

[Home](#) » [Volume 2 / 1998](#) »

Upland Cotton Susceptibility to *Bemisia argentifolii* (Homoptera: Aleyrodidae) Infestations

Authors: Chang-chi Chu, Eric T. Natwick, Henry H. Perkins, Donald E. Brushwood, Thomas J. Henneberry, Steven J. Castle, Allen C. Cohen, and Marcus A. Boykin

Pages: 01-09

Arthropod Management

[Full Text PDF](#) (227K)

Seventeen upland cotton (*Gossypium hirsutum* L.) cultivars were evaluated in the field for susceptibility to *Bemisia argentifolii* Bellows and Perring in Imperial Valley, CA, from 1992 to 1996. All cultivars were susceptible. Sticky cotton occurred and lint yields were low. In 1995 and 1996, nine untreated and insecticide-treated cultivars were compared using 4.1 adults per leaf turn as an insecticide-treatment action threshold. Lint yields of the insecticide-treated plots increased from 1.2 to 7.9 times in 1995 and from 0.35 to 4.0 times in 1996 compared to untreated cultivars. Deltapine (DPL) 5409 and 5415 on average required 5.5 insecticide applications; DPL 50, 5461, and 5517 required six applications; and DPL 5432 and 5690 required 6.5 applications. Louisiana (LA) 887 required seven applications and Stoneville (ST) 474 required 7.5 applications. In a no-choice greenhouse trial in 1997, the nine cultivars studied were equally colonized with *B. argentifolii* eggs and nymphs in small leaf cages and adult emergence was not significantly different among cultivars. Results suggest the potential to reduce insecticide applications by selecting appropriate cultivars currently available. Identification of resistance mechanisms and development of breeding programs to incorporate resistance into acceptable upland cultivars appear to be promising approaches for whitefly control.