

Flood Tolerant Soybeans: The Future Of Problem Area Farming

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Dr. Grover Shannon, Dr. Jeong Lee, and researcher Scotty Smothers, of the University of Missouri Delta Center, has done research to develop flood tolerant soybean lines to mix with a soybean rice rotation in low land areas or zero grade fields.

“In our research, we have had a few plant introductions that are showing a real good promise for flooding tolerance. We have seen up to an 89 percent soybean yield loss in the past and we are finding some plant introductions with a less than 10 percent loss under flooding conditions,” said Smothers.

The conditions used in the research is complete saturation of the soil with three to four inches of water on the plants for a extended period of time, sometimes up to a week.

“Whenever we flood,” said Smothers, “we usually try to get the soybeans around R2 stage growth which is pretty immature. Our ideal time is to do it in the early flowering stages to compare yield loss.”

Smothers states that selecting good flood tolerant varieties is his recommendation for farmers who want to try planting soybeans in a flood prone area.

“If you are going to plant out there in a problem area or zero grade field, you have to work with varieties of soybeans that have a tolerance to excessive water especially in a soybean rice rotation,” said Smothers.

“We also use raised planting beds, which seems to help, and good drainage. We want to use anything that gives that soybean a little bit of a boost or edge out of the water,” said Smothers.

“As of now, we really aren’t suggesting a certain variety of soybean to use. We want to make sure that the variety really shows promise before we make any suggestions

on the book,” said Smothers.

“What we do have, is a list of varieties that have shown promise to water-logged conditions. This list can be obtained by contacting Shannon, Lee or Smothers at shannong@missouri.edu, leejeo@missouri.edu or smotherss@missouri.edu,” said Smothers.

Most of the research is in its early stage and is not yet published but for more information check the Missouri Delta Center website at <http://aes.missouri.edu/delta/>. Δ

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Scotty Smothers of the University of Missouri Delta Center



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