## Table of Some of the Most Common Miticides for Use Against Spider Mites<sup>1</sup> in California (Version 2, Mar 2007)<sup>2</sup> David Haviland; Entomology Farm Advisor, UCCE- Kern County

Miticide	Active Ingredient	Producer	Targeted life stages and mode of action	IRAC Number <sup>3</sup>
Acramite	bifenazate	Chemtura	contact toxin on all stages by unknown mechanism in nervous system	25
Agri-Mek	abamectin	Syngenta	contact or ingestion toxin that paralyzes juveniles and adults; death by starvation	6
Apollo	clofentezine	MANA	growth regulator of mite eggs and some nymphs	10A
Carzol	formetanate	Gowan	contact toxin that inhibits acetylcholinesterase and monoamine oxidase	1A
Comite	propargite	Chemtura	contact on juveniles and adults by inhibition of ATP synthesis	12C
Danitol	fenpropathrin	Valent	nerve toxin to juveniles and adults by modification of sodium channels (pyrethroid)	3
Desperado	pyridaben/sulfur	Wilbur-Ellis	contact on juveniles and adults by inhibition of energy production, plus sulfur	21
Dicofol	dicofol	multiple	contact toxin of juveniles and adults with unknown mode of action	UNC
Ecotrol	botanical oils	EcoSMART	contact on all stages; inhibits nervous system by blocking octopamine receptors	-
Envidor	spirodiclofen	Bayer	contact on all mite stages by inhibiting lipid biosynthesis; most effective on juveniles	23
Fujimite	fenpyroximate	Nichino	contact toxin to eggs, juveniles and adults; inhibits electron transport in the mitochondria	21
Kanemite	acequinocyl	Arysta	contact toxin to eggs, juveniles and adults; inhibits electron transport in the mitochondria	20B
Kelthane	dicofol	Dow	contact toxin of juveniles and adults with unknown mode of action	UNC
Nexter	pyridaben	BASF	contact on juveniles and adults by inhibition of energy production	21
Oberon	spiromesifen	Bayer	contact on all mite stages by inhibiting lipid biosynthesis; most effective on juveniles	23
Omite	propargite	Chemtura	contact on juveniles and adults by inhibition of ATP synthesis	12C
Onager	hexythiazox	Gowan	mite growth regulator; adult females lay sterile eggs; contact toxin on eggs and juveniles	10A
Vendex	fenbutin-oxide	Du Pont	contact toxin to juveniles and adults by inhibition of ATP synthesis	12B
Zeal	etoxazole	Valent	contact toxin on eggs; inhibits molting of juveniles; adult females produce sterile eggs	10B
Zephyr	abamectin	Syngenta	contact or ingestion toxin that paralyzes juveniles and adults; death by starvation	6

<sup>&</sup>lt;sup>1</sup> Spider mite species include *Tetranychus* spp. (pacific, two-spotted, strawberry, McDaniel, Carmine spider mites), *Panonychus* spp. (European, citrus red mites), *Eotetranychus* spp. (Willamette, Yuma spider mites), *Eutetranychus banksi* (Texas citrus mite)

**Disclaimer:** Discussion of research findings necessitates using trade names. This does not constitute product endorsement, nor does it suggest products not listed would not be suitable for use. Some research results included involve use of chemicals which are currently registered for use, or may involve use which would be considered out of label. These results are reported but <u>are not</u> a recommendation from the University of California for use. Consult the label and use it as the basis of all recommendations.

<sup>&</sup>lt;sup>2</sup>Pesticide-related information is always changing. To recommend changes to the table please contact David Haviland. dhaviland@ucdavis.edu, 661 868-6215 Insecticide Resistance Action Committee (IRAC) numbers used to denote different modes of action. Same number indicates same mode of action

## Registration Status of Selected Miticides for Use Against Spider Mites<sup>1</sup> in California. (Current as of March, 2007) David Haviland; Entomology Farm Advisor, UCCE- Kern County

Key: YES = fully registered for use NB = registered for use on non-bearing crops only No = not registered for use

	IRAC	Nut Crops			Stone Fruits					Citrus	Pome Fruits		Grape	Cotton
	Number <sup>2</sup>	Almond	Pistachio	Walnut	Apricot	Cherry	Peach	Plum	Nectarine		Apple	Pear	1	
Acramite	25	YES	YES	YES	NB	NB	YES	YES	YES	NB	YES	YES	YES	YES
Agri-Mek	6	YES	no	YES	no	no	no	YES	no	YES	YES	YES	YES	no
Apollo	10A	YES	no	YES	YES	YES	YES	no	YES	no	YES	YES	YES	no
Carzol	1A	no	no	no	no	no	YES	no	YES	$No^3$	YES	YES	no	no
Comite	12C	no	no	no	no	no	no	no	no	no	no	no	no	YES
Danitol	3	no	no	no	no	no	no	no	no	YES	YES	$No^3$	$No^3$	$No^3$
Desperado	21	YES	YES	YES	no	no	YES	YES	YES	no	no	no	no	no
Dicofol	UNC	no	no	YES	no	no	no	no	no	YES	YES	YES	YES	YES
Ecotrol	-	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Envidor	23	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	no
Fujimite	21	YES	YES	YES	NB	NB	NB	NB	NB	No	YES	YES	YES	YES
Kanemite	20B	YES	YES	no	no	no	no	no	no	YES	YES	YES	no	no
Kelthane	UNC	no	no	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Nexter	21	YES	YES	YES	no	no	YES	YES	YES	YES	YES	YES	YES	no
Oberon	23	no	no	no	no	no	no	no	no	no	no	no	no	YES
Omite	12C	YES	NB	YES	NB	$YES^4$	NB	NB	YES	YES <sup>5</sup>	NB	NB	YES	no
Onager	10A	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Vendex	12B	YES	no	YES	no	YES	YES	YES	YES	YES	YES	YES	YES	no
Zeal	10B	YES	YES	YES	NB	NB	NB	NB	NB	NB	YES	YES	YES	YES
Zephyr	6	no	no	no	no	no	no	no	no	no	no	no	no	YES

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<sup>&</sup>lt;sup>2</sup> Insecticide Resistance Action Committee (IRAC) numbers used to denote different modes of action. Same number indicates same mode of action

<sup>&</sup>lt;sup>3</sup> Miticide is registered for the crop, but one or more spider mites are not listed on the label as target pests

<sup>&</sup>lt;sup>4</sup> For use on non-bearing, or post-harvest on bearing

<sup>&</sup>lt;sup>5</sup> For use on any non-bearing, or post-harvest on bearing navels or grapefruit

<sup>&</sup>lt;sup>6</sup> OMRI certified for use on organic crops