Cost-Effective Alternative to Reduce Boll Weevil Impacts

- Cotton is a perennial plant that will resume growth following harvest in South and Central Texas, providing the potential for development of hostable fruit (squares and bolls) for boll weevil feeding and reproduction.
- Early harvest and stalk destruction – when performed on an area-wide basis – are among the most effective cultural practices for managing over-wintering boll weevils.
- With narrow profit margins associated with cotton production and the costs associated with destroying cotton stalks after harvest, the need existed for more efficient and cost-effective alternatives for stalk destruction.

Extension’s Response

- Beginning the late 1990s and continuing through 2010, the Texas A&M AgriLife Extension Service and Texas A&M AgriLife Research implemented applied-research studies and delivered educational programs demonstrating the effectiveness of using herbicides to destroy cotton stalks versus traditional mechanical methods.

- The agrichemical industry used the results of these field studies to obtain regulatory approval for herbicide stalk destruction and to establish the optimum application timings and product-use rates.
- Extension specialists developed and conducted extensive educational programs for producers across central, eastern, and southern portions of Texas on the best management practices for using herbicides to destroy cotton stalks. These programs resulted in more than 3,500 producer contacts since 2010.
- A publication was developed to address this alternative cotton stalk destruction method and has been distributed to producer organizations and to more than 20,000 individual producers since 2003.

Economic Impact

- Enterprise budgets were developed to assess the per-acre costs of using herbicides to destroy stalks versus mechanical means for two regions of the state.
- Using herbicides to destroy stalks on 55 percent of the acres in the two regions resulted in an estimated $8.4 million increase in net returns in 2011.
- This level of impact helps support an additional 79 jobs.