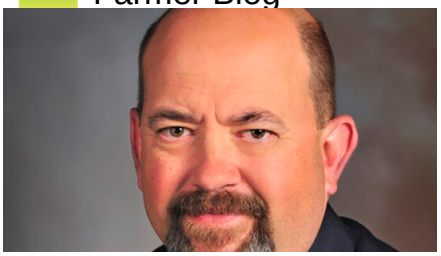
SOYBEAN RESEARCH PRINCIPAL INVESTIGATOR PROFILE – DAVID LANGSTON

Farmer Blog



David Langston, Professor and Extension Plant Pathologist, Virginia Tech

Why did you decide to pursue a career that includes soybean research?
I like to answer questions, so I am drawn to areas where there are many questions to answer. During my career as a plant pathologist, I have found nematodes very interesting, and I have worked with them in vegetables. As my extension role shifted in 2020 to include soybean diseases, I naturally gravitated toward nematodes, because there are few answers to nematode problems in soybeans, especially in Virginia.

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?
Nematodes reduce soybean yield significantly. I am evaluating nematode-resistant soybean varieties, as well as the costs and benefits of resistant varieties compared to nematicides. I want to study effectiveness and economics of nematode control for the Mid-Atlantic region to help farmers manage nematodes.

How has the soybean checkoff enhanced your ability to find answers to production problems for farmers?
It takes a lot of manpower to do nematode work. I am compelled to put out trials when I find problem fields so we can learn more. Those trials generate many samples. The sampling and evaluation process is cumbersome, and funding from the checkoff makes it possible to fund the people needed to do this work.

Within your area of expertise, what are the top two or three general recommendations you would offer farmers to improve their management practices?
To manage soybean problems like nematodes and sudden death syndrome, farmers need to evaluate all available tools. Planting resistant varieties should be the starting point, but do the homework to be sure varieties have strong yield potential. Then, they should consider

other factors, like effectiveness of seed treatments, soil conditions and planting date to make decisions most likely to protect that yield potential.

Within your area of expertise, what do you consider to be critical soybean research needs that can impact the profitability of famers in the future?
To better help farmers control nematodes, I see the need for research to streamline and provide greater efficiency in nematode soil sampling. We also should explore the potential for precision applications of nematicides to use them just where they are needed, in hotspots where nematode pressure is economically damaging in fields.

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