>Trapaeolum</i>)	3, 5, 6, 7, 12, 16, 17, 21	3, 4, 6, 7, 19		10, 12, 16	1, 6	6, 12, 13, 16, 17, 19, 25		1, 3, 9, 12, 15, 27	1, 3, 5, 6, 7, 11, 14, 17			24
NEPHTHYTIS (<i>Syngonium</i>)								1, 9, 15	1, 3, 5, 6, 7, 8, 11, 14, 17, 24, 28			
ONION		6, 19						9	6			
ORCHID	2, 5, 10, 12, 16, 17, 21, 24, 26, 28, 29						10, 16, 17, 21, 24, 28, 29	1, 9, 15, 25	1, 2, 3, 5, 6, 7, 10, 11, 14, 16, 17, 21, 28	5, 6, 7, 12, 16, 17, 21, 26, 28	6, 7, 10, 17, 23, 24, 28, 29	13
PACHYSANDRA	16, 17, 21	6, 9, 19					7, 10, 16, 17, 24, 28	1, 8, 9, 15, 27		5, 6, 7, 16, 17, 21, 26, 28		
PANSY (<i>Viola</i>)	2, 6, 7, 16, 17, 21, 23, 24, 25, 26, 28, 29	4, 6, 19						1, 3, 9, 15, 25, 27		2, 5, 6, 7, 16, 17, 21, 24, 26, 28	6, 7, 17, 21, 24, 27	12, 13
PEPEROMIA	16, 17, 21							1, 9, 15		6, 7, 16, 17, 21, 26, 28	8, 11, 13, 17, 21, 22, 23, 24, 28	

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Chemical Insect Controls for the Michigan Greenhouse Industry

By David Smitley and Terrance Davis (Research assistant)
Department of Entomology

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Cooperative Extension Service



Michigan State University

Pesticides must be registered with the U.S. Environmental Protection Agency (EPA) and the Michigan Department of Agriculture (MDA) as to the crop on which the chemical is to be used and the pests to be controlled. Information about target pests, crops, rates, handling, safety, and any special considerations must be listed on the pesticide container. Failure to use a pesticide consistent to its label can

lead to the injury of crops, humans, animals and the environment, and can lead to civil fines and/or condemnation of the crop. Labels are constantly changing, so always check the label before applying any compound. The recommendations in this bulletin are those the authors feel to be the most efficacious compounds currently registered for the crop and pest, and the least likely to cause phytotoxicity.

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