

CALIFORNIA MANDARIN/MINNEOLA PRODUCTION*		
COMMON TREATMENTS		
PEST/DISEASE TARGET	PEST CONTROL OPTIONS	TREATMENT PERIOD
Plant Growth Regulators	2,4-D	September-November
	gibberellic acid (GA ₃)	Mandarin - 1 to 2 applications from 50% petal fall up to 3 weeks after petal fall. Mandarin - 2 weeks before color break for late harvested orchards only as color should not be expected until late January with treatment.
Disease Control (Alternaria rot, brown rot, and clear rot)	copper compounds, potassium phosphite (Prophyt) and synthetic fungicides (azoxystrobin, azoxystrobin-difenoconazole, boscalid-pyraclostrobin, fluopyram-trifloxystrobin, fosetyl-AI)	October - February
California Red Scale	<i>Aphytis melinus</i> Releases * *	February– September
	oils, pyriproxyfen (Esteem), chlorpyrifos (Lorsban), buprofezin (Centaur), spirotetramat (Movento)	May-Sept
Citrus Red Mite	oils, pyridaben (Nexter), acequinocyl (Kanemite), fenpyroximate (Fujimite), spiroadiclofen (Envidor), hexythiazox (Onager), cyflumetofen (Nealta)	Feb-Apr and September-October
Citrus Thrips	Spinosad (Success/Entrust), abamectin (Agri-Mek and others), beta cyfluthrin (Baythroid), cyfluthrin (Tombstone and others), , fenpropathrin (Danitol), spinetoram (Delegate), Cyantraniliprole (Exirel)	April-June
Citricola Scale	oils, chlorpyrifos, acetamiprid (Assail), systemic imidacloprid, thiamethoxam (Actara), buprofezin (Centaur), flupyrifidifurone (Sivanto)	August-October
Forktailed bush Katydid	chlorpyrifos, dimethoate cyfluthrin, fenpropathrin (Danitol), diflubenzuron (Micromite), cryolite (Kryocide)	April-June
Asian citrus psyllid	Fenpropathrin, beta cyfluthrin, cyfluthrin, zeta-cypermethrin (Mustang), thiamethoxam, pyrethrins, spinosad	Sep-Mar
Fuller rose beetle	Thiamethoxam	July and October
OCCASIONAL TREATMENTS		
Caterpillars (citrus cutworm, amorbia and others)	B.T., chlopyrifos	April-June
Cottony Cushion Scale	Vedalia Beetle Establishment, * *	February-April
	malathion, carbaryl, methidathion	April-September
Citrus leafminer	Systemic imidacloprid, abamectin, spinetoram	June-October
Glassy-winged Sharpshooter	imidacloprid, acetamiprid, cyantaniiprole	March-August
	Acetamiprid, beta cyfluthrin	October-January
POST-HARVEST TREATMENTS		
DISEASE TARGET	DISEASE CONTROL OPTIONS	TREATMENT PERIOD
Green Mold & Blue Mold (<i>Penicillium digitatum</i> &	Synthetic compounds (o-phenylphenol, thiabendazole, imazalil, fludioxonil,	Pre-packaging of harvested fruit

<i>P.italicum</i>)	fludioxonil/azoxystrobin, pyrimethanil), natural compounds (carbonates) and biocontrols (<i>Pseudomonas</i> spp.)	
Sour Rot (<i>Geotrichum.citri-aurantii</i>)	Synthetic fungicides (o-phenylphenol) and natural compounds (carbonates)	Pre-packaging of harvested fruit (Seasonal)

- * **The only pesticides used by California citrus growers are ones that have been approved by the U.S. Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation.**
- ** **Beneficial insects are a key component in the California orange growers IPM program.**