

NORTH CENTRAL SOYBEAN RESEARCH PROGRAM



2018 ANNUAL REPORT



**2018 NCSRP ANNUAL REPORT
SUMMARIES AND RESULTS CAN BE
FOUND ONLINE AT:**

SoybeanResearchInfo.com 

TOPICS INCLUDE:

Enhancing Long-term Soybean Cyst Nematode Resistance
Benchmarking Soybean Production Systems
Control of Sclerotinia Stem Rot
Characterization of *P. sojae* and *P. sansameana*
Soybean Sudden Death Syndrome Management Plan
Discovering Underlying Gene Functions in Soybean Traits
Understanding and Managing Soybean Stem Canker
Increasing Genetic Gain Yield Rate in Soybean Breeding
Multi-State On-Farm Partnership
Second SCN Coalition
Biology and Management of Seedling Diseases
Management for New and Existing Soybean Pests
Soybean Extension Group: Bringing Science to Farmers

NCSRP NORTH CENTRAL SOYBEAN
RESEARCH PROGRAM



WHO WE ARE

NCSRP is recognized as a leader in multi-state collaborative research and outreach efforts to support soybean farmers and drive the soybean industry forward. The focus of NCSRP is soybean production research and extension outreach. NCSRP's emphasis on enhancing and protecting soybean yield and quality through genetics and agronomic practices contributes to soybean farmer success today and tomorrow.

Mission: NCSRP will serve as a bridge between state and national soybean organizations and will be the recognized leader in funding and communicating basic and applied soybean research programs that are highly collaborative and uniquely appropriate in addressing soybean production, profitability and environmental sustainability for growers across the North Central region.

Guiding Statements:

1. NCSRP Executive Board will review overall program impact and success, and establish specific research priorities of regional importance on a five-year cycle (e.g. key diseases, insects, production practices, etc.).

2. NCSRP-funded programs and projects will not be redundant with current state (QSSB) or nationally (USB) funded programs but may complement and extend state or nationally funded projects when addressing the common interests and needs of North Central region soybean growers.

- NCSRP will maintain communication and collaborative connectivity with QSSBs and the

USB to maintain awareness of state and national soybean research priorities and funding.

- Regional researchers submitting proposals for NCSRP funding must provide clear statements of research being funded by a QSSB or the USB.

3. Multi-year research project or program proposals will be accepted for funding consideration, but annual renewal will be predicated on successful generation and communication of meaningful annual results.

4. NCSRP emphasizes the collection, compilation and dissemination of research results through appropriate peer reviewed scientific abstracts and journals, extension publications, farmer-focused bulletins, appropriate websites (Soybean Research & Information Initiative) and databases (National Soybean Checkoff Research Database).

Collaborative Soybean Research Objectives and Priorities:

1. Soybean yield enhancement through genetic improvement and biotic and abiotic stress mitigation for soybean maturity groups 0-IV.

- Classical and molecular breeding efforts that will enhance soybean yield potential, quality and yield stability clearly focused to the North Central region.
- Research that addresses the control of insects and diseases (defensive traits) with consistent or potentially significant economic impacts across the North Central region.
- Research that addresses weed resistance to herbicides for species of common occurrence and threat across the North Central region.
- Research that addresses soybean response to water, nutrients, soil and environmental conditions unique to the North Central region.
- 2.** Soybean production practices that will increase yield, profitability and environmental stewardship issues specific to the North Central region.
 - Corn-soybean rotations
 - Plant populations, row spacing and input management
 - Water quality and watershed planning
 - Cover crops
 - Soybean production sustainability and life cycle assessment.



LETTER FROM THE PRESIDENT

Farmers have experienced a roller coaster year dealing with international trade issues, tariffs, low soybean prices, extreme weather, variable yields and a number of disease and insect pests such as the soybean gall midge attacking fields in several states.

Because of these issues, the North Central Soybean Research Program (NCSRP) becomes even more important. Finding ways to improve soybean production, quality and plant health helps farmers in turbulent times. After marking 25 years of coordinated research last year, NCSRP has not rested on its laurels.

This annual report is an illustration of how NCSRP is changing with the times, as it will live on our website (<https://www.soybeanresearchinfo.com>), rather than in printed form sitting on a shelf. The projects accomplished this year are listed here and are linked to their full reports, videos, field day summaries, management guides and other relevant information, so the reader can go as in-depth as they wish. It's our hope that you and others seeking information on NCSRP-funded research and outreach will benefit from the scope and depth of this meaningful basic and applied research. We believe that the research results can

help you in the short- and long-term to be profitable and sustainable, no matter what outside pressures you encounter as you produce your soybean crop.

As you read through the funded projects, notice the collaboration that crosses boundaries – state lines, institutions and educational disciplines. Projects range from increasing genetic gain and yield potential, to pests such as the soybean cyst nematode and thrips, diseases including sudden death syndrome (SDS), seedling diseases and white mold, as well as exploring cropping system management and more.

I'm proud to serve this group of smart, motivated and caring farmers and scientists. Thank you for allowing me to serve another year as your president.

Gene Stoel,
NCSRP PRESIDENT,
Lake Wilson, Minnesota



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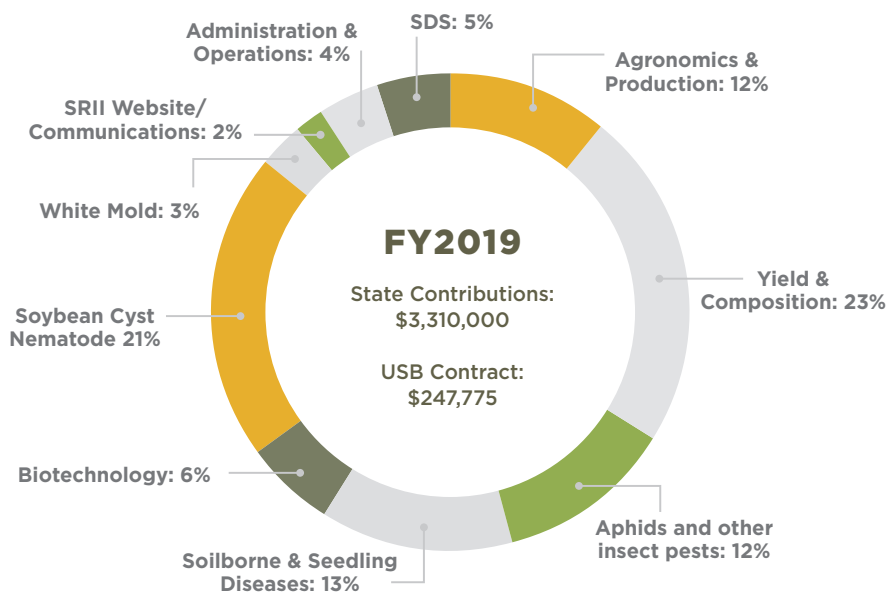
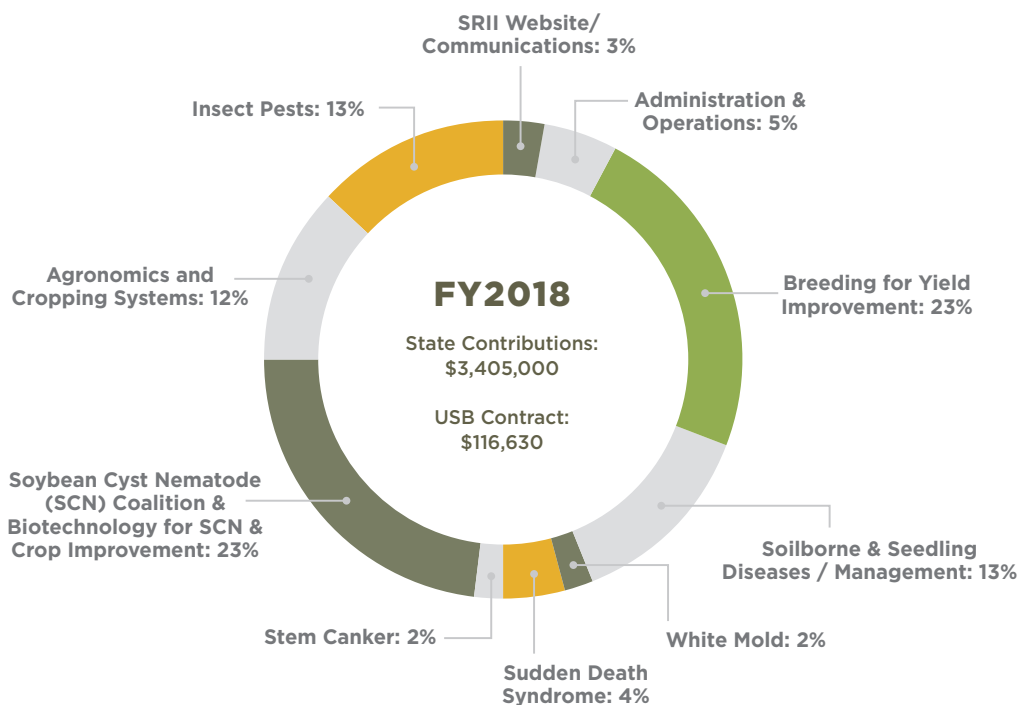
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