PEAR: Pyrus communis L. 'd'Anjou'

Fear psylla (PP); Psylla pyricola Foerster
Grape mealybug (GMB); Pseudococcus maritimus (Ehrhorn)

PEAR, GRAPE MEALYBUG CONTROL, 1990: Mature pear trees were sprayed with a handgun operating at 600 psi to evaluate pesticides for early season control of GMB. Plots consisted of 6 single-tree replicates in randomized block design. Treatments were evaluated for GMB control by counting the infested shoots per 10-shoot sample per replicate on 3 May and by rating 50 fruits/replicate at harvest for presence of nymphs in the calyx. Fruit with no treatments reduced mean PP nymph densities during first generation. No plant injury was observed from any of the treatments.

All treatments except Safer Insectical Concentrate and Agri-Mek provided good control of fruit infesting GMB nymphs. Mean fruit infestation with GMB; Pseudococcus maritimus

### Table: Pesticides treatments, rates/100 gal and dates of applications

<table>
<thead>
<tr>
<th>Pesticides treatments</th>
<th>Clusterbud, 3 Apr</th>
<th>Petal fall, 24 Apr</th>
<th>% GMB infested shoots</th>
<th>GMB fruit rating</th>
<th>PP/100 leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorsban 4 EC 1 pt</td>
<td>Lorsban 50% WP 12 oz</td>
<td>Lorsban 50% WP 12 oz</td>
<td>0.0c</td>
<td>1.17c</td>
<td>15.0b</td>
</tr>
<tr>
<td>Superior oil 1 gal</td>
<td>Morestan 25% WP 1 lb</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parathion 25% WP 1 lb</td>
<td>Parathion 25% WP 1 lb</td>
<td>Parathion 25% WP 1 lb</td>
<td>6.7bc</td>
<td>1.00c</td>
<td>30.0b</td>
</tr>
<tr>
<td>Superior oil 1 gal</td>
<td>Morestan 25% WP 1 lb</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thiodan 3 EC 24 oz</td>
<td>Thiodan 50% WP 1 lb</td>
<td>Thiodan 50% WP 1 lb</td>
<td>8.3bc</td>
<td>5.00c</td>
<td>33.3b</td>
</tr>
<tr>
<td>Superior oil 1 gal</td>
<td>Morestan 25% WP 1 lb</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No spray</td>
<td>Superior oil 1 gal</td>
<td>Superior oil 1 gal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insegar 25% WP 3 oz</td>
<td>Superior oil 1 gal</td>
<td>Superior oil 1 gal</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continued)
**PEAR: Pyrus communis L. 'Bartlett'**

Pear psylla (PP), *Psylla pyricola* Foerster
Pear rust mite (PRM), *Eptimerus pyri* (Nalepa)
Two spotted spider Mite (TSM), *Tetranychus urticae* Koch
European red mite (ERM), *Panonychus ulmi* (Koch)

**PEAR, INSECTICIDE EVALUATIONS, 1990:** Mature 'Bartlett' pear trees were sprayed with handguns operating at 600 psi to evaluate pesticides for control of pear pests. Plots consisted of 5 single-tree replicates in randomized block design. Application dates varied between treatments and are given in the table of adult count data. Treatments were evaluated for PP and mite control by counts made at 2-wk intervals. Adult PP were counted from a 5 beating-tray sample/replication. PP nymphs and phytophagous mites were counted from a 50-leaf sample/replicate. Leaf samples consisted of the proximal leaf, distal leaf and 3 leaves from the middle of 10 terminal shoots. Leaves were brushed and resulting slides were examined under magnification. PP russet was rated according to US grade standards for fresh market 'Bartlett' pears on 2 samples of 25 mature fruits/replication. Factors of fruit quality including firmness, soluble solids and size were evaluated from 2 10-fruit samples/replicate at normal harvest maturity. Fruit and foliage were examined for phytotoxicity after each spray.

Pear psylla density within the test orchard was high due to a marginally effective prebloom spray program and to the presence of several unsprayed trees including the control plot and several unused trees. NTN 33893 was applied twice during the season and each application provided short-term suppression of PP nymph populations and reduced fruit russet from honeydew. This material seemed to stimulate phytophagous mite populations. Six applications of WEX, an adjuvant, applied alone also reduced PP nymph density and fruit injury from honeydew but this treatment caused serious fruit injury in the form of russet rings where drops of spray formed. Andalin plus oil provided measurable PP nymph control and reduced fruit injury but also caused fruit injury in the form of russet rings and blotches where drops formed. Agri-Mek plus WEX provided PP control similar to the standard, Agri-Mek plus oil, but caused fruit injury similar to but less severe than the high rate of WEX alone. One application of SN 109321 provided short term reduction in PP nymph density. Six applications of RAY-GARD (a formulation of diatomaceous earth) plus B1956 produced good PP nymph control and prevented honeydew russet of fruit; however, it stimulated spider mite populations and there was some transpiration injury to foliage from mite feeding injury on trees treated with this material. There were no differences between treatments in factors of fruit quality measured; however, fruit from the control plot was significantly smaller (*P* = 0.01) than that from other plots probably due to the heavy infestation of PP.

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