Evaluating Cotton Stalk Destruction Methods

Economic Impacts of Extension Education

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 overwintering boll weevils.
- With the cost of destroying cotton stalks after harvest added to the narrow profit margins in cotton production, producers needed more efficient and more cost-effective alternatives for stalk destruction.

AgriLife 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 rather than traditional mechanical methods to destroy cotton stalks.
- The commercial release and subsequent adoption of cotton varieties tolerant to previously recommended herbicides for stalk destruction in 2017 has led to a renewed effort to identify effective alternatives and to rapidly disseminate that information to producers.
- The agrochemical industry used the results of these field studies to obtain regulatory approval for herbicides that destroy stalks and to establish optimum application timing 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 8,100 producer contacts since 2010.
- Because there are numerous production systems used in producing cotton, no single cotton stalk destruction strategy works for every producer. AgriLife Extension's on-going research aims to help identify improved strategies and to fine tune cotton stalk destruction management practices to improve efficiency while accounting for various environmental and management factors.

Economic Impacts

- Enterprise budgets were developed to assess the per-acre costs of using herbicides as an alternative to mechanical means to destroy stalks in two regions of the state.
- Using herbicides to destroy stalks on 80% of the acres in the Blackland region and on 75% of the acres in the Coastal Bend and Rio Grande Valley regions resulted in an estimated $6.3 million increase in net returns in 2019.
- This level of impact helps support an additional 61 jobs.

Contact
Jeff Hyde, Director
Texas A&M AgriLife Extension Service
Ph. 979.862.3932 | Email: jeff.hyde@ag.tamu.edu