Delaware Soybean Board 2015-16 Research

Statewide Insect Pest Survey in Soybeans
Researchers: University of Delaware (UD) Cissel, Whalen.
Funded: $6,031
Objectives: Establish a statewide monitoring system for pests to alert producers in a timely manner of potential infestations; detect new potentially invasive pests (such as Kudzu bug) and alert growers; use statewide monitoring to identify fields where replicated research and extension demonstrations can be conducted.

Effect of Fertigation on Irrigated Full Season and Double Cropped Soybeans
Researchers: UD Whaley, Adkins, Sylvester.
Funded: $15,134
Objectives: Evaluate the effects of nitrogen and sulfur applied through a center pivot irrigation on full season and double cropped soybean yield; determine the optimal soybean reproductive growth stage(s) for nitrogen and sulfur application; determine the economics of applying nitrogen and sulfur on irrigated soybeans during reproductive growth stages.

Evaluating the Response of Full Season and Double Cropped Soybeans to Various Soil Moisture Levels
Researchers: UD Whaley, Adkins, Sylvester
Funded: $20,394
Objectives: Evaluate the effects of various soil moisture levels on growth and yield of full season and double dropped soybeans; determine the optimal irrigation management strategy for full season and double cropped soybeans to maximize yield and profitability.

Palmer Amaranth Weed Management for No-Till and Double Cropped Soybeans
Researcher: VanGessel
Funded: $20,394
Objectives: Evaluate various herbicide options for control of Palmer amaranth in double cropped soybeans; evaluate the usefulness of residual herbicides when applied as a tankmixed partner for POST application; examine timing of burndown application; evaluate the management of cereal rye cover crop for weed management.

A Field Evaluation of Soybean Vein Necrosis Virus and Its Impact on Soybean Yield and Quality in Delaware
Researchers: UD Kleczewski, Cissel, Whalen
Funded: $4,874
Objectives: Estimate potential crop losses or quality issues due to Soybean Vein Necrosis Virus (SVNV); better understand the relationship between threips arrival and SVNS-mediated crop impacts; monitor SVNV in Delaware grower fields.

Analysis of the Origins of Phosphorus in the Chesapeake
Researcher: UD Jaisi
Funded: $19,323
Three major phosphorus sources have contributed to the degradation of water quality in the Chesapeake Bay: land driven phosphorus, mobilized phosphorus from bay sediments, and imported phosphorus from ocean. One of the challenges we faced to interpret some of our present results is that we do not have sufficient information on the differences and variations of

different land driven phosphorus sources. Proposed research will collect samples from natural sources (soils, sediments), legacy phosphorus (stores of legacy phosphorus in soils and catchments), agricultural related sources (fertilizers and manures), and wastewater sources. This objective will be realized by analyzing samples collected from lands, river waters, and the bay that retain these sources. The isotope database, thus generated, will be used to interpret data obtained from the bay. This will provide the most rigorous information to identify presence of different phosphorus sources in the bay as well as their relative roles on water quality issues in the bay.

Soybean Variety Evaluation for Single and Double Crop Systems and Cyst Nematode Resistance
Researcher: UD Isaacs
Funded: $9,061.66
Objectives: Incorporate “popular” varieties into UD soybean variety trials; screen new and existing varieties against the indigenous SCN poplations.