

The College of Agriculture and Life Sciences

2012 Precision Agriculture Field Day Planning Committee

The College of Agriculture and Life Sciences at North Carolina State University provides knowledge and technology that improve the economy, environment and quality of life for the citizens of North Carolina. In the classroom, we equip students for productive careers. Through research, we find solutions and develop systems with economic, environmental and social value. Our extension programs are helping people use knowledge to enhance their lives and livelihoods.

Relationships with many partners enhance the quality and productivity of our research, teaching and extension programs. We extend our appreciation to the field day partners and participants.

To learn more about the College of Agriculture and Life Sciences, contact:

- ❑ Dean's Office — 919.515.2668
Dr. Johnny Wynne, *Dean*
- ❑ Academic Programs — 919.515.2614
Dr. Kenneth Esbenshade, *Director*
- ❑ North Carolina Agricultural Research Service — 919.515.2717
Dr. David Smith, *Director*
- ❑ North Carolina Cooperative Extension — 919.515.2811
Dr. Joe Zublena, *Director*

The College's Web site:
<http://www.cals.ncsu.edu>

- Michael Waggoner, *Department of Soil Science, N.C. State University, chair*
- Graham Boyd, *Plant Food Association of North Carolina*
- Carl Crozier, *Department of Soil Science, N.C. State University*
- Ron Gehl, *Department of Soil Science, N.C. State University*
- Lance Grimes, *NC Cooperative Extension, Washington County*
- Ron Heiniger, *Department of Crop Science, N.C. State University*
- Alan Meijer, *Department of Soil Science, N.C. State University*
- Howard Penny, *Gregory Poole*
- Ron Perry, *Southern States*
- Dominic Reisig, *Department of Entomology, N.C. State University*
- Gary Roberson, *Department of Biological and Agricultural Engineering, N.C. State University*
- Clyde Sorenson, *Department of Entomology, N.C. State University*
- Suzanne Stanard, *CALS Communications, N.C. State University*
- Jewell Tetterton, *Tidewater Research Station, NCDA&CS*
- Milton Vaughan, *Trimble/Crop Production Services*
- Pawel Wiatrak, *Department of Entomology, Soils and Plant Sciences, Clemson University*

2012 Precision Agriculture Field Day

June 19, 2012

Vernon James Research & Extension Center
Tidewater Research Station

Plymouth, N.C.

Sponsored by:
North Carolina State University
College of Agriculture and Life Sciences

North Carolina Agricultural Research Service

North Carolina Cooperative Extension Service

North Carolina Department of Agriculture and Consumer Services

Program

8:00 a.m.

Registration and Commercial Exhibits
Open

9:00 - 11:30 a.m.

Precision Farming Field Demonstrations
(rotating in 20-30 minute intervals)

Greenseeker Sensor-based Variable Rate
N Application

Gary T. Roberson, *Department of
Biological and Agricultural Engineering,
N.C. State University*

Automated Soil Sampling Rig

*Representatives of the Department
of Biological and Agricultural
Engineering, N.C. State University*

GPS Control of Spray Boom Sections and
Planter Operations

Ron Heiniger, *Department of Crop Science,
N.C. State University, and Howard Penny,
Gregory Poole Equipment Company*

Poultry Litter Subsurface Placement with
Optional Variable Rate/GPS Control

Dan Pote, *USDA-ARS Arkansas,
Rory O. Maguire, Department of Crop and
Soil Environmental Sciences, Virginia Tech*

Soil Electrical Conductivity Mapping with a
Veris Sensor

Southern States

11:30 a.m. - 1:00 p.m.

Commercial Exhibits and Lunch

Welcoming Remarks by:

David Monks, *Assistant Director, N.C.
Agricultural Research Service, College
of Agriculture and Life Sciences, N.C. State
University*

Sandy Stewart, *Director, Research Station
Division, N.C. Department of Agriculture
and Consumer Services, and N.C. State
University*

1:00 - 3:00 p.m.

Indoor Presentations
(Technical Posters on Display)

RTK-GPS Options for the Farm

Gary T. Roberson, *Department of
Biological and Agricultural Engineering,
N.C. State University*

Sensor-Based Variable-rate N Technology for
Corn

Pawel Wiatrak, *Department of Entomology,
Soils & Plant Sciences, Clemson University*

Uniformity of Granular Spreaders at
Different Application Rates

Carl Crozier, *Department of Soil Science,
N.C. State University*

Variable Rate Seeding

Ron Heiniger, *Department of Crop Science,
N.C. State University, and Phil Howard,
Southern States*

Program Evaluation

Technical Posters

"Determination of Corn Plant Nitrogen
Status Using Airborne Spectral and LiDAR
Measurements: Preliminary Investiga-
tion"

David J Williams, Jeffrey White and
Carl Crozier, *Department of Soil
Science, N.C. State University*

"RTK GPS and Automatic Steering for
Peanut Harvesting"

Gary T. Roberson, *Department of
Biological and Agricultural
Engineering, and David Jordan,
Department of Crop Science, N.C.
State University*

"Spying on Stink Bugs in Cotton"

Dominic Reising, *Department of
Entomology, and Alan Meijer,
Department of Soil Science, N.C.
State University*

"Using Greenseeker for Disease
Detection in Peanut"

Davron Isaev, Gary Roberson and
M. D. Boyette, *Department of
Biological and Agricultural
Engineering, and David Jordan,
Department of Crop Science,
N.C. State University*