

2010 Demonstration Report



THE LEARNING CENTER

at Scott, Mississippi

Evaluation of Genuity® VT Triple PRO™ Corn at Different Planting Dates

In the Southern United States, multiple generations of lepidopteran insects result in annual, problematic damage in corn. Corn earworm (CEW), fall armyworm (FAW) and Southwestern and/or European corn borers can cause economic loss from stalk and ear feeding and increase the risk of mycotoxins. The date when corn is planted may also influence the amount of insect damage the crop receives. Typically, insect pressure is higher in later planted crops. Corn products that contain insect protection traits, such as Genuity® VT Triple PRO™, can help control insect damage and protect yield potential.

Study Guidelines

A demonstration trial was conducted in 2010 at the Monsanto Learning Center at Scott, MS to assess corn yield response of Genuity® VT Triple PRO™ corn to different planting dates. The planting dates were; March 17th, March 30th, April 16th, May 6th and May 20th. Two hybrid families were used and each family included Genuity® VT Triple PRO™ corn and Round Ready® Corn 2. The corn products had a 116-117 day relative maturity (RM) and the agronomic practices were those common for the region. The trials were irrigated and planted on two contrasting soil types; a silty clay loam and a sandy loam. Planting rates for each soil type and hybrid were 38,000 kernels/acre. Soil fertility was managed for each soil type based on a 240 bu/A yield potential. Insect scouting was conducted during the season.

Results

Insect infestations were high throughout the season. Overall the trial with clay soils had higher yields compared to the sand soils. However, the yield trends were similar for both soil types and families therefore, the summary data has been combined.

Compared to Roundup Ready® Corn 2, Genuity® VT Triple PRO™ corn had a yield advantage of at least 10 bu/acre at all five planting dates (Figure 1). Overall the two later plantings, May 6th and May 20th, had lower yields in contrast to the earlier plantings. In addition, the Genuity® VT Triple PRO™ corn planted on May 6th had a yield advantage of 19.1 bu/acre and the Genuity® VT Triple PRO™ corn planted on May 20th had a yield advantage of 17.7 bu/acre.

Figures 2 and 3 each show linear a regression of the Genuity® VT Triple PRO™ corn and Roundup Ready® Corn 2 yields verses the number of days after the first planting (March 17th). The average Genuity® VT Triple PRO™ corn yield at the first planting date was 219.54 bu/acre (y-intercept) with an average .6477 bu/day loss for the Genuity® VT Triple PRO™ corn planted after March 17th (Figure 2). The average Roundup Ready® Corn 2 yield at the first planting date was 210.08 bu/acre (y-intercept) with an average .8082 bu/day loss for the Roundup Ready® Corn 2 planted after March 17th (Figure 3).

The difference in y-intercepts ($219.54 - 210.09 = 9.45$) denotes the initial net advantage of Genuity® VT Triple PRO™ corn which was 9.54 bu/acre. If corn is sold at \$5.25, this advantage totals \$49.61 per acre. Results from this study show that for every day that planting is delayed, Genuity® VT Triple PRO™ corn can give a 0.1605 bu/acre per day or \$0.843 per acre per day advantage.

Conclusions

- The data reinforces the recommendation that the optimal planting time for corn in Mississippi is before mid April.
- Genuity® VT Triple PRO™ showed a yield advantage of at least 10 bu/acre, even at the early planting dates.
- Genuity® VT Triple PRO™ shows an increasing yield advantage as planting dates get later.
- The data demonstrates the value growers receive from planting Genuity® VT Triple PRO™ in both direct yield savings and risk management potential.
- Not all corn hybrids perform the same. To achieve the highest yield potential one must select well adapted hybrids and manage them well.
- Based on the data and corn priced at \$5.25, for each day planting is delayed Genuity® VT Triple PRO™ corn loses \$3.40 worth of corn production per acre.
- Based on the data and corn priced at \$5.25, for each day planting is delayed Roundup Ready® Corn 2 loses \$4.24 worth of corn production per acre.
- In this trial for every day of delayed planting, Genuity® VT Triple PRO™ corn had a \$0.843 per acre per day advantage compared to Roundup Ready® Corn 2.

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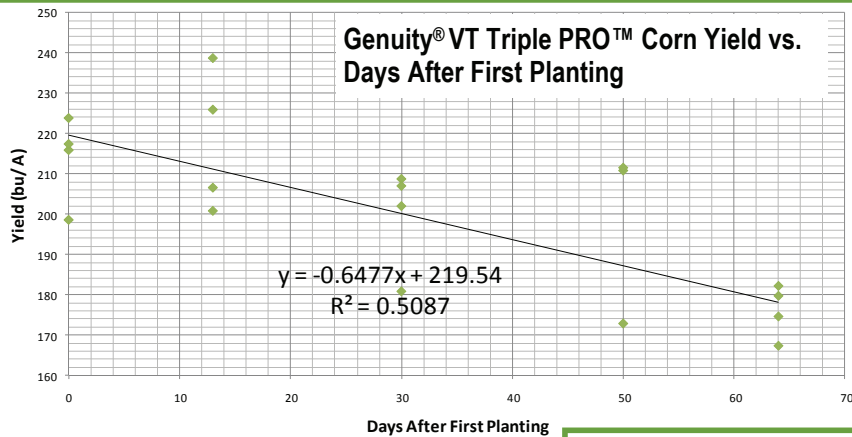
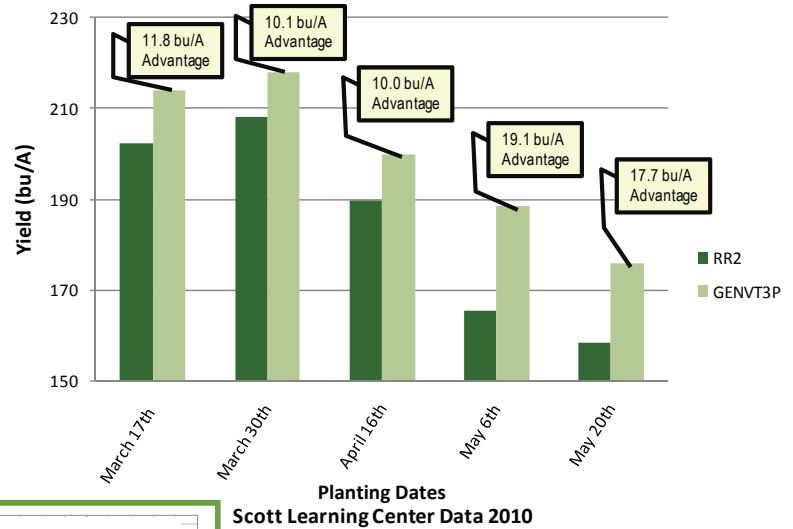
Figure 1.▶

Effect of planting date and trait on corn yield with both soil types and hybrid families combined. Monsanto Learning Center at Scott, MS 2010. Roundup Ready® Corn 2 = RR2 and GENVT3P = Genuity® VT Triple PRO™

▼ Figure 2.

Genuity® VT Triple PRO™ corn yield verses days after first planting. Yield was calculated based on 15% moisture content. Y-intercept and average yield of first planting date is 219.54 bu/A with an 0.6477 bu/day when planted after the first planting date (March 17th). Monsanto Learning Center at

Average Yield Advantage of Genuity® VT Triple PRO™ vs. Roundup Ready® Corn 2 at Different Planting Dates



The information discussed in this report is from a single site, non-replicated, one-year demonstration. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

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Before opening a bag of seed, be sure to read, understand and accept the stewardship requirements, including applicable refuge requirements for insect resistance management, for the biotechnology traits expressed in the seed as set forth in the Monsanto Technology/Stewardship Agreement that you sign. By opening and using a bag of seed, you are reaffirming your obligation to comply with the most recent stewardship requirements.



▼ Figure 3.

Roundup Ready® Corn 2 yield verses days after first planting. Yield was calculated based on 15% moisture content. Y-intercept and average yield of first planting date is 210.08 bu/A with an 0.8082 bu/day when planted after the first planting date (March 17th). Monsanto Learning Center at Scott, MS 2010.

