



# WEED SCIENCE SOCIETY OF NORTH CAROLINA

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## Winter 2006

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### FROM THE PRESIDENT

**Dr. Katie Jennings**

Hello fellow weed scientists,

Recently while attending meetings, I started thinking about the future of agricultural production and weed management in North Carolina. The meetings that I enjoyed attending were the Southeast Vegetable and Fruit Expo in Myrtle Beach, SC and the North Carolina Crop Protection School in Raleigh, NC. At the Expo, Edith Garrett, president of E. Garrett & Associates, and Richard Dahl, president of Dole Food Company, talked about the future of crop production in North Carolina. They talked about the future increases in production acreage of vegetable and fruit crops as a result of Dole Food Company locating a bag salad plant in Gaston County and the possibility of locating a frozen fruit processing plant in North Carolina as well. With these increases, there will be a demand for better pest management strategies including weed management programs. The need for research and development of weed management strategies in these crops will increase dramatically.

Likewise at the Crop Protection School, several speakers highlighted pest resistance in crops. Dr. Alan York made a presentation on herbicide resistance in weeds. After hearing Dr. York's presentation and conducting an internet search, I found that most documented cases of herbicide resistance in North Carolina have occurred in agronomic crops and turf. With these recent thoughts, it has become clear to me that agriculture in North Carolina will indeed change over the next few years. For example, more effort will be needed in the area of weed science in high value horticultural crops such as blueberry, brambles, lettuce, and others. Also resistance management will be a high priority especially in agronomic crops, or even in horticultural crops that are in rotation with agronomic crops. The great news is that the future is bright for weed science. We will need to continue to develop cutting edge technology in the area of weed science. The bad news (which is really not bad news) is that we have to continue to work hard to keep up with the demand from our growers. In closing, let me encourage you to attend and participate in our Weed Science Society of North Carolina meeting on **Thursday, March 9<sup>th</sup> at the J. C. Raulston Arboretum**. See you at the meeting!!!

### TOPICS FROM THE 2005 ANNUAL MEETING

#### **Program - Reaching Back and Looking Forward**

*Fumigation Technology and Methyl Bromide Alternatives*,  
Dr. Frank Louws, Dept. of Plant Pathology, NCSU

*New Developments in Invasive Species Mapping Techniques*,  
Mr. Beau Long, UAP Timberland, LLC

*Panel Discussion – Emerging Issues in Agronomic Crops, Ornamentals, Turf, and Fruit/Vegetables*, Discussion Leaders: Dr. Alan York (Agronomic Crops), Dr. Joe Neal (Ornamental), Dr. David Monks (Fruit & Vegetables), Dr. Fred Yelverton (Turf)

#### **Graduate Student Presentations**

*Distribution of Tomato Spotted Wilt Virus (TSWV) in Relation to Wild Weedy Hosts and Susceptible Crops Over a Large Agricultural Landscape*, Robyn Stout, NCSU

*Site-Specific Weed Management with a Weed-Sensing Sprayer*, Ian Burke, NCSU

*Growth Analysis of Direct-Seeded Commercial Beneficial Insect Habitats*, Mary Richards-Kroner, NCSU

**Abstracts provided by speakers at the 2005 Annual Meeting and other information relating to the WSSNC can be found at the WSSNC web site.**

**[www.wssnc.ncsu.edu](http://www.wssnc.ncsu.edu)**

### MINUTES OF THE 2005 ANNUAL BUSINESS MEETING

**March 10, 2005**

**Tom McKemie, Secretary-Treasurer**

Mike Burton called the Business meeting to order at 1:50 pm on March 10, 2005. The meeting was held at the J.C. Raulston Arboretum on Beryl Drive in Raleigh. President Burton welcomed and thanked everyone for coming to the meeting. President Burton began by announcing the following committee reports:

### Committee Reports

Tom McKemie started with the reading of the 2004 meeting minutes. The minutes were passed around while Tom read them out loud. Tom continued with the financial report. The report was projected from a computer for all members to see. Both the minutes and the financial report were voted on and passed. Please see financial report and budget breakdown by years at [www.wssnc.ncsu.edu](http://www.wssnc.ncsu.edu).

Sue Rick continued with an update on the WSSNC Dean Whitter fund and indicated that our fund manager recommended that we should remain where we are.

#### Financial Committee Report 3/05

Investment fund history:

Mar '00	\$30,330
Mar '01	\$32,195
Mar '02	\$30,781
Mar '03	\$26,520
Mar '04	\$35,680
Mar '05	\$38,595

#### Legislative Report

Tom Hunt was not present. Tom McKemie gave the Legislative report leading with the number one hot issue: Laws to prevent biotech crops from being planted in several states in the United States. Vermont is leading the way trying to pass legislation to have individual state rights to prevent biotech crops from being grown. Several counties in California have already passed measures to ban biotech crops, but have not made them law yet. The CPANC is pressing ahead with supporting a North Carolina law that prohibits individual counties from passing their own laws regarding biotech plants.

Tom also read a part of Glenn Jernigan's letter to the Society listing the challenges ahead for the NC Legislature. The remarks were accepted by the general membership.

#### Website Report

Mike Burton gave out the website address: [www.wssnc.ncsu.edu](http://www.wssnc.ncsu.edu) and the new password to access the members list is **WEEDSCINC**.

#### Awards Report

Leon Warren presented Tom McKemie with the WSSNC Distinguished Service Award for 2005.

#### Student Awards and Announcements

Katie Jennings made the following announcements:

2004 NC Crop Protection School  
Ian Burke, 2<sup>nd</sup> place paper  
Andrew Gardner, 3<sup>rd</sup> place paper

2005 Beltwide  
Andrew Gardner, 1<sup>st</sup> place paper, M.S.  
Whitnee Barker, 2<sup>nd</sup> place paper (tie), Ph.D.  
Walter Thomas, 2<sup>nd</sup> place paper (tie), Ph.D.

2005 SWSS  
Whitnee Barker, Outstanding M.S. Student  
Ian Burke, Outstanding Ph.D. Student

Andrew Gardner, 1<sup>st</sup> place poster  
Ian Burke, 1<sup>st</sup> place paper

#### 2004 NEWSS Weed Contest

1<sup>st</sup> place team - Ian Burke, Wesley Everman,  
Whitnee Barker  
3<sup>rd</sup> place individual - Ian Burke  
1<sup>st</sup> place in calibration calcs - Walter Thomas  
4<sup>th</sup> place individual - Wesley Everman  
5<sup>th</sup> place individual - Ian Burke

#### WSSNC Graduate Student Winners

Poster Contest:

Ian Burke, Ph.D.  
Andrew Gardner, M.S.

Outstanding Students:

Ian Burke, Ph.D.  
Juliana Buckelew, M.S.

#### Newly Elected Board Members for 2005

Vice-President ..... Dr. Reid Evans  
Secretary-Treasurer ..... Dr. Loren Fisher  
Director-at-Large ..... Dr. Paul Garvey  
Student Representative ..... Wesley Everman

#### Old Business:

Constitution amendments were brought forward to the general membership regarding changing the membership dues to \$15/year. Additional charges for meeting expenses are in addition to dues. Students will also pay \$15 for membership.

Joe Neal suggested we contact the SE Exotic Plant Council to see if a joint meeting can be arranged. They will be having their meeting in Raleigh in 2006.

Business meeting was adjourned for the ACC tournament.

#### Special Thanks to our Sponsors

BASF, Bayer, Dow AgroSciences, DuPont,  
FMC, Monsanto, and Syngenta

## MINUTES OF THE FALL BOARD MEETING

September 1, 2005

Loren Fisher, Secretary-Treasurer

The meeting was held in Kilgore Hall on NCSU campus. The meeting was called to order at 3:30 p.m. by our president Katie Jennings. In attendance were Katie Jennings, Reid Evans, Loren Fisher, Mike Burton, Joe Neal, Paul Garvey, Wesley Everman, and Leslie Fuquay. The items of business included the location of the 2006 WSSNC meeting, pesticide credits, theme and potential presenters/speakers, dates, and meal plans.

The theme of the meeting will be HERBICIDE RESISTANCE and Reid will serve as program head. The meeting will be held at the JC Raulston Arboretum off of Beryl Road. Katie will reserve the meeting room. The date for the meeting will

be March 9<sup>th</sup>. The meal will be catered by a local restaurant. Reid & Katie will inquire about pesticide credits.

It was decided that the panel discussion at the 2005 meeting was useful and received good feedback. It will be continued at the 2006 meeting, continue the speaker-focus topic of weed resistance.

The board recalled the 2005 society agreement to raise membership dues to \$15.00, with the meeting cost variable, not to exceed \$20.00. Company sponsorship remains \$400.

Leslie Fuquay asked for newsletter items from the board. Katie Jennings adjourned the meeting at 5:00 p.m.

## MINUTES OF THE WINTER BOARD MEETING

**December 16, 2005**

**Loren Fisher, Secretary-Treasurer**

The meeting was held at Pam's Farmhouse Restaurant. The meeting was called to order by Katie Jennings at 7:30 a.m. to discuss topics for the upcoming annual meeting. In attendance were Katie Jennings, Reid Evans, Mike Burton, Joe Neal, Loren Fisher, Alan York, Wesley Everman, and Leslie Fuquay. Reid confirmed the theme of the meeting, Herbicide Resistance, and updated the group on the speakers who had agreed to participate. Reid and Katie confirmed reservation of the arboretum for the annual meeting on Thursday, March 9 – a good date for availability because there are no student activities during spring break. It was suggested we use the same caterer for lunch as in 2006, due to the quality and convenience of the meal/service and the ability to delay headcount confirmation until mid-morning. It was recommended that the poster displays be set up in the lobby and hallway of the arboretum building, to provide more space in the meeting area. It was suggested that we send announcement of the meeting to each of the NC Pesticide Coordinators, to notify of approved continuing certification credits for meeting attendance. Alan York graciously agreed to obtain the investment records and contact information from departed Finance chair, Sue Rick, and review the current state. He attended the meeting to update the board on his findings. That was followed by a discussion of new investments in student activities or scholarship that the society might consider, in lieu of those suspended several years ago. Several board members agreed to check into the details of the best suggestions. The 2006-07 board will follow-up on this activity. The meeting was adjourned at 9:30 a.m.

## BOARD OF DIRECTORS

### President:

Katie Jennings, N.C. State University  
Box 7609, Raleigh, NC 27695  
e-mail: [katie\\_jennings@ncsu.edu](mailto:katie_jennings@ncsu.edu)

### Past President:

Mike Burton, N.C. State University  
Box 7620, Raleigh, NC 27695  
email: [mike\\_burton@ncsu.edu](mailto:mike_burton@ncsu.edu)

### Vice-President:

Reid Evans, NCSU Central Crops Exp. Stn  
13223 US 70 West, Clayton, NC 27520-2127  
e-mail: [reid.evans@ncmail.net](mailto:reid.evans@ncmail.net)

### Secretary-Treasurer:

Loren Fisher, N.C. State University  
Box 7620, Raleigh, NC 27695  
email: [loren\\_fisher@ncsu.edu](mailto:loren_fisher@ncsu.edu)

### Executive Directors:

#### Academia

Joe Neal, N.C. State University  
Box 7609, Raleigh, NC 27695  
e-mail: [joe\\_neal@ncsu.edu](mailto:joe_neal@ncsu.edu)

#### Industry

Leslie Fuquay, Syngenta Crop Protection  
PO Box 18300, Greensboro, NC 27419-8300  
email: [leslie.fuquay@syngenta.com](mailto:leslie.fuquay@syngenta.com)

#### At-Large

Paul Garvey, Agriculture Systems Associates  
3341 Hwy 58 South, Kinston, NC 28504  
email: [agsystem@bellsouth.net](mailto:agsystem@bellsouth.net)

#### Student Representative

Wesley Everman, N.C. State University  
Box 7620, Raleigh, NC 27695  
e-mail: [wjeverma@unity.ncsu.edu](mailto:wjeverma@unity.ncsu.edu)

## COMMITTEE CHAIRS

Awards:	Jim Burton
Finance:	David Jordan
Student Affairs:	Carrie Judge
Historical:	Rolf Jesinger, Tom McKemie
Publications/Website:	Leslie Fuquay, Steve Hoyle
Nominations:	Roger Batts
Legislative:	Tom Hunt
Membership:	Dunk Porterfield
Program:	Reid Evans

## IMPORTANT DATES

**Weed Science Society of North Carolina (WSSNC)**,  
March 9, 2006, Raleigh, NC

**National Invasive Weeds Awareness Week (NIWAW)**,  
February 26–March 3, 2006, Washington, DC

**Association of Southeastern Biologists (ASB) Annual Meeting**, March 29–April 1, 2006, Gatlinburg, TN

**5<sup>th</sup> International IPM Symposium of the North American Weed Management Association**, April 4–6, 2006, St. Louis, MO

**Aquatic Weed Control Short Course**, May 1–5, 2006, Fort Lauderdale, FL

**14<sup>th</sup> International Conference on Aquatic Invasive Species**, May 14–19, 2006, Key Biscayne (Miami), FL

**Southeast Exotic Pest Plant Council (SE-EPPC) Annual Conference**, May 23–25, 2006, Raleigh, NC

**Aquatic Plant Management Society (APMS) Annual Meeting**, July 16–19, 2006, Portland, OR

**South Carolina Aquatic Plant Management Society**,  
August 23–25, 2005, Springmaid Beach – Myrtle Beach, SC

**Southern Weed Science Society Annual Meeting**, January 20–25, 2007, Nashville, TN

**Weed Science Society of America Annual Meeting**,  
February 5–10, 2007, San Antonio, TX

## RECENT AWARDS AND RECOGNITION

### 2005 WSSNC Annual Meeting Awards

Distinguished Service Award: Tom McKemie

Outstanding Ph.D.: Ian Burke

Outstanding MS: Juliana Buckelew

Student Posters: Ph.D. – Ian Burke

M.S. – Andrew Gardner

### WSSNC Distinguished Service Award Nominations:

Please send nominations for the WSSNC Distinguished Service Award to Jim Burton at Box 7609, N.C. State University, Raleigh, NC 27695-7609 or by e-mail at [jim\\_burton@ncsu.edu](mailto:jim_burton@ncsu.edu). A brief description of the contributions of the individual to the WSSNC and weed science in North Carolina is requested with the nomination.

### 2006 SWSS Annual Meeting Awards

Oral Pres. Section 1 (M.S.): 1<sup>st</sup> place – Andrew Gardner

Oral Pres. Section 2 (M.S.): 1<sup>st</sup> place – George Place

### 2006 Beltwide Annual Meeting Awards

Oral Presentation (Ph.D.): 1<sup>st</sup> place – Walter Thomas

Oral Presentation (M.S.): 2<sup>nd</sup> place – Ashlee Spruill

Poster (M.S.): 1<sup>st</sup> place – Andrew Gardner

## STUDENT UPDATE

### Wesley Everman, Student Representative

#### GRADUATED:

**Carrie Judge** defended her Ph.D. in June and officially graduated in August from the Department of Horticultural Science. Her Ph.D. research investigated the population dynamics and management of Japanese stiltgrass (*Microstegium vimineum*) and impacts on native plant community restoration under the direction of Dr. Joe Neal.

Currently, Carrie is a postdoctoral research associate in the Department of Horticultural Science at NCSU working on research investigating woody roadside vegetation management with novel herbicide application technology and biological control agents, with special interest in invasive exotic woody vegetation. In the future she would like an academic or federal research position that focuses on invasive plant management, biology, and ecology. Carrie would also like a teaching and/or extension component to her appointment.

**Juliana Buckelew** received a M.S. in Horticulture in May 2005 from NC State University. For her thesis work, she studied Eastern black nightshade management in plasticulture tomato under the direction of David Monks. Specifically, she studied the effects of weed density in plasticulture, conducted timing studies on weed seed production and tomato yield in plasticulture, as well as herbicide efficacy trials. She plans to continue her graduate work as a Ph.D. candidate under the direction of David Monks.

**Robyn Stout** completed a M.S. in Crop Science in May 2005 with her thesis title "Distribution of Tomato spotted wilt virus (TSWV) in relation to wild weedy hosts and susceptible crops over a large agricultural landscape." Robyn studied crop production, agricultural ecosystems, weed ecology, sustainable and local food systems including agricultural impacts on society, and human nutrition. Robyn is currently working at home in Raleigh, NC, raising a future farmer!, gardening, writing, and trying to get a part-time job. Her future plans are to further develop the "Edible Schoolyard" theme for at least one area school, and expand gardening programs into other schools.

**Ian Burke** completed his Ph.D. in the summer and officially graduated in December 2005. He took a postdoctoral position with the USDA-ARS in Stoneville, MS. His dissertation research investigated the biology, physiology and pollen expression of ACCase resistance in johnsongrass (*Sorghum halepense*). In the future he plans on continuing his career in weed science while furthering his skills as a carpenter and interior decorator remodeling his house.

**Andrew MacRae** completed his Ph.D. in the summer of 2005 under Dr. Monks, and accepted a postdoctoral position in Tifton, GA with the University of Georgia where he is currently preparing for the hottest summer of his life.

## NEW STUDENTS:

**Ashlee Spruill** is from Columbia, a tiny town in eastern NC. Ashlee has been at state since Fall 2001, when she began her B.S. in Ag Extension, receiving her degree in December 2004. She began her Master's in January 2005 with Dr. Mike Burton. Ashlee's research is on late season weed emergence in cotton, and she is also working with Dr. Burton on alternative methods for suppression of tropical spiderwort. Ashlee plans to graduate in May 2006 and move back to Columbia where, after their late May wedding, she and her husband will work on her family's farm.

**George Place** is from Kansas City, MO. He finished his B.S. in Biology at the University of New Mexico in Albuquerque. George lived in New Mexico for five years where he had some great opportunities to work in the mountains and enjoy the big sky and solitude of the southwest. After graduation, George joined the Peace Corps as an agroforestry volunteer in El Salvador, Central America. He worked with subsistent farmers for 27 months on erosion control, reforestation, and fruit production. George says, "I learned a lot; but mostly I learned how much I didn't know". George and his wife were married in El Salvador and returned to the states two years ago. George is currently conducting research in the area of nitrogen uptake and transfer by soybean, Palmer amaranth, sicklepod, redroot pigweed and prickly sida. He is examining possible nitrogen transfer between weeds and soybeans through mycorrhizal connections. George and his wife plan on returning to Latin America where he hopes to continue working in rural agricultural development.

**Angela Richardson** is currently pursuing a M.S. degree under the direction of Dr. Joe Neal at North Carolina State University. She is working on taxonomic problems of the genus *Cardamine*. Richardson is originally from Franklinville, North Carolina. She completed three undergraduate degrees at NC State, a B.S. in Botany in May 2004, a B.S. in Biological Sciences in December 2004, and a B.A. in Medicinal Ethnobotany in May 2005.

## 2005 NEWSS Collegiate Weed Contest

By Wesley Everman

North Carolina State sent two teams (A: Walter Thomas, Whitnee Barker, and Wesley Everman; and B: Gerald Henry, Adam Hixson, Brandy Silvey, and Davie Wilson) coached by Dr. Rob Richardson, Scott Clewis, and Dr. John Wilcut, to the North Eastern Weed Science Society student contest held at Penn State University's Southeast Research and Extension Center near Landisville, Lancaster County, on July 26, 2005. A total of 45 graduate and undergraduate students participated from eight universities. The universities represented were Clemson, North Carolina State, VA Tech, Penn State, Cornell, SUNY-Cobleskill, Guelph, and Nova Scotia Ag College. All students participated in weed identification, unknown herbicide identification, sprayer calibration, and farmer problem events.

In response to student and coach requests to broaden the scope of the contest to include more weed biology and basic science, some rules were changed on an experimental basis in the weed identification and unknown herbicide identification events. Rather than simply identifying a particular weed, the students also had to choose the correct biological or ecological characteristic of the weed from a list of four characteristics, only one of which was correct. These characteristics included growth habit, area of origin, biocontrol, method of reproduction, botanical terms, life cycle, etc. For the unknown herbicides, in addition to identifying the herbicide, chemical class, and mode of action, the student also had to choose a chemical or physiological property from a list, only one of which was correct. Such properties included water solubility, soil sorption, translocation patterns, etc.

In the farmer problem event, an attempt was made to move away from agronomic problems involving strictly herbicides. There were scenarios such as invasive weed management in a riparian zone, biology/ecology of invasive weeds in a forest setting, organic weed control, Christmas trees, turfgrass, and vegetable crops, in addition to agronomic crops. The overall results were as follows:

### NEWSS Weed Contest Graduate Division Awards:

**1<sup>st</sup> place team:** NCSU (Walter Thomas, Whitnee Barker, Wesley Everman)

**2<sup>nd</sup> place team:** Clemson (Mayak Malik, Prashant Jha, Marcos Oliveria)

**3<sup>rd</sup> place team:** VA Tech (David McCall, John Willis)

**1<sup>st</sup> place individual:** John Willis (VA Tech)

**2<sup>nd</sup> place individual:** Wesley Everman (NCSU)

**3<sup>rd</sup> place individual:** Prashant Jha (Clemson)



**1<sup>st</sup> Place Grad. Team – NC State**

Left to right: Rob Richardson (coach), Whitnee Barker, John Wilcut (coach), Walter Thomas, Scott Clewis (coach), Wesley Everman, Tim Dutt (NEWSS President)



**2<sup>nd</sup> Place Grad. Individual – Wesley Everman**

Left to right: Tim Dutt (NEWSS President), Wesley Everman (NCSU), Scott Clewis (coach)



**Gerald Henry identifying weeds**



**Written Calibration**



**Adam Hixson assembling a spray boom**



**Walter Thomas assembling a sprayer**



**Walter Thomas working on a farmer problem**

## PURPOSE OF WSSNC

“To advance the discipline of weed science in North Carolina and improve the well-being of the citizens of the state through a better understanding of weeds and their management”.

## OBJECTIVES OF WSSNC

“To promote leadership, unity, and communication among state weed scientists in universities, government and industry, users of weed science technology, workers in interdisciplinary activities, and other organizations with mutual interests, foster and support research, teaching, and extension problem solving efforts in weed science, and promote safe and effective use of herbicides and other weed management technologies in North Carolina”.

## MEMBERSHIP IN WSSNC

All individuals interested in weed science and/or weed management shall be eligible for membership. Active members include those who have paid dues. Supporting members include any individual or firm concerned with manufacture, distribution, or application of weed management materials or devices who contribute financially to the Society.

## NEWSLETTERS AND WEB SITE

Newsletters are distributed electronically to the membership via email several times per year and posted along with other information on the WSSNC website. Election ballots will be included in a separate communication, approximately two weeks before the annual meeting. Information concerning weed tours at N.C. State University will be sent to the membership approximately one month before the event.

Send contributions, comments, and suggestions concerning the newsletter to:

### Newsletter Editor:

Leslie Fuquay, Syngenta Crop Protection  
PO Box 18300, Greensboro, NC 27419-8300  
Phone: (336) 632-6359 Fax: (336) 632-6021  
email: [leslie.fuquay@syngenta.com](mailto:leslie.fuquay@syngenta.com)

The WSSNC web site is maintained by Steve Hoyle. Please send comments and suggestions concerning the web site to:

### Webmaster:

Steve Hoyle  
Box 7620, NCSU, Raleigh, NC 27695-7620  
email: [steve\\_hoyle@ncsu.edu](mailto:steve_hoyle@ncsu.edu)





# WEED SCIENCE SOCIETY OF NORTH CAROLINA

## 24<sup>th</sup> ANNUAL MEETING

Thursday, March 9, 2006  
J.C. Raulston Arboretum  
N.C. State University  
Raleigh, North Carolina



**Theme: Herbicide Resistance**

8:30 am	<b>Registration</b>	12:15 pm	<b>Lunch</b>
9:00 am	<b>Opening Remarks</b> Dr. Katie Jennings, President, WSSNC	1:15 pm	<b>Emergence of Herbicide Resistance in Aquatic Settings</b> Dr. Rob Richardson, NCSU
9:10 am	<b>Role of Herbicide Resistance in Structuring Weed Communities</b> Dr. Dave Mortensen, Penn State University	1:35 pm	<b>Graduate Student Presentations</b> <b>Some Glyphosate Resistant Biotypes Are Really Over-Compensation Mutants</b> Walter Thomas, NCSU
9:40 am	<b>Glyphosate Weed Resistance Concerns</b> Chuck Foresman, Syngenta Crop Protection		<b>Use of GPS and Controlled Environmental Experiments to Examine Factors Affecting Paspalum Species Distribution</b> Gerald Henry, NCSU
10:10 am	<b>Break</b>		<b>Weed Management in 15-inch Roundup Ready Flex Cotton</b> Davie Wilson, NCSU
10:30 am	<b>Weed Management Strategies for Roundup Ready Crops</b> Dr. Jennifer Ralston, Monsanto		
11:00 am	<b>Characterization of ALS Resistance in Plants</b> Dr. Siyuan Tan, BASF	2:20 pm	<b>Industry Updates</b>
11:30 am	<b>Herbicide Resistance and Weed Management: DuPont Perspective</b> Dr. Raymond Forney, DuPont	2:45 pm	<b>Business Meeting</b>
		3:45 pm	<b>Adjourn</b>

### DIRECTIONS TO J.C. RAULSTON ARBORETUM 4415 Beryl Road 27606 (919) 515-3132

#### From I-40/Research Triangle Park/RDU Airport:

Take Wade Ave. exit at I-440 split (right lanes). Take Blue Ridge Rd. exit just past RBC Center. Right at light onto Blue Ridge Rd. Straight across Hillsborough St. at stoplight (State Fairgrounds on right). Cross railroad tracks and take immediate left on Beryl Rd. Arboretum is approx. ¼ mile on the right. Parking lot space is limited; additional parking on Beryl Rd.

#### From NCSU area:

Take Hillsborough St. towards the State Fairgrounds. Pass stoplight at Meredith College entrance. Turn left at next stoplight (Waffle House on left), cross railroad tracks and bear right onto Beryl Rd. Continue straight past Method Rd. Arboretum is approx. ¼ mile on the left. Parking lot space is limited; additional parking on Beryl Rd.