



IMPROVED CONTROL OF SOYBEAN APHIDS ON ROUNDUP READY SOYBEANS USING WETCIT® AS AN ADJUVANT

TARGET	Soybean aphid (<i>Aphis glycines</i>)	CROP	Roundup Ready soybeans	LOCATION	Crookston, MN
TRIAL DATE	July – August 2011	RESEARCHER	Dr. Ian MacRae Department of Entomology, Univ. of Minnesota		

APPLICATION

A trial was established in a commercial field of Roundup Ready soybeans to assess the efficacy of **WETCIT**® when combined with Warrior II (*Lambda-cyhalothrin*) for the control of soybean aphid populations. The trial location was chosen to facilitate the deposition of winged aphids and standard agronomic practices were followed. Seeds were not treated with fungicides or insecticides prior to planting. The soybean rows were spaced 30 inches apart and the plots were 30 feet long. Half of the plot length was used for sampling three plants per assessment date, to assess aphid infestation and the other half was left undisturbed through the season to assess yield at the end of the season. Insecticide treatments were applied in 15 gallons per acre spray mixture on July 15, when the average number of aphids per plant across all the treatments reached 250 per plant and 80% of the plants in the plots harbored aphids.

RESULTS

After the insecticide treatments were applied, the aphid population in the untreated plots rose well above the threshold level and then gradually decreased over the remainder of the growing season. Aphid counts in the treated plots dropped and remained below the threshold level after the insecticide treatments were applied (*Figure 1*). Yield loss on soybeans is closely correlated to Cumulative Aphid Days (CAD) - a function of aphid numbers and the time they spend feeding. While the Warrior II + **WETCIT** and Warrior II-standalone treatments both significantly reduced the CAD when compared with the untreated, the + **WETCIT** treatment was numerically the lowest (*Figure 2*). Current research indicates that economic yield loss will occur at between 4000 – 6000 CAD, depending on the soybean price. For the duration of this trial, the CAD remained below 4000 where **WETCIT** was added to the Warrior II treatment. The Warrior II + **WETCIT** and the Warrior II-standalone treatments both had significantly higher yields than the untreated.

- UNTREATED
- Warrior II (*Lambda-cyhalothrin*) (0.96 fl oz/acre)
- Warrior II (*Lambda-cyhalothrin*) (0.96 fl oz/acre) + **WETCIT** 0.4% (concentration/acre)

FIGURE 1: WEEKLY MEAN APHID POPULATION

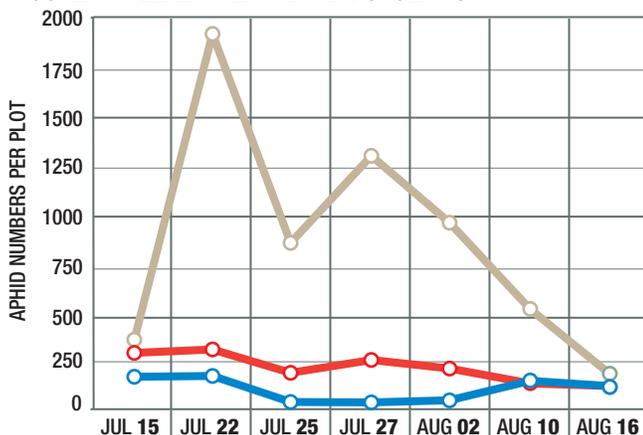


FIGURE 2: WEEKLY MEAN CAD VALUES

