

# Increase In Corn Growth: Results Could Be From Twin Rows And Nitrogen

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Dr. Wayne Ebelhar, Mississippi State University researcher at the Delta Research and Extension Center, has seen a great increase in corn acreage growth.

"Mississippi went to 930,000 acres of corn planted and 910,000 acres harvested in 2007," said Ebelhar. "In 2008, we are at about 720,000 acres planted with 700,000 harvested."

According to Ebelhar, in 2007, Mississippi had a record corn yield of nearly 150 bushels per acre. The NASS average across the state was 148. "We had research in farmer fields and big plots. Our test plots hit 280 bushels on some which won the corn grower contest in Mississippi by 48 bushels/acre," said Ebelhar.

The two components that Ebelhar states were important in these studies were twin-row corn planting, seeding rates and nitrogen. "We have been working with twin-row corn now for about five years and we have worked out some of the problems. Producers are using roller-bedders in the beginning of the season with middle busters to clean out the middles. This shapes the beds as well as flattens the bed rows providing the best bed to plant into. This gets us a really good start," said Ebelhar.

"We water every row and put nitrogen on both sides of the row. That was one of the things that we found out early with twin-row corn that helps because you need to fertilize both rows. Also with watering, some farmers will go through and water every other row but we found that with twin-rows you need to water every row so that the water is coming to both rows carrying the needed nitrogen," said Ebelhar.

Ebelhar stated that it is hard to get moisture to move all the way through from side to side which is why it is important to water both sides of the rows.

"With the nitrogen components in the study we are using 180, 220, and 260 pounds of nitrogen per acre. We have gotten significant responses to the nitrogen each year but that response is not statistically significant if you look at the cost of nitrogen," said Ebelhar. "It's not giving us a financial advantage."

Ebelhar states that he is seeing a much bigger advantage to increasing seeding rates. "We have been evaluating seeding rates from 25,000

up to more than 40,000 plants per acre. Most seeding rates by farmers are down to the low 30's or high 20's with single rows."

"On twin-rows we bump that (low 30's to high 20's) up," said Ebelhar. "We are looking at 38-inch row pattern where you are basically look-



**Dr. Wayne Ebelhar, Mississippi State University Researcher at the Delta Research and Extension Center, discussed the great increase in corn acreage growth.** Photo by John LaRose

ing at 30 inches between outside rows and 10 inches between the rows on the beds. This way, you are kind of mimicking a 30-inch row system with the twin rows and are able to get through it with sprayers and water."

"We began this study in 2005 and in 2006 and 2007 we have had the highest yield with 40,000 plants per acre," said Ebelhar.

"Right now at the experiment station, I'm comparing single-row versus twin-row planting. We have also taken a look at this on-farm with the same cooperators as with the other study. We have two varieties, two different planters, single row and twin-row, and two different plant populations, high and low. We are going to have some direct comparisons from 2008," said Ebelhar.

"I think that we are being successful with the twin-rows for some crops and soils. There is a definite advantage in soybean production and with corn," said Ebelhar. Δ



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