gallonage was increased as the plants grew by increasing the number of nozzles/row. Thus, the sprayer delivered 60 gal/acre the first 2 sprays (4 nozzles/row) and 100 gal/acre for the remaining sprays (8 nozzles). Each nozzle was fitted with D-7 disks and #45 cores. The terminal leaflet was collected from the 7th or 8th leaf (counting from the top) of each of 10 stems from the middle row of each plot on 30 May. The numbers of crawlers, sessile nymphs and pupae were counted. Fruit were harvested on 6 Jun and red-ripe fruit were rated 1–4 for increasing severity of external symptoms of irregular ripening (IRR). This disorder is associated with high populations of the sweetpotato whitefly and is characterized by inhibited or incomplete ripening of longitudinal sections of the fruit. Green fruit were held in paper bags and, when they ripened, were evaluated as above.

While all insecticides resulted in fewer sweetpotato whitefly crawlers compared to the check, significantly fewer were observed on plots sprayed with Brigade than on plots sprayed with either Ammo or Pounce. Fewer sessile nymphs were observed on insecticide-treated plots compared to the check. Only Brigade resulted in fewer pupae relative to the check. IRR ratings were significantly lower for plots sprayed with insecticides compared to the check with significantly lower ratings observed on plots sprayed with Brigade compared to plots sprayed with the other insecticides. Fruit rated either 3 or 4 were considered unmarketable. Using this criteria, all insecticides produced proportionately more marketable fruit than the check; however, proportionately more marketable fruit were harvested from plots sprayed with Brigade. No phytotoxic symptoms were observed for any insecticide.

Means within a column followed by the same letter are not significantly different at the F = 0.05 level, Duncan's multiple range test.

1Percent of fruit rated 3 or 4. Data were transformed arcsine square root of the proportion prior to analysis but data are presented in the original scale.

Means within columns followed by the same letter are not significantly different (P < 0.05 level, DNMRT).

1Percentage data were transformed by the arcsine square root of (%) (0.01) prior to analyses but are presented in the original scale.

2New and old formulations.