AGRO-CULTURE LIQUID FERTILIZERS

Rescue Fertilization of Soybeans That Have Been Flooded
R&D Research. Washington, LA

Experiment Info:

Planted:	5/28
Variety:	Pioneer 95Y70
Row Spacing:	19"
Previous Crop:	soybeans
Harvested:	11/10

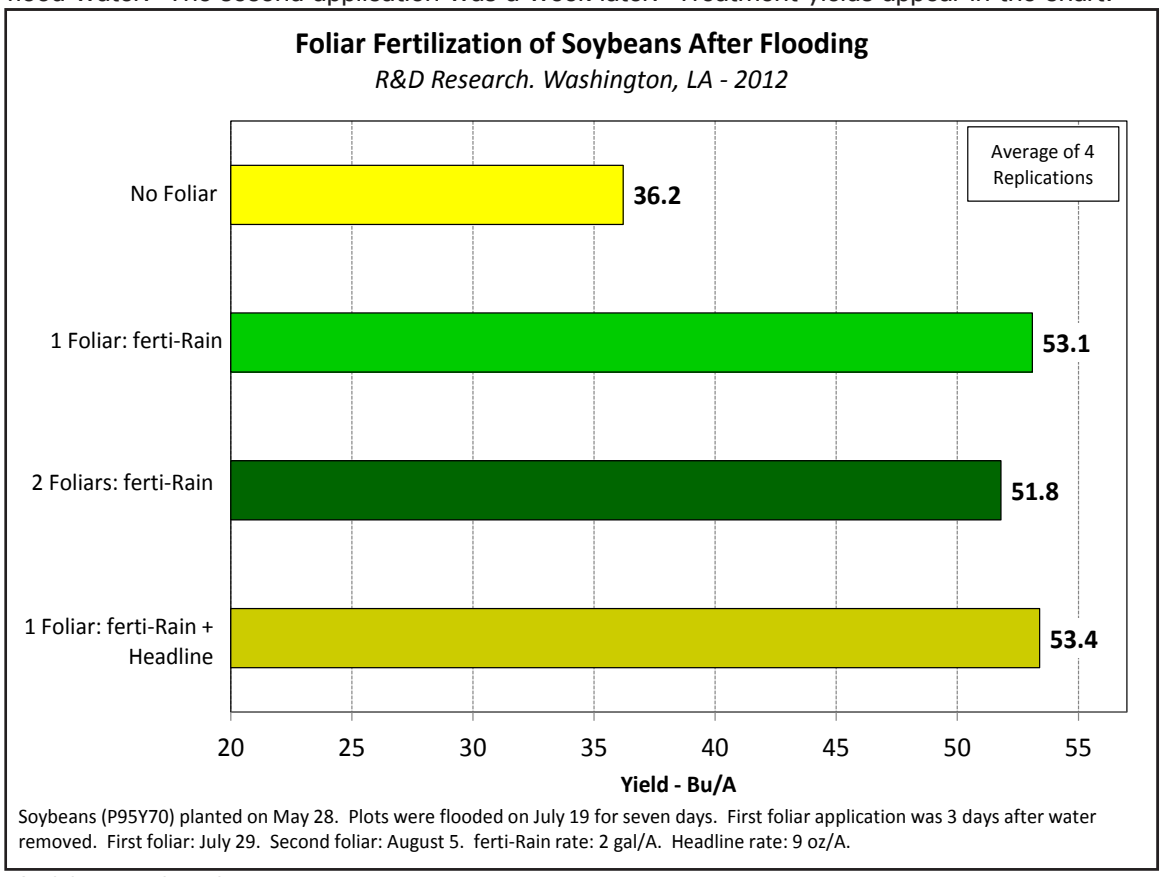
Soil Test Values (ppm):

pH:	6.8
CEC:	10.2
% OM:	1.8
M3-P:	56
M3-K:	107
M3-S:	8
% K:	2.5
% Mg:	29.6
% Ca:	63.3
% H:	3.0
% Na:	1.6
Zn:	1.5
Mn:	22
B:	1.2

Objective:

Evaluate the effects of foliar applications of ferti-Rain to soybeans that have been stressed due to field flooding.

Rice is an important crop in the South and is grown on laser leveled fields that are leveed to hold water during the growing season. Soybeans are often grown in rotation with rice, and although the levees are open, heavy summer rains can lead to temporary flooding of fields leading to stress. In 2011 an experiment was conducted with R&D Research to evaluate foliar applications to soybeans that had been flooded. Some soybeans were flooded at an early growth stage, and some at a later growth stage. It was found that foliar fertilization following flooding did increase yield. Several treatments were applied, but it was determined that ferti-Rain offered the best option as it is a single product and did as well as the multiple nutrient product applications. This year a follow-up test was conducted with only one flood applied at a later growth stage, and with only ferti-Rain as the nutrient application. The treatments were a single application, two applications, and a single application with Headline fungicide. First application was made three days after removal of the flood water. The second application was a week later. Treatment yields appear in the chart.



Soybeans (P95Y70) planted on May 28. Plots were flooded on July 19 for seven days. First foliar application was 3 days after water removed. First foliar: July 29. Second foliar: August 5. ferti-Rain rate: 2 gal/A. Headline rate: 9 oz/A.

LSD(0.01): 5.7. CV: 5.2%

Conclusions:

- There was a strong response to foliar applications following removal of flood water. The foliar nutrition was effective in the revival of soybeans that had been water stressed.
- A single 2 gal/A application was effective as there was no yield increase following a second application, nor was there a yield response with the fungicide.
- Note: I have seen flooded soybean fields that are in rotation with rice. Two years of such positive data is encouraging and is a viable option for growers faced with such situations.