

# N O T E

## Whitefringed Beetles (*Graphognathus* spp.) Damage to North Carolina Cotton<sup>1</sup>

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Whitefringed beetles, *Graphognathus* spp., infest a variety of plant species including cotton, corn, peanuts, sugarcane, velvetbean, cowpea, sweet potatoes, and blackberries (Metcalf 1993, Destructive and Useful Insects. Pp. 14.10-14.11). While whitefringed beetles are not considered cotton pests, they have been sporadically reported damaging seedling cotton in several southeastern U.S. states including Alabama, Georgia, and Florida (Bugwood 1999, [http://www.bugwood.caes.uga.edu/gapests/reproduction\\_weevils.html](http://www.bugwood.caes.uga.edu/gapests/reproduction_weevils.html); Rogers 1986, <http://www.fcla.edu/FlaEnt/fe79p285.pdf>; Rumph 2000, <http://www.aces.edu/departments/ipm/cotton-update.htm>).

Damage to foliage by adult feeding does not appear to significantly affect plants, whereas damage by larvae (fraying of the roots just below the soil line) may cause wilting and eventual death of young cotton plants.

In early June 2001, dead and damaged (e.g., plants at various stages of wilt) cotton plants from Union Co., NC, were received at the pathology laboratory at North Carolina State University for diagnosis. The roots were damaged just below the soil line. Damage appeared to be similar to that previously reported in Alabama (K. Edmisten and R. Smith, unpubl.) and identified as caused by whitefringed beetles. Similar damage was noted in cotton in Union Co. and Greene Co.

On 26 June 2001, wilting and dead plants were excavated at one site in Greene Co. Whitefringed beetle larvae were collected by sifting soil from around damaged and wilting plants. The extent of the damage was hard to estimate because plants were at various stages of decay and many had probably disintegrated beyond recognition. However, approximately 5% of the total seedlings in the field were dead. Similar damage was observed in other Greene Co. cotton fields. Factors common to cotton fields where whitefringed beetles or their damage was observed in 2001 were the presence of residue from a known crop host grown the previous year (e.g., sweet potatoes) and conservation tillage.

The current impact of whitefringed beetles as an economic pest of cotton appears minimal as only a small percentage of North Carolina cotton fields were reported as damaged by these beetles in 2001. However, the eradication of the boll weevil, *Anthonomus grandis grandis* Boheman, and the use of Bt transgenic cotton have reduced the number of insecticide applications in July and August, a time coincident with the occurrence of whitefringed beetle adults. As with some other emerging insect pests of cotton, whitefringed beetles may become a more serious cotton pest.

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