

SOYBEAN RESEARCH PRINCIPAL INVESTIGATOR PROFILE – MATTHEW O’NEAL

... Farmer Blog



Matthew O’Neal, Professor, Department of Plant Pathology, Entomology and Microbiology, Iowa State University

Why did you decide to pursue a career that includes soybean research?

I wanted a job in applied entomology, and one opened up at Iowa State University. It’s hard to pass up the opportunity to work at the center of tackling key insect problems and helping a lot of people. Soybeans face a lot of challenges, so they offer many opportunities to help farmers. And in soybeans, we study beneficial insects as well as pests. My time is now split about 50/50 between pests and beneficial insects.

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 think my research on prairie strips in soybean and corn systems to improve honeybee productivity has the most potential to impact soybean production. Although soybeans don’t need pollinators, evidence suggests that soybean yield increases when pollinators do visit the plants. Bees support biodiversity, and they could also support soybean yields.

How has the soybean checkoff enhanced your ability to find answers to production problems for farmers?

The soy checkoff provides the foundation for getting research work done. It allows us to recruit, support and train students that conduct practical research, preparing them for jobs in the industry. Without the checkoff, none of this happens.

Within your area of expertise, what are the top two or three general recommendations you would offer farmers to improve their management practices?

- *Scout. It’s hard, but it matters. Farmers tend to look at big fields, but insect populations change within the field. What insects are present? Where are they? What*

course of action should be taken? Scouting helps answer all these questions, and the answers can help limit insect resistance.

- *I recommend farmers include check strips with applications to see if what they chose to do worked. This practice also helps detect resistance.*
- *Follow local and regional extension updates about what is happening in the field. An abundance of information is available online, and it can help farmers make better decisions.*

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?

I am personally curious about the interaction between pollinators and soybeans, an area where research could reveal synergies. We also need to do research on the biology of new pests as they appear. At the same time, we need breeding research to find traits that protect against these pests. Insecticides are not our only tools for pest management.

SRIN articles:

[Genetic Tools Could Identify Pyrethroid-Resistant Aphids and Restore Susceptibility](#)



This website is funded by the soybean checkoff



©2025 Soybean Research & Information Network