

PROPOSAL SUMMARY

PROJECT TITLE: On-Farm Investigation and Evaluation of Soybean Production Strategies for 2012

ESTIMATED DURATION: One Year; July 1, 2012-June 30, 2013

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PROJECT LOCATIONS:

Project locations are all soybean producing counties of Virginia including but not limited to:

Charles City County	King William County
City of Chesapeake	Lancaster County
Southampton County	Greensville County
Dinwiddie County	Mathews County
Westmoreland County	Middlesex County
Gloucester County	New Kent County
Prince George County	Essex County
Northumberland County	Sussex County
King & Queen County	Surry County

PROJECT OBJECTIVE:

To assist Virginia's soybean producers with investigation and troubleshooting of problems in soybeans and the limitations associated with them, and also, to provide research-based local evaluations of control strategies used to improve production efficiency. Management strategies will be developed, implemented, and tested on producer farms and their focus will be to optimize production and maximize economic yields while minimizing negative environmental effects. To accomplish this, we should, but not limit our work to:

1. Determining, through troubleshooting, the need for on-farm replicated soybean research looking into soybean varietal, nutritional and pest related problems.
2. Investigate soybean pest problems, identify pest populations, determine control strategies, implement these strategies, evaluate the outcomes and record the results.
3. Investigate and evaluate soybean nematode pest situations, identify populations, determine control strategies, evaluate these options and outcomes, and record the results.
4. Evaluate insect/disease control strategies, as well as, current economic thresholds.
5. Evaluate the performance of soybean varieties in various cropping systems.

6. Evaluate the use of micronutrients and other potential yield enhancers on soybean variety performance.
7. Evaluate row spacing, seeding rates and final stand count and their impact on yield.
8. Evaluate seed treatment technologies.
9. Evaluate tillage practices and their relationship to yield.
10. Evaluate new soybean breeding technology and its performance.
11. Evaluate soybean cropping systems and associated technologies.
12. Evaluate food-grade soybeans and other value-added opportunities.

EXPERIMENTAL DESIGN:

Project coordinators will investigate soybean production problems in field and will make identification determinations through the use of university specialists and laboratories. In many cases, control strategies may need to be evaluated on the farm with the cooperating soybean producer. Replicated on-farm research plots will use producer-cooperator equipment. Plots will be replicated a minimum of three (3) times. Plot length will be a minimum of 300 feet. Site selection will focus on soil type consistency and a high degree of cooperation with agribusiness and producers. Statistical analysis will determine the significance of the research results. Research results will be reviewed by Soybean Specialist and selected peer agents prior to publication.

Budget
On-Farm Investigation and Evaluation of Soybean Production Strategies for
2012

FUNDS REQUESTED:

Non-Salaries	
Supplies	1250.00
Repairs	1250.00
Lab Fees (soil, tissue and nem.)	3000.00
Printing/Publication Cost	1200.00
Travel	3000.00
TOTAL Non-Salaried	9,700.00
Salaries*	
Summer Intern Wages	(?) .00
Summer Intern Fringes	(?) .00
TOTAL Salaries	4,000.00
GRAND TOTAL Funds Requested	13,700.00

***Includes full funding for one summer intern.**

BACKGROUND INFORMATION:

The number of crop and soil specialized Virginia Cooperative Extension Agents in Virginia's soybean producing region is decreasing. At one time, each county housed its own agricultural agent. Now, due to factors related to, but not limited to, budgetary issues, agricultural agents are spread thin and are called on to cover multiple counties and more acres. Soybean producers need assistance with investigating production problems and determining and evaluating control strategies. Due to the fact that these agents are spread very thin, additional travel and technical assistance is needed to attend to producer needs.

Historically, producers have relied heavily on research-based information from Virginia Tech and its agents and specialists. By obtaining this type of information they feel that they are better equipped to efficiently produce food needed to feed a growing world population while remaining profitable. Research from Virginia Tech has shown that improved economic yields may be obtained by initiating better management practices. Improving soybean yields can increase profit margins. Producers need research-based information in order to intensively manage soybeans for maximum economic yields and to better position them in the world market arena. For almost 20 years, on-farm plots have provided non-biased research-based information to corn, soybean and small grain producers. This information has been well received by them as a way to evaluate new and current management practices.

EXPECTED RESULTS OF RESEARCH:

Research will assist producers in attaining maximum economic yields and increase the profitability of soybean production in Eastern Virginia, as well as, other soybean producing areas of Virginia. This plot work should enable producers to make management decisions based on research and will provide them a greater opportunity to improve yield and profit potential.

Published results will be available for winter production meetings and summer field days for those with interest. Copies may be obtained by contacting any of the project leaders or coordinators.

ESTIMATED WORTH:

In Virginia, over 500,000 acres of soybeans are produced totaling over 15 million bushels contribute to Virginia's agricultural industry-an industry valued in excess of \$55 billion. By identifying production issues that limit production and by evaluating and establishing intensive production strategies for soybeans, producers are better positioned to realize yield increases and raise their profit margin by \$10.00-20.00 per acre. This small increase would equate to nearly \$10 million to those soybean producers.