Winter 2007

FROM THE PRESIDENT

Tom McKemie

Greeting fellow Weed Scientist,

I don’t know about you but I am glad 2007 is coming to a close. I thought 2002 was a dry year and I can still remember the impact of the dry weather on crops and weeds but 2007 takes the cake. You know it is bad when it stops raining on concrete and asphalt and the city folks start complaining. Not only was it dry but growers had to deal with an Easter freeze that severely impacted wheat yields and pocketbooks very early. Exceptional drought conditions inched their way across the state all year slowly impacting not only wheat yields but corn, soybean and peanut yields. Wheat yields were off due to the freeze and soybean yields in parts of western North Carolina were only 9 bushels per acre. Exceptional conditions finally made their way into the Coastal Plains where corn yields were 50-60 bushels in many areas, on the good soils and well below their 10 year averages. Even with the price of corn closing in at $4.00 per bushel you can not pay the bills with 50 bushels. A bright spot may be in the Blacklands where they had good to extremely good corn yields. Potatoes were smaller this year impacting not only yields but quality. Soybeans yields were up and down depending on rainfall patterns or if you planted early or wheat beans and caught a rain. I had the unfortunate experience of walking many acres of peanuts that had just been dug and I could only estimate about 200 pounds of yield to the acre. The growers were new to peanuts and probably will try again in 2008.

I contacted a friend of mine in southwest Edgecombe County to ask about doing some wheat plots in late September and to ask him when or if he was going to plant wheat this year. He said “we have already started and some of it is already up”. I asked Mickey why he started so soon (thinking about the drought) and he said “we always plant this time of year and we don’t let one year change our plans”. This got me thinking about last year’s meeting. If you remember we took a look at weed resistance from several points of view. We heard reports from our weed specialists at NCSU, County Extension, Herbicide Distribution, and a grower, Al Averitt, represented our consultants in talking about the economics of weed resistance. We are changing the way we look at weed resistance and it comes from several years of looking at the issues and tackling the hard decisions, not just one year. Our focus has been on palmer pigweed but the concepts we are developing apply to all weeds that are resistant to a herbicide or have the mechanisms to become resistant. Crop rotation, herbicide rotation, use of multiple active ingredients and tillage practices will all be needed to control resistant weeds. Hopefully, getting corn and soybean growers to use two active ingredients and cotton growers to use at least three actives will slow down the spread of resistance. In Gaylon Ambrose’s presentation I heard some good news. Growers are listening and responding. Of course some will be slow adaptors but the message is getting out and everyone will have to change and improve the way we control weeds or we will lose a very valuable herbicide system.

On another note please mark your calendars for our next meeting on March 6, 2008. The meeting will be held at the J. C. Raulston Arboretum located on Hillsborough Street just off the 440 Beltline. This is the same location where the meeting was held last year. Registration will begin at 8:30 am with the program starting at 9:00 am. Rob Richardson is putting the finishing touches on the program entitled: The State of Weed Science: Current Trends and Emerging Markets.

See you at the meeting.

TOPICS FROM THE 2007 ANNUAL MEETING

Herbicide Resistance: Practical Answers and Probable Solutions
Update of Resistance Issues in North Carolina
Dr. Alan York, NCSU

North Carolina / U.S. Weed Resistance Survey
Dr. John Wilcut, NCSU

Mechanism of Weed Resistance
Dr. Jim Burton, NCSU
Dealing with Weed Resistance at the Farm Gate
Al Averitt, Consultant

Grower Response to Weed Resistance
Danny Clayton, Cotton and Corn Producer

The Role of Extension Agents and Weed Resistance
Art Bradley and Gaylon Ambrose, N.C. County Extension Agents

Managing Resistant Weeds
Joe Dunn, Helena Chemical

Economics of Weed Management
Dr. Michele Marra, Dept of Agricultural and Resource Economics, NCSU

Practical Solutions and Probable Answers for 2007: Panel Discussion
York, Wilcut, Averitt, Marra, Burton, Clayton, Bradley and Ambrose

Chemical Mowing In Orchards
Wayne Mitchum, NCSU

Weed Management Update in Pasture and Turf
Leon Warren, NCSU

Graduate Student Presentations

Temporal aspects of weed populations in over 15 Roundup Ready continuous cotton fields in North Carolina and Mississippi
Wesley Everman, NCSU

Abstracts provided by speakers at the 2007 Annual Meeting and other information relating to the WSSNC can be found at the WSSNC web site. www.wssnc.ncsu.edu

MINUTES OF THE
2007 ANNUAL BUSINESS MEETING

March 8, 2007
Loren Fisher, Secretary-Treasurer

The meeting was called to order by President Reid Evans with 77 dues paying members in attendance. There were four industry sponsors for 2007; BASF, Nufarm, Syngenta, and Monsanto.

Jim Burton presented the Distinguished Service Award to Leslie Fuquay.

Caren Judge presented the Student Awards as follows:
MS Poster: 1st Ryan Pekarek, 2nd Sarah True
PhD Poster: 1st Wes Everman, 2nd Bridgett Lassiter
Outstanding Students: MS Angela Post, PhD Wes Everman

Glenn Oliver agreed to become the new Newsletter Editor.

Rob Richardson was elected Vice-President.

Peter Dittmer was elected Student Member of the WSSNC Board.

Tom Hunt gave a Legislative update and discussed agricultural equipment usage on highways and roads, pollution discharge and elimination of permits, and regulation of GMO crop planting.

The secretary/treasurer report was given by Loren Fisher. The minutes were accepted with the following changes; spelling correction for Peter Dittmer and NCEPPC was changed to SEEPPC. The treasurer’s report is attached.

It was moved by Tom Hunt and seconded by Wick Wickliffe for WSSNC to support a $1,000 scholarship from the WSSNC Endowment with additional support from the WSSNC checking account to make sure the award is $1,000. Additionally, the WSSNC will provide $500 to support travel of the Weed Team at NCSU. This was passed with a voice vote. A committee is to be created by the President to determine how to award the scholarship.

Tom McKemie reported on MP & E Management of the website and marketing for WSSNC. It was determined that private management would be cost prohibitive at this time for WSSNC.

Industry updates were provided.

Reid Evans turned the meeting over to new President, Tom McKemie.

The meeting was adjourned.
Pictured (L to R): Reid Evans, Past President; Loren Fisher, Secretary-Treasurer; Rob Richardson, Vice President; Paul Garvey, Glenn Oliver, Joe Neal, Executive Directors; Tom McKemie, President; Peter Ditmar, Student Board Member.

**BOARD OF DIRECTORS**

**President:**
Tom McKemie, BASF  
5104 Indigo Moon Way, Raleigh, NC 27613  
email: thomas.mckemie@basf.com

**Past President:**
Reid Evans, NCSU Central Crops Exp. Stn  
13223 US 70 West, Clayton, NC 27520-2127  
e-mail: reid.evans@ncmail.net

**Vice-President:**
Rob Richardson, N. C. State University  
Box 7620, Raleigh, NC 27695  
email: rob_richardson@ncsu.edu

**Secretary-Treasurer:**
Loren Fisher, N.C. State University  
Box 7620, Raleigh, NC 27695  
email: loren_fisher@ncsu.edu

**Executive Directors:**

- **Academia**  
  Joe Neal, N.C. State University  
  Box 7609, Raleigh, NC 27695  
e-mail: joe_neal@ncsu.edu

- **Industry**  
  Glenn Oliver, BASF  
  26 Davis Dr., Research Triangle Park, NC 27709  
  email: glenn.oliver@basf.com

- **At-Large**  
  Paul Garvey, Agriculture Systems Associates  
  3341 Hwy 58 South, Kinston, NC 28504  
  email: agsystem@bellsouth.net

**Student Representative**
Peter Ditmar, N.C. State University  
Box 7609, Raleigh, NC 27695  
e-mail:

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**COMMITTEE CHAIRS**

- **Awards:** Jim Burton  
- **Finance:** David Jordan  
- **Student Affairs:** Carrie Judge  
- **Historical:** Rolf Jesinger, Tom McKemie  
- **Publications/Website:** Glenn Oliver, Steve Hoyle  
- **Nominations:** Katie Jennings  
- **Legislative:** Tom Hunt  
- **Membership:** Dunk Porterfield  
- **Program:** Tom McKemie  
- **Public Relations:** Mike Burton, Steve Hoyle, Wesley Everman

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**IMPORTANT DATES**

Weed Science Society of North Carolina (WSSNC),  
March 8, 2007, J.C. Raulston Arboretum, Raleigh, NC

Stay informed about important dates and meetings by checking the 'Events' link on the WSSNC website.  

**www.wssnc.ncsu.edu**

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**RECENT AWARDS AND RECOGNITION**

**WSSNC Distinguished Service Award**

During our 2007 meeting, Leslie Fuquay was awarded our WSSNC Distinguished Service Award for all the time and effort she has put into the WSSNC Newsletter Editor position from 2003 to 2007. Leslie’s work experience consists of:

- **Union Camp Corporation 1984-1987**
- **Virginia Tech (Tidewater Experiment Station) 1987-1993**
- **Arbor Enterprises 1995-1997**
- **Syngenta 1997-present**

Her current job responsibilities involve biological R&D Data Management, including data analysis & summarization; field biology data support; statistical consultation and training.

Leslie, thanks for doing a tremendous job on the newsletter and developing it from a couple of printed pages snail-mailed to membership to an electronic version that allows the organization to save funds by emailing the PDF file to our membership.

**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. A brief description of the contributions of the individual to the WSSNC and weed science in North Carolina is requested with the nomination.
**STUDENT UPDATE**

Peter Ditmar, Student Representative

Jared Hoyle was born on April 5, 1984 in Kernersville, North Carolina as the youngest of four boys. He achieved a Bachelors of Science from North Carolina State University in Horticultural Science in 2006. Currently, Hoyle is working under Fred Yelverton, at NCSU, pursuing a Masters of Science Degree in Weed Science focusing on mowing height control of large crabgrass in tall fescue and common bermudagrass. He is also working with various pre-emergent herbicides for control of large crabgrass along with bermudagrass encroachment in tall fescue at various mowing heights and brown patch suppression with various mowing heights. He plans to obtain a Masters of Science in December 2008.

Lela Walker is from Greenville, NC. She graduated from North Carolina State University in 2007 with a B.S. in Horticultural Science. She was a research technician and field supervisor for the NCSU Department of Forestry's Rooted Cutting Program for three years. She also conducted an undergraduate research project studying requirements for germination of Pinkshell Azalea (*Rododendron vaseyi*) seed. She is currently pursuing an M.S. in Horticultural Science under Dr. Joseph Neal, focusing on the biological control of Japanese Stillgrass (*Microstegium vimineum*).

Stephen Meyers is currently a MS student at North Carolina State University. An Indiana native, he graduated from Purdue University with a BS in Horticultural Production and Marketing. While at Purdue, Stephen constructed a survey to evaluate consumer misconceptions of organic goods, wrote major portions of the new Indiana 4H Floriculture curriculum, and participated in various field and lab research efforts. His current research concerns weed management in sweetpotato with a focus on Palmer amaranth management under the direction of Drs. Jennings and Schultheis.

Clara Englert is a Master's student working with Drs. Joe Neal and Tom Ranney in the NCSU Department of Horticultural Science. She graduated *summa cum laude* from Ohio Wesleyan University with majors in Zoology and Environmental Studies. For the past three years, she has lived in Washington, D.C. and worked for the National Science Board of the National Science Foundation. Her master's research project involves the development of a science-based assessment protocol to evaluate the invasive potential of ornamental species across eco-regions of North Carolina.

Aman Chandi is a native of India and joined the Department of Crop Science during the fall of 2007. She is pursuing her PhD under the direction of Drs. Jim Burton and David Jordan. Her research will focus on the fitness of glyphosate-resistant Palmer amaranth and ALS-resistant common ragweed. She will also apply molecular biology techniques to address fundamental questions associated with the genetics of Palmer amaranth populations in North Carolina, with emphasis on characterizing glyphosate-susceptible and resistant biotypes.

Gurinderbir Chahal, a native of India, joined the Department of Crop Science in the fall of 2007. He will be pursuing his PhD under the direction of Drs. David Jordan and Jim Burton. Gurinderbir will be involved in investigating physiological and physical characteristics of interactions among pesticides. The emphasis of his project will be on interactions that include three or more components, including elucidating the mechanism involved in these interactions.

Scott Clewis recently completed his PhD in the Department of Crop Science under the direction of Drs. John Wilcut and David Jordan. Scott is a Research Associate and will continue working in the weed science program at North Carolina State University. Scott's research focused on many aspects of weed management in agronomic crops. The focus of his dissertation included various aspects associated with reduced tillage systems in cotton.

2007 NEWSS Collegiate Weed Contest

By Adam Hixon and Wesley Everman

The Northeastern Weed Science Society weed contest was held in Blacksburg, VA at Virginia Tech’s main campus on July 31, 2007. A total of 45 graduate and undergraduate students participated from six universities. The universities represented at the contest were North Carolina State, Cornell, Guelph, Nova Scotia Ag College, Penn State, and Virginia Tech.

N.C. State had another strong showing this year. It sent four teams: A): George Place, Jared Whitaker, Adam Hixon, and Angela Post; B): Juliana Buckelew, Amanda West, and Guy Collins; C): Jared Hoyle, Peter Ditmar, and Ryan Pekarak; D): Megan Coneybear and Sara True. Rory Roten participated as an undergraduate individual. Team A finished as first place graduate team. George, Jared, and Adam also finished as first, third, and fourth place individuals, respectively.

In keeping with changes instituted in the 2006 contest, students needed to complete multiple choice questions on specific characteristics of each unknown herbicide or weed, and were exposed to farmer problem scenarios in various aspects of weed science. As is customary, the four contest segments were weed identification, unknown herbicide identification, sprayer calibration, and farmer problems. The overall results were as follows:

**NEWSS Weed Contest Graduate Division Awards:**

1st place team: NCSU (George Place, Jared Whitaker, Adam Hixon, and Angela Post)

2nd place team: Virginia Tech (Nathan O’Berry, Mike Weeks)
3rd place team: Univ. of Guelph (David Van Dam, Daryl Vermey, and Allan Kaastra)

1st place individual: George Place (NCSU)
2nd place individual: Virender Kumar (Cornell Univ.)
3rd place individual: Jared Whitaker (NCSU)

Photos courtesy of Adam Hixon

2007 SWSS Collegiate Weed Contest

By Adam Hixon and Wesley Everman

Wesley Everman, Jared Whitaker, and Adam Hixson attended the Southern Weed Science Society weed contest in Vero Beach, FL at the Syngenta Research Center on August 9, 2007. For this contest, a total of 45 graduate and undergraduate students participated from nine universities. The universities represented at the contest were North Carolina State University, University of Arkansas, Mississippi State University, Louisiana State University, University of Florida, University of Tennessee, Clemson University, Auburn University, and Oklahoma State University.

N.C. State has not participated in the Southern Weed Science Society Weed Contest for many years, but this year’s resurgence in participation was needed to continue having the weed contest for years to come. In a contest perennially dominated by three schools (MSU, UA, and LSU), NCSU was able to come away as the third place team. Wesley and Adam also finished as fifth and sixth place individuals, respectively.

SWSS Weed Contest Graduate Division Awards:

1st place team: Univ. of Arkansas (Frank Lyons, Landon Ries, )
2nd place team: Mississippi State Univ. (Tom Eubank, Trent Irby, Johnathan Huff, and Wade Givens)
3rd place team: NCSU (Wesley Everman, Adam Hixson, and Jared Whitaker)

1st place individual: Tom Eubank (Mississippi State Univ.)
2nd place individual: (Univ. of Arkansas)
3rd place individual: Drew Ellis (Univ. of Tennessee)

Photos courtesy of Adam Hixon
**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 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:**
Glenn Oliver, BASF Corporation  
1001 Oakgate Court  
Apex, North Carolina 27502  
Phone: (919) 427-9055 Fax: (919) 372-7147  
email: glenn.oliver@basf.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  
Phone: (919) 515-5272 Fax: (919) 515-5315  
email: steve_hoyle@ncsu.edu
26th ANNUAL MEETING

Thursday, March 6, 2008
J.C. Raulston Arboretum
N.C. State University
Raleigh, North Carolina

Theme: Herbicide Resistance – Practical Answers and Probable Solutions

8:30 am Registration
9:00 am Opening Remarks – Tom McKemie
9:05 am
State of NCSU Weed Science, an administrative perspective – Dr. David Monks (NCSU)
Current status and future direction of the agrichemical industry – Tom Hunt,
Trends in turfgrass weed management – Dr. Fred Yelverton, NCSU
Herbicide resistance in field crops. – Dr. Alan York, NCSU
10:25 am Discussion, Break, View Posters
11:00 am
Current pesticide enforcement issues from NCDA - Jim Burnette, NCDA
Biofuel crops in NC: current status and future expectations - Nicholas George
New invasive/noxious plant issues from APHIS - Anthony Man-Son-Hing
12:00 pm Lunch
1:00 pm
Trends in aquatic plant management – Bo Burns, BASF Corporation
A National Park Service view of invasive plants - Nancy Fraley
Organizing a successful multi-state education and eradication program for beach vitex - Betsy Brabson
2:00 pm Student Presentations
3:00 pm Industry Updates
3:15 pm Business meeting
3:45 pm Adjourn

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. intersection. Arboretum is approx. ¼ mile on the left. Parking lot space is limited; additional parking on Beryl Rd.
A TRIBUTE TO ONE OF OUR OWN ….

Dr John Wilcut, Professor of Crop Science, North Carolina State University

Written by Dr. David Jordan, NCSU. John William Wilcut, 52, passed away August 24, 2007 at his home after a valiant battle with adrenal cancer. His wife, Cathy Worley Wilcut of Apex, and children Jared, of Raleigh and Caitlyn (Caity) of Apex survive John. He was the son of Pete and Irene Wilcut (Missouri). His father preceded him in death.

Surviving siblings include his brothers, Kerry Wilcut and wife, Debbie (Marion, IL), James Wilcut and wife, Daphne (St. Louis, MO), and sister, Kim Amodio and husband, Angelo (Waynesboro, MO). Surviving also are several nephews and nieces. He was strongly devoted to his family, and his first priority was to take care of each of them in the best way he could. He was a thoughtful, romantic man who cherished his wife and children.

John was born in Farmington, MO and grew up in Missouri and Illinois. He was an avid St. Louis Cardinal fan. He received his BS and MS degrees at Eastern Illinois University. He then went to Auburn University to receive his Doctorate in Weed Science. The Auburn Tigers were added to his list of favorite teams. John worked at research stations at Virginia Tech University and The University of Georgia. His desire to be on a main campus to teach and work with students led him to North Carolina State University, where he was a Professor in the Crop Science Department. He dedicated his life to being a mentor to other weed scientists and helping farmers find weed control solutions to maximize crop yields. He was nationally and internationally recognized for his contributions to Agriculture and Weed Science, but his greatest satisfaction came from working with students as they embarked on their careers. He had many more sons and daughters than listed here.

Dr. Wilcut's program is recognized for providing national leadership in the areas of weed management, weed ecology and biological relationships among crops and weeds, and in the physiological behavior of herbicides in crops and weeds important to U.S. agriculture. John demonstrated excellence in research, extension, and teaching
at North Carolina State University, the University of Georgia, and Virginia Tech. His expertise in weed science has been recognized by regulatory agencies at the state and federal level; by commodity groups in a number of states as evidenced by funding and requests for presentations, field days, and commodity meetings; and by state, regional, and national professional organizations and societies.

His students have received recognition through numerous departmental, state, regional, and national awards provided by the American Peanut Research and Education Society, the National Cotton Council, the Department of Crop Science at North Carolina State University, the Southern Weed Science Society, and the Weed Science Society of America. John’s efforts and collaboration with student and other professional colleagues resulted in close to 200 refereed journal articles, five book chapters, and well in excess of four million dollars in funding during his career.

In recognition of John’s efforts, he also has received numerous awards including the Outstanding Young Weed Scientist, Outstanding Educator, and Weed Scientist of the Year from the Southern Weed Science Society; the Dow AgroSciences Research Award and Bailey Award recipient from the American Peanut Research and Education Society; induction as Fellow and recipient of the Outstanding Young Weed Scientist (Early Career Award) from the Weed Science Society of America; the Outstanding Faculty Member Award by Agronomy Club in the Department of Crop Science at North Carolina State University; and the Award for Excellence for Junior Scientist at the University of Georgia’s Coastal Plain Experiment Station. John also served as coach for Weed Teams at North Carolina State University that placed first in 1999 and from 2001-2004 and second place in 1995, 1998, 2000, and 2002 at the Northeastern Weed Science Society Weed Contest.

Dr. Wilcut served simultaneously as Editor of Weed Technology and Peanut Science in recent years. Many members of the American Peanut Research and Education Society credit John with revitalizing the flagship publication Peanut Science through his hard work and dedication. John also brought his experience and dedication to the discipline of weed science through his excellence and dedication as Editor of Weed Technology.

John’s candid opinions and assessments have helped many people make important decisions that have benefited not only their careers but also other more important aspects of their lives and relationships with others. John’s impact is profound, and family, friends, colleagues, and agricultural and scientific communities will miss him.