## IV. Nuts

Chemical control

1. Pacific mite - almonds

J. E. Dibble
University of California
Kearney Agricultural Center
Parlier, CA

Summer treatments were made by high pressure hand gun and are shown as numbers of mites/10 leaves.

|                   | Rate/acre          | 12 days | 20 days |
|-------------------|--------------------|---------|---------|
| Vendex            | 1.5 pts.           | 2c      | 7c      |
| Vendex + Nat. oil | 1.5 pts. + 1 qt.   | 40c     | 4c      |
| Vendex + orchex   | 1.5 pts. + 2 gals. | 3c      | 6c      |
| Omite             | 6 lbs.             | 3c      | lc lc   |
| RSB 2-8           | 3.3 gals.          | 62b     | 93a     |
| RSB 2-9           | 3.3 gals.          | 140ab   | 14bc    |
| SIS + SSUF        | 2 gals. + 4 ozs.   | 29b     | 16b     |
| SSUF              | 8 gals.            | 14bc    | 11c     |
| Orchex            | 8 gals.            | 8c      | 10c     |
| EL436             | 8.5 ozs.           | 7c      | 24b     |
| EL436             | 17 ozs.            | 22bc    | 19b     |
| Danitol           | 10.6 ozs.          | 4c      | 6c      |
| Danitol           | 21.3 ozs.          | 2c      | 2c      |
| Apollo Apollo     | 8 ozs.             | 20bc    | 26b     |
| Check             |                    | 157a    | 126a    |

Kelthane, Vendex and Omite are still commercially effective as miticides. To back these compounds up are the oils alone or in combination. The fatty acid soaps and foliar nitrogen may well have a place either in combination or through repeated applications. Danitol, Apollo, Mitac, EL436 all have control capabilities.

Table 1. Peak rates of parasitism of stink bug egg masses 1 in pistachio orchards in 1988 and 1989.

| INSECTICIDE USE | DATE(S)   | PEAK % PARASITISM  |
|-----------------|---|--|
| *               | mante Library of  | VINST TO THE   |
| Unsprayed       | 7/13  | 100  |
| Unsprayed       | 7/12, 8/26, 9/4   | 100  |
| Unsprayed       | 7/12  | 29   |
| Unsprayed       | 7/29  | 100  |
| Commercial 2    | 7/6   | 100  |
|                 |   |  |
| Unsprayed       | 7/27  | 60   |
| Unsprayed       | 8/23  | 62   |
| Unsprayed       | 8/26  | 45   |
| Commercial      | Entire Season   | 0  |
| Commercial      | 8/23  | 62   |
|                 | Unsprayed Unsprayed Unsprayed Unsprayed Commercial 2 Unsprayed Unsprayed Unsprayed Unsprayed Commercial | Unsprayed 7/13 Unsprayed 7/12, 8/26, 9/4 Unsprayed 7/12 Unsprayed 7/29 Commercial 2 7/6  Unsprayed 7/27 Unsprayed 8/23 Unsprayed 8/26 Commercial Entire Season |

Approximately 60.1% of the eggs within a single egg mass are parasitized. Rates of parasitism includes all species of *Trissolcus* and *Anastatus*.

Single application of permethrin on 4/12/88.

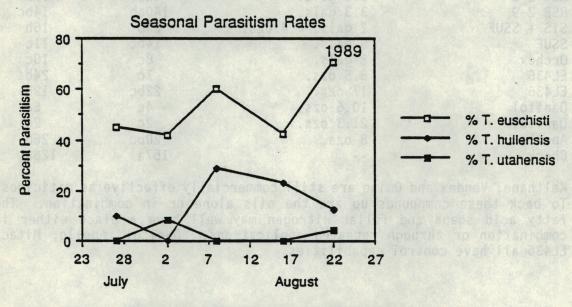


Fig. 1. Seasonal Rates of Parasitism of Stink Bug Egg Masses

## Names of Compounds Evaluated

| Compound                 | Company               |
|--------------------------|-----------------------|
| Andalin                  | UniRoyal              |
| Apollo                   | NorAm                 |
| Danitol                  | Valent                |
| EL 436                   | Elanco                |
|                          | Rohm & Haas           |
| Kelthane                 | (number of suppliers) |
| Natural oil (cottonseed) |                       |
| Omite                    | UniRoyal              |
| Orchex 796 oil           | Exxon                 |
| potassium nitrate        | (number of suppliers) |
| foliar spray             |                       |
| RSB 2-8 fatty acids      | Safer, Inc.           |
| RSB 2-9 fatty acids      | Safer, Inc.           |
| SIS fatty acids          | Safer. Inc.           |
|                          | Safer/Sun             |
| SSUF oil                 | DuPont                |
| Vendex                   |                       |
| 6                        | 3                     |