COOPERATIVE EXTENSION UNIVERSITY OF CALIFORNIA

FLOWER AND NURSERY REPORT

FOR COMMERCIAL GROWERS

Yellows Disease of China Aster

Lyle E. Pyeatt, Farm Advisor, Santa Clara, Alameda, and Contra Costa Counties

The most severe outbreak of aster yellows disease in many years affected field-grown commercial plantings of China aster (*Callistephus chinensis*) in Santa Clara County this year. Plants that became infected early in their growth cycle usually did not flower. Those infected at more advanced stages of growth produced deformed, greenish-yellow flowers. The result for the grower was the same in either case—a nonmarketable product.

For half a century the cause of aster yellows was thought to be a virus. However, about 10 years ago researchers discovered the causal agent actually is a mycoplasma. These tiny micro-organisms are somewhat larger than viruses but smaller than bacteria. Mycoplasma bodies differ from viruses in several technical respects of interest mainly to plant pathologists.

The first symptom of the disease usually is a slight yellowing along leaf veins. After a time the infected plant produces new leaves that are entirely yellow. The diseased plant does not wilt or die. The main stem is stunted, but side shoots grow long and thin. Infected leaf blades are somewhat deformed, and leaf stalks are longer than normal. Often part of a diseased plant may appear to be normal.

Aster yellows has been reported on more than 200 plant species, including California natives and introduced weeds. Leafhoppers transmit the mycoplasma from infected to healthy plants. Therefore, yellows control measures should be focused on: 1) control of the insect vector; 2) immediate removal of infected aster plants from the field; and 3) where practicable, weed control in areas surrounding the aster planting.

There is no chemical registered for the control of yellows disease in China aster. Experimental sprays of oxytetracycline (Terramycin®) have been ineffective.

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