# Efficacy of Field-Aged Bait Sticks Against the Boll Weevil

Authors: Dale W. Spurgeon
Pages: 68-73
*Arthropod Management*

Full Text PDF (40K)

The role of the commercial boll weevil bait stick (Boll Weevil Attract-and-Control Tube) in boll weevil (*Anthonomus grandis grandis* Boheman) management is poorly understood. This study evaluated the influence of bait stick age on weevil mortality and behavior. Bait sticks were assayed after aging 0, 1, 3, 5, and 7 wk in the field. Efficacy was estimated in the field by allowing weevils to land on the bait stick, capturing them as they departed, and holding them to determine mortality after 24 and 48 h. Weevils captured in traps were used in forced contact assays of the same bait sticks used in the field, and as unexposed controls. Average duration of exposure to the bait stick in the field tended to increase with bait stick age, from 1.73 min (0-wk-old) to 7.94 min (7-wk-old). Most weevils remained on the bait stick for <5 min, but this proportion tended to decrease with increasing bait stick age. Mortality in either assay type (0–10%) was not different from the controls. No mortality was observed when bait stick age was >1 wk. Seventy-four percent of weevils responding naturally to the bait stick failed to land on the device. Low observed mortality and failure of most weevils to land on the bait sticks suggest the bait stick is unlikely to provide significant control or suppression of field populations. These results emphasize that meaningful evaluations should include methods that do not involve unnatural or excessive contact of the weevil with the treated bait stick surface.

The Journal of Cotton Science is published four times a year by The Cotton Foundation.
Articles are available as Adobe PDF files and can be viewed with the free Adobe Acrobat Reader.