

CALIFORNIA NAVEL ORANGE PRODUCTION*

COMMON TREATMENTS

| PEST/DISEASE TARGET | PEST CONTROL OPTIONS | TREATMENT PERIOD |
|-------------------------|---|--|
| Growth Regulator | 2,4-D | September-January |
| | Gibberellic acid (GA ₃) | Navel: Sep-Nov Valencia: Aug-Sep |
| Disease Control | copper compounds, synthetic fungicides (azoxystrobin, fenbuconazole, azoxystrobin-difenoconazole), and phosphonate fungicides (fosetyl-Al, potassium and calcium phosphite) | October-November (synthetic fungicides), seasonal (phosphonate fungicides) |
| California Red Scale | <i>Aphytis melinus</i> releases* * | February– September |
| | Petroleum and mineral oils, pyriproxyfen, chlorpyrifos, buprofezin, spirotetramat | May-August |
| Citricola Scale | oils, chlorpyrifos, acetamiprid | August-October |
| Citrus Red Mite | Oils, pyridaben, acequinocyl, fenpyroximate, spirotetramat | April-June and September-October |
| Citrus Thrips | spinosad, abamectin, cyfluthrin, dimethoate, fenpropathrin, spinetoram | April-June |
| Forktailed Bush Katydid | cryolite, chlorpyrifos, dimethoate cyfluthrin, fenpropathrin | April-June |

OCCASIONAL TREATMENTS

| | | |
|---|----------------------------------|------------------|
| Caterpillars (citrus cutworm, amorbia and others) | B.T., cryolite, chlorpyrifos | March-June |
| Citrus leafminer | Imidacloprid | Aug-Oct |
| Cottony Cushion Scale | Vedalia Beetle Establishment,* * | February-April |
| | malathion, carbaryl | April-September |
| Glassy-winged Sharpshooter | imidacloprid | February-August |
| | acetamiprid | October-November |

POST-HARVEST TREATMENTS

| DISEASE TARGET | DISEASE CONTROL OPTIONS | TREATMENT PERIOD |
|---|---|------------------|
| Green Mold & Blue Mold (<i>P. digitatum</i>) – (<i>P. italicum</i>) | Synthetic fungicides (thiabendazole, imazalil, fludioxonil, pyrimethanil, azoxystrobin), natural compounds (carbonates), and biocontrols (<i>Pseudomonas</i> spp.) | Seasonal |
| Sour Rot (<i>G. citri-aurantii</i>) | Synthetic fungicides (o- | Seasonal |

| | | |
|--|---|--|
| | phenylphenol) and natural compounds (carbonates), (propiconazole – <i>pending fall 2011</i>) | |
|--|---|--|

*The only pesticides used by California citrus growers are ones that have been approved by U.S. and California regulators.

**Beneficial insects are a key component in the California orange growers IPM program.