

Giant Ragweed Competition In Cotton

KELLY BARNETT

KNOXVILLE, TENN.

Several of you who stopped by the UT Weed Tour or Cotton Tour this year may have noticed a study that evaluated the effect of giant ragweed at varying populations in cotton. Although glyphosate-resistant (GR) giant ragweed is not as widespread and problematic as GR Palmer pigweed, cotton growers who have GR giant ragweed have few options for viable control. We know from previous studies that giant ragweed is an early emerging weed with a high photosynthetic rate, allowing it to stay well ahead of the cotton throughout the growing season. By harvest, we were using pruners and chainsaws to remove these weeds from our plots and hauling truckloads and truckloads of ragweed out of the fields. I'd like to share some of the results from this study because I think we were all surprised at just how much of an impact even one giant ragweed plant can have on cotton.

From the beginning of this study, the impact of giant ragweed on cotton maturity and height was quite evident. Several evaluations indicated that even at low populations, giant ragweed was reducing cotton height early in the growing season.

**Plot after 16
giant ragweed
plants were
removed -
85 lbs. lint
yield/A.**



Treatments included 0, 1, 2, 4, 8, or 16 giant ragweed plants per 4 row/30 foot cotton plots and all other weeds were continually removed throughout the growing season. Node above white flower (NAWF) demonstrated that 4, 8, and 16 giant ragweed plants statistically delayed cotton maturity when compared to the 0 giant ragweed treatment (control). Many of you who are struggling with giant ragweed realize how competitive it can be. Going into this I suspected it would be very competitive as well. However, I did not think that one giant ragweed plant would reduce cotton yield from 1500 lbs/A to 1100 lbs/A. Two giant ragweed plants reduced yields by over 550 lbs. Four or more giant ragweed plants basically took the crop. This study shows that GR giant ragweed, plant for plant is at least as competitive as Palmer amaranth. Fortunately it does not spread like Palmer pigweed. So the best management approach is to keep it from becoming established in your fields. △

KELLY BARNETT: Graduate Research Assistant, University of Tennessee