

Is transgenic cotton more profitable?

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Transgenic cotton cultivars were planted on almost 93% of U.S. cotton acres in 2007. Transgenic cultivars with pest-managing traits are dual-purpose products. The cultivars produce lint and seed, while the expressed propriety traits provide part of the crop's insect management and/or enable use of broad-spectrum herbicides for weed management.

Growers must choose among an increasing number of cultivars and an increasingly diverse spectrum of pest management options linked to the cultivars. In recent years, the number of different transgenic cotton production options that a grower may purchase has outpaced the capacity of the official cultivar trials (OCTs) to adequately evaluate their economic value.

First, large numbers of cultivars are being offered; but moreover OCTs when conducted with uniform, and generally very high levels of pest management, do not fully assess the value of the transgenic cultivars. In fact, the pest management options and their associated potential for cost reductions are the principal features of the current transgenic cultivars.

This paper addresses the challenges posed by the advent of transgenic, pest-managing technologies, and directly addresses the question most relevant to growers, "Will transgenic cultivars return more profit?" Results from the study were published in the January-February 2008 issue of *Agronomy Journal*.

Field experiments were conducted from 2001-2004 to compare production systems utilizing cotton cultivars possessing different

transgenic technologies. Cultivars of each type of technology were managed in accordance with their respective genetic capabilities. In 2001 and 2002 selection of the Roundup Ready technology system resulted in reduced returns to the producer, while higher returns were attained from non-transgenic, Bollgard and Bollgard/Roundup Ready technologies. Cultivar differences were noted among the non-transgenic cultivars.

Again in 2003, selection of the transgenic cultivars reduced returns, while similar, higher returns were attained from non-transgenic technologies.

According to the authors, “Collectively these results indicate that profitability was most closely associated with yields and not the transgenic technologies.” Continued research is necessary to analyze the 2005 and 2006 results with more recent types of transgenic cotton cultivars.

Source: American Society of Agronomy

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