

## **EFFECT OF REFLECTIVE MULCHES AND PLANT COVERS IN CONTROLLING INSECT PESTS AND WEEDS IN CHRYSANTHEMUM**

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Plastic mulches and plant covers with reflective surfaces were evaluated for reducing insect pests and weeds on chrysanthemums in a commercial cut flower field in Oceanside, California. Each 30 foot plot consisted of three adjacent rows; data were collected only from the center of the middle row. Treatments were reflective ground mulch, reflective plant cover, a combination of reflective ground mulch with plant cover, non-reflective ground mulch and uncovered rows (control); there were three replications per treatment. Weekly counts of pests were made from sticky traps and plant samples. Weeds in center plot grids were counted. Additional quantitative measurements were: light levels, soil temperature, dry plant stem weights, and stem length. A rating scale of 1-5 was used to evaluate crop quality. In general, the mulch treatments had fewer pests than the control. Reflective ground mulches protected the crop initially, but effectiveness was reduced when the plant canopy covered the mulch. The overhead reduced thrips population levels throughout the crop. Similar levels of insects were observed in the overhead reflective cover treatment compared to the combination cover plus mulch treatment, but the combination treatments also reduced weeds. Light levels were reduced by ca 20% with the overhead reflective cover, with no negative impact on flowering date. The quality of plants was higher in the mulch treatments, which also produced the longer stems preferred by florists.