

Boll Weevil Eradication Efforts Showing Significant Economic Benefits

ECONOMIC IMPACTS OF EXTENSION EDUCATION

INSECT THREATENS VIABILITY OF COTTON

- The boll weevil has historically been the most costly insect pest of cotton in Texas. The weevil feeds on young cotton plants and lays eggs in the buds and new bolls. Since their introduction in 1892, boll weevils have disrupted rural economies, reduced land values, and triggered substantial population movements.
- In addition to direct losses caused by boll weevils, treatments applied to control boll weevils often resulted in increases in secondary pests as well as insecticide resistance.

AGRI LIFE EXTENSION'S RESPONSE

- At the request of Texas Cotton Producers Inc., Texas A&M AgriLife Extension Service entomologists took the lead in drafting a plan for boll weevil eradication in Texas.
- Extension entomologists worked with the cotton industry to draft legislation that provided a legal framework for implementing boll weevil eradication. The Texas Legislature enacted the bill.
- In 1993, Texas Cotton Producers Inc., assisted by AgriLife Extension, Texas A&M AgriLife Research, the Texas Department of Agriculture, and the U.S. Department of Agriculture, established the Texas Boll Weevil Eradication Foundation. The foundation is charged by the legislature with implementing the eradication plan.
- Grower participation is determined by a vote on an eradication referendum in each eradication zone. Extension specialists have served as technical advisers for the boll weevil eradication program since its inception, and they provided boll weevil eradication educational programs prior to referendum votes.

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- Acreage in the program has increased from 1.4 million in 1996 to 6.0 million in 2023.

ECONOMIC IMPACTS

- Although the economic benefit of boll weevil eradication will not be fully realized until eradication has been achieved across the state, growers have already seen significant gains.
- The change in net returns above variable costs for each zone ranged from \$21 to \$92 per acre in 2023, measured by calculating boll weevil yield losses and insecticide costs before and after implementing the eradication plan.
- The total increase in net returns was an estimated \$418 million in 2023. Total economic output (gross business sales) associated with farm-level and ginning impacts was an estimated \$668 million, which helped to support an additional 3,366 jobs.
- The estimated cumulative increase in net returns since 1996 is \$6.4 billion.