Fungus Threatens the Viability of Cotton

- For more than a century, the fungal disease cotton root rot has been one of the most destructive cotton diseases in Texas.
- Cotton root rot reduces yield, fiber quality, and harvest efficiency on an estimated 1.5 million acres in Texas annually. With the disease essentially eliminating harvestable cotton on affected acres, economic losses from the disease are estimated at $29 million each year.

Extension’s Response

- As cotton producers identified this issue with county Extension agents at the local level, in 1998 the Texas A&M AgriLife Extension Service began to screen new classes of fungicides to control for cotton root rot.
- Beginning in 2005, AgriLife Extension collaborated with Southern Rolling Plains cotton producers to evaluate fungicides in dedicated fields using several application methods. These efforts were funded by Cotton, Inc. - Texas State Support Committee.
- After evaluating the effectiveness of flutriafol (Topguard, manufactured by Cheminova) in 2008, and subsequently validating and expanding the promising results, AgriLife Extension compiled data from the 2010 and 2011 field trials. This information was used to apply for a Section 18 emergency exemption label for flutriafol with the Texas Department of Agriculture and the U.S. Environmental Protection Agency.
- A Section 18 label was granted in February 2012, allowing for use of the fungicide for cotton root rot control on up to 288,000 acres of Texas cotton during the 2012 season.
- Since 2010, AgriLife Extension has hosted more than 7,300 producers across Texas at 110 educational meetings on the appropriate use of the fungicide for cotton root rot control.
- AgriLife Extension worked with industry to develop more than 30 publications and newsletter articles on proper application methods that were distributed to some 8,000 producer contacts.

Economic Impact

- In 2012, flutriafol was used on an estimated 77,000 acres of irrigated cotton and 153,000 acres of dryland cotton (230,000 total acres).
- The total net economic benefit to growers was estimated at $8.5 million ($61.47 per irrigated acre, $24.74 per dryland acre) in 2012 alone.
- These benefits are conservative, as they do not include the value of improved harvest efficiency and fiber quality.