YUCHENG FENG – SOYBEAN RESEARCH PROFILE

Farmer Blog



Yucheng Feng, Professor of Soil Microbiology, Auburn University

Why did you decide to pursue a career that includes soybean research?
I began working with soybeans when I came to Auburn, because that is what is needed here. Soybeans are a major crop in Alabama. The symbiotic relationship between legumes, such as soybeans, and rhizobia is crucial not only for soybean production, but also for the success of other crops in the agronomic system. Alabama farmers are interested in rhizobia inoculant. I hope to improve upon the currently available inoculants and help increase farm productivity and profitability.

What research topic have you completed in the past or are working on now that could have or has had the most significant impact on soybean production?
My research looking at the impact of glyphosate herbicide on nitrogen fixation in soybeans has been important for soybean production. In addition, research into the potential for rhizobia inoculant to support drought tolerance in soybeans could impact soybean production in the future.

How has the soybean checkoff enhanced your ability to find answers to production problems for farmers?
The Soy Checkoff has been essential to my research. This funding makes it possible to support graduate students as they conduct research. We need funding for research continuity, and the Soy Checkoff provides that. I am very grateful for this support.

Within your area of expertise, what are the top two or three general recommendations you would offer farmers to improve their management practices?
Farmers should inoculate their soybeans at planting. Alabama recommends inoculant use, especially in fields that haven't been planted to soybeans before. Inoculant helps soybeans start strong, especially under stressful environmental conditions. The cost is low, and the

potential for improving soybean production is great. An inoculant is like insurance for soybean seed.

Within your area of expertise, what do you consider to be critical soybean research needs that can impact the profitability of farmers in the future?
We need research to develop better inoculants for farmers. We eat yogurt to support our gut microbiome. Plants need a healthy microbiome, as well, and there is so much we don't know about soil microbes. It's important to have the right bacteria cocktail in inoculant, to support plant growth and increase yield. As we learn more about what plants need for a healthy microbiome, the inoculant market could grow continuously. With research, we can learn to build soil health to support crop production.

SRIN articles:

Inoculating Soybeans for Drought Tolerance

SOYBEAN RESEARCH & INFORMATION NETWORK

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