RAY WEIL – SOYBEAN RESEARCH PROFILE

Farmer Blog

Ray Weil, Professor of Soil Science, University of Maryland

Why did you decide to pursue a career that includes soybean research?
Soy is the main source of protein in many food systems around the world. Soybean is also a good rotational crop for soils. As a soil scientist, I have a natural interest in the soil-plant relationships created by soybeans.

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?
I believe my research on the value of sulfur to soybeans has been most valuable to farmers and soybean production. My work found that soy protein quality, especially the critical amino acid methionine, is very sensitive to the amount of sulfur in the soil. The research demonstrated why sulfur should be added to the soil when needed. That work, considered groundbreaking for food systems, has been extended to other legumes as well.

How has the soybean checkoff enhanced your ability to find answers to production problems for farmers?
The soy checkoff has been really useful over the years. We've made big advances because farmers are willing to support research that other research-funding sources don't. I'm fortunate to work with a state soybean board that welcomes off-the-wall ideas, like using radishes as a cover crop. Their support allows us to gather enough data to start answering questions and demonstrate the need for additional grants to further that work. The checkoff supports practical research because farmers want to know what concepts address practical problems and to learn more about potential solutions.

Within your area of expertise, what are the top two or three general recommendations you would offer farmers to improve their management practices?
Farmers need to take care of their soils. They are meant to be covered, but they are not

meant to be tilled, so developing a system as close as possible to no-till with cover crops supports soybean yields and soil health.

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 on secondary nutrients in the soil. We also need to better understand cover crops that promote mycorrhizae and other microbes in the soil.

SRIN articles:

Does Fertilizing Cover Crops Boost Nutrient Capture?

SOYBEAN RESEARCH & INFORMATION NETWORK

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