



## President's Message

Steve Kelly

Another annual meeting has past and a new president is in place. I've got some big shoes to fill and tough acts to follow. But, the SWSS has been a big part of my professional life since the first meeting I attended in 1999. I've been fortunate enough to attend every one consecutively and would certainly not have done it any differently. The annual meetings are a great place to renew old acquaintances and cultivate new ones.

The 2013 meeting in Houston was a great success. Attendance and the number of papers submitted were right in line with those of the last two years. This was a direct reflection of the hard work that Gary Schwarzlose and his local arrangements team put in to organizing and conducting the meeting. Thanks Gary and team!



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Future Meeting Site:  
Hyatt Regency  
(Formerly Wynfrey Hotel)  
Birmingham, AL  
January 27-29, 2014



[www.swss.ws](http://www.swss.ws)

Our local arrangement co-chairs for the 2014 meeting in Birmingham are Scott McElroy and Joyce Treadaway-Ducar. They will have another outstanding meeting forum lined up for us January 27 through 29 at the Hyatt Regency (formerly The Winfrey Hotel). This is one of the most central locations geographically for us to have the annual meeting so please make plans to attend. Additionally, for those of you in close proximity to Birmingham, I'm sure Scott and Joyce would be happy to have you on board as a member of the local arrangements committee.

Scott Senseman is the program chair for the 2014 meeting and this will certainly be an eventful year for Scott. We initiated some new procedures for the 2013 meeting that will continue into the 2014 meeting. For the most part, using the WSSA submission website went well. While there were one or two issues, Scott and I, along with others that were intimately involved in the 2013 program, will work closely with the WSSA submission site webmaster to help things go even more smoothly for the next meeting. If you have any ideas or suggestions for symposia I'm sure Scott will welcome those ideas.

A "Call for Awards Nominees" will be sent soon. While there are many SWSS members that are well-deserving and qualified for

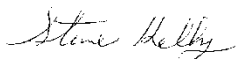
the awards that we bestow, some of them are never recognized because they're not nominated. Sure, the awards packets are hard work, but what isn't these days. If you know of someone who is deserving of one of these awards, please go the extra mile and nominate them. I'm sure the nominee would be more than happy to assist you.

As we move toward the 2014 meeting in Birmingham and the 2015 meeting in Savannah, the board has decided to pursue a joint meeting with the WSSA in Puerto Rico in 2016. This decision was based on the positive response received at the General Session when the audience was polled by then president Tom Mueller. This is certainly an exciting proposition given the increased attendance at the last SWSS meeting held in San Juan. Business Manager Phil Banks will work in close contact with WSSA business managers to insure that everything goes smoothly.

Recently, Tony White notified the board that he will be stepping down as SWSS Webmaster effective June 30. I want to personally thank Tony for his service in this role over the last few years. Tony was instrumental in getting the SWSS web site to the point it is today. I have asked Phil Banks to solicit bids from outside vendors to manage the site. However, the board will also consider volunteers from within the membership if we have interest. So, if this is something you wish to do please contact Phil. With Tony's last day rapidly approaching, the board will need to make a decision during the July meeting to insure that all annual meeting information is updated and posted in a timely manner.

As your president, I'm looking forward to serving the society in the upcoming year. If you have suggestions for improvements please reach out to me or other board members. If we want to have a society that is beneficial to all members, we need the involvement and input of as many as possible.

Respectfully submitted,



Steve Kelly  
President, SWSS

### **Students Receive Three SWSS Endowment Enrichment Scholarships**

Sushila Chaudhari, Matthew Elmore, and Peter Eure recently received scholarships from the SWSS Endowment to support educational opportunities outside of their current graduate program. Sushila will spend time with Cheryl Dunne and other researchers with Syngenta at their Vero Beach location in Florida. Matthew will visit Steve Duke's lab (USDA-ARS) in Oxford, Mississippi while Peter will work with Tim Adcock (Diligence Technologies) in Tennessee. Students will share their experiences at the 2014 annual meeting. Nine students applied for the scholarship of \$1,500. This program would not be possible without contributions from members of the SWSS to the endowment and the gracious offer from academia and industry for the educational opportunities. Thanks to all involved in establishment of the scholarship, the many companies and organizations offering their time, personnel and facilities for the experience and to graduate students for their interest in the program. The Endowment Committee looks forward to continuing the program with possible expansion. The committee also looks forward to comments and suggestions from the SWSS membership on ways to improve the Endowment Enrichment Scholarship program.

## **From your SWSS Awards Chair, Tom Mueller**

I would say it is safe to say that all of us like to win stuff, including awards. Each year, SWSS awards several awards for its members. For some awards, there is no shortage of nominees; for others, often no one gets nominated, or many times the winner is the only one nominated.

As someone that has won several SWSS awards, I encourage you to nominate a colleague for the prizes listed on the website.

The following was largely adapted from the ACS magazine, C&E News May 6, page 50.

It's that wonderful time of year when lots of award nominations are due in the months ahead, and many professionals are asked to write supporting letters. There is an art to writing a great letter of recommendation, and a few steps can ensure that you write the strongest letter possible.

### **1. COMMIT.**

When you're asked to write a letter about someone else, consider the request before you accept. Do you know this person well enough to do him or her justice? Do you respect the person, and his or her work, enough that you are eager to tie your reputations together? Do you have time to craft a compelling letter before the deadline? Only if you can enthusiastically accept should you agree.

### **2. COLLECT.**

Start by collecting the necessary background information. Ask for a résumé or CV of your subject, the requirements and judging criteria for the award, and the requested document type. Is there a form? Should the letter be a certain length? All of the pertinent information is located at the SWSS website, [www.swss.ws](http://www.swss.ws).

### **3. COMPOSE.**

Start writing your letter. Begin by describing how you know the candidate and for how long. Describe how the person meets the award criteria, making sure to include specific examples. Don't just write "Steve is a team player." Provide details of the time Steve took the tasks no one else wanted and completed them on time to allow the team to succeed.

There's no need to repeat dates and facts from elsewhere in the application package. The reviewers want to get to know the candidate as a person, and they are looking for a sense of who that person is and how well he or she fulfills the qualifications for the award.

### **4. COORDINATE.**

If possible, coordinate with others who are writing supporting documents so you don't duplicate another's coverage. Instead, your submissions can be complementary if they describe different aspects of the candidate. This is not as big a deal for SWSS awards as others, but it is a good idea if possible.

### **5. CHECK.**

As with any important document, once you think it's done, put it aside for a couple of days or at least

overnight. Then read it over again and make sure it flows smoothly. Confirm that you have addressed all, or at least all that you can, of the award criteria. Send a file to the nominator with plenty of time to make the deadline, and let the nominator know you have done so.

It is an honor, and an obligation, to be asked to write a letter of recommendation for a colleague. If you respect and admire the candidate enough to agree, you owe it to that person to write the strongest, most compelling letter you can.

*Above largely adapted from C&E News, American Chemical Society*

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### **Agriculture- A River Runs Through It** Submitted by Richard Coupe, U.S. Geological Survey

Agriculture in the United States is a tremendous success and contributes to the high standard of living enjoyed by Americans, but there are concerns over the effects of agriculture on water quality and quantity.

Scientists at the U.S. Geological Survey (USGS) are studying how agriculture affects the environment in several areas of the U.S. The study results show how environmental processes and agricultural practices interact to affect the quality and quantity of water in streams and groundwater.

Heather Welch, Claire Rose, Richard Rebich, and Richard Coupe, U.S. Geological Survey scientists involved in the National Water Quality Assessment (NAWQA) Study of Agricultural Chemical Transport (ACT) study, have examined agricultural effects on water quality in the Mississippi Delta region. The research has focused on effects of fertilizer movement from crop fields into rivers and streams, the environmental effects of biofuel production, pesticide movement in streams and groundwater, and changes in surface and groundwater flows. These results point to the need for change in how we grow our food, fuel, and fiber, and manage our soil and water resources.

Videos are being used in addition to scientific publications to communicate the relevance of these scientific findings to audiences such as resource managers, educational groups, public officials, and the general public. The videos include an overview:

“Agriculture- A River Runs Through it” at: <http://www.youtube.com/watch?v=iD3u3YsRoX8>

and interviews with scientists, farmers, and a documentary of water sampling on the Mississippi River. The full set of ACT Study Videos can be viewed at:

[http://gallery.usgs.gov/video\\_sets/Contamination](http://gallery.usgs.gov/video_sets/Contamination)

More information can be obtained from: <http://water.usgs.gov/nawqa/>

## People and Places

**Dr. Mike Barrett** has been selected as the new WSSA EPA Liaison. Mike replaces Dr. Jill Schroeder who has served for the past 4.5 years as our EPA Liaison. In this role, Jill has greatly increased the visibility of WSSA within EPA. Mike will begin his role with EPA in early June.

**Patrick Jones** recently completed a Master's of Science degree at the University of Tennessee (Knoxville, TN) under the direction of Dr. Jim Brosnan. His thesis was titled, "Impacts of Preemergence Herbicides on Hybrid Bermudagrass Morphology." Patrick recently accepted a position as a research scientist at The Scott's Company in Marysville, OH.

**Matthew Elmore** is a Ph.D. candidate at the University of Tennessee (Knoxville, TN) under the direction of Dr. Jim Brosnan. Matthew began a 12-week internship with BASF Corporation on June 1<sup>st</sup>, 2013. Matthew also was a recipient of the SWSS Enrichment Scholarship that will provide him the opportunity to work in a USDA-ARS research laboratory this fall under the direction of Dr. Stephen Duke.

**Dr. Scott Senseman**, the new head of Plant Sciences, comes to us from Texas A&M University, where he supervised and managed a laboratory devoted to the fate of pesticides in the environment. His teaching responsibilities encompassed undergraduate courses such as introduction to agronomy, ecology of agrochemicals, and weed ecology and management, as well as graduate courses in methods of plant, soil and water analysis in environmental systems and mode of action and fate of herbicides. As a guest lecturer, Dr. Senseman has communicated on the technique of mind mapping, used to elaborate words, ideas and concepts related to a central theme or key idea. He also served as coach of the highly successful Texas A&M Weed Team. Dr. Senseman has guided 22 master's and doctoral students and served on the graduate committees of 56 others, which truly indicates his dedication to quality of graduate education. His successful research career has garnered almost \$2 million in externally and internally funded grants and resulted in 91 peer reviewed publications with more in review, which could explain in part why he is such a sought after speaker. His awards have included an alumni citation for distinguished contributions to education from Wilmington College in Ohio, a Super Service Award from Texas Cooperative Extension, an outstanding paper in weed technology, and he was a finalist for the Governor's Award in Environmental Excellence for an atrazine abatement project. He expects to join UTIA in July.

## In Memoriam

Dr. Robert Eugene Eplee, Sr.

Dr. Robert (Bob) Eugene Eplee Sr., 79, passed away on Wednesday, Jan. 30, 2013, at the New Hanover Regional Medical Center in Wilmington, North Carolina.

Dr. Eplee, born on November 15, 1933, was the son of the late Kelly Eplee and Madeline Price Eplee of Marion, North Carolina. He was preceded in death by one son, David F. Eplee. He is survived by his



wife, Mary Mullins Eplee of Whiteville; and one son, Dr. Robert Eugene Eplee Jr. of Laurel, Maryland. A memorial service was held at 2p.m. on Saturday, Feb. 2, 2013, at Whiteville First Presbyterian Church with Rev. Joshua Bower officiating. Eplee received his B.S degree in Agronomy from Berea College, Kentucky (1955) and his M.S. Degree in Agronomy from the University of Kentucky (1963). He received his Ph.D. in Crop Science (Weed Science) from North Carolina State University in December, 1965.

After serving in the U.S. Army in France from 1955-1957, Bob served as an Extension Agent with the Kentucky Cooperative Extension Service in Morehead County, Kentucky, from 1957-1961. Upon completing his graduate studies at NCSU in December, 1965, he accepted the position as Director of the Witchweed Laboratory in the Crop Pest Division of the USDA Agricultural Research Service in Whiteville, North Carolina. He held that position until the Whiteville Plant Methods Center was closed by USDA APHIS in August, 1995. From 1995 until his retirement in 2000, he served as the Director of the APHIS Oxford Plant Methods Center (Oxford, North Carolina) and the APHIS Center for Plant Health Science and Technology in Raleigh, North Carolina.

#### Career Highlights

Bob is best known and remembered for his research on the biology and control of Witchweed [(*Striga asiatica* (L.) Kuntze)], a parasitic weed that is native to Africa and Asia, that was first discovered in southeastern North Carolina, in July, 1956. Thanks in large part to his 30 year research program to develop methods and equipment for the USDA-Carolinas Witchweed Eradication Program, the infestation has been reduced from 432,000 acres in the North and South Carolina Coastal Plain (1970) to 1,542 acres (end of 2012).

The principles and practices he developed in the Witchweed Program also contributed greatly to the development of new approaches for invasive species prevention in the U.S. and elsewhere. Some examples include:

- Weed Science Society of America Liaison for Passage of the Federal Noxious Weeds Act of 1974
- Science and Technical Support for Federal-State Weed Eradication Programs (e.g., Goatsrue in Utah, Common Crupina in Idaho, Hydrilla in California and Florida, and Japanese Dodder in South Carolina – 1981-2000)
- Original member -U.S. Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW) (1990)
- Development of Interagency Approaches for Early Detection and Rapid Response to New and Emerging Invasive Plants through State Invasive Species Councils and Committees (e.g., Wyoming Weed Team – 1998) and Invasive Plant Task Forces (North Carolina Giant Salvinia Task Force -2002)

#### Professional Recognition

Over the years, Eplee received a number of national and international awards for his professional accomplishments, including:

- Fellow of the Weed Science Society of America -1993 -Otto Heinreicher Award, International Parasitic Plant Society, 6th International Congress, Cordoba, Spain -1996

- Legacy Award, International Parasitic Plant Society, 9th International Congress, Charlottesville, Virginia – 2007. (In recognition of extraordinary contributions to understanding the biology, control, and quarantine of witchweed over 30 years)

From a personal standpoint, Bob Eplee will always be remembered for his devotion to the local community through his work in the Boy Scouts of America and the Whiteville Lions Club. As a professional, he will be remembered for his contributions to the United States as a federal weed scientist. According to longtime friend and colleague Dr. Doug Worsham (one of his professors and graduate advisors at NCSU), Bob was a hands-on scientist who could take a complex problem and break it down to find simple solutions that could be applied in the real world. His work in USDA APHIS made Witchweed Eradication in the Carolinas not only possible, but practical, and economically feasible.

There is one thing for certain -if there is an equipment shop in Heaven, Bob Eplee is already there, designing, building, and testing a new piece of equipment with a big smile on his face. Just imagine that ..... In any case, this world is definitely a better place because of the life and work of Dr. Robert Eugene Eplee, Sr. – 1933-2013.

Prepared by: Randy G. Westbrooks, Ph.D., IVS Prevention Specialist, Invasive Plant Control, Inc., Whiteville, North Carolina; A. Douglas Worsham, Ph.D., Professor, Emeritus, Weed Science, North Carolina State University, Raleigh, North Carolina; Lytton Musselman, Ph.D.; and Mary Payne Hogan Professor Botany, Department of Biological Sciences, Old Dominion University, Norfolk, VA  
WHITEVILLE, NORTH CAROLINA, USA

### **Web Master Announcement**

After several years of excellent service to SWSS, Tony White has decided to resign (effective June 30) as our web master due to increased responsibilities with his job. We all thank Tony for the time and effort he has put into building a new website and keeping everything running smoothly for our society. President Steve Kelly has asked Phil Banks to conduct a search for a new web master. The job would require up to date knowledge in website design and maintenance and would require the ability to host the web site. We encourage proposals from any qualified person or company for web site updating and maintenance. Proposals should be sent to Phil ([swss@marathonag.com](mailto:swss@marathonag.com)) and should be received before June 10, 2013.

## 2013 Award Winners

### 2013 Weed Scientist of the Year- Barry Brecke



Barry Brecke was born in Milwaukee, Wisconsin. He is married to Gayle and has two grown children, Darren and Suzanne. He earned his B.S. degree from the University of Wisconsin-River Falls and his M.S. and Ph.D. in Agronomy-Weed Science from Cornell University. He is currently Professor Emeritus - Weed Science and Interim Center Director at the University of Florida, West Florida Research and Education Center, Jay, FL. He joined the University of Florida in 1975 with a research focus on developing weed management systems for corn, soybeans, cotton and peanuts. In 1996 he accepted additional responsibilities in teaching as part of a satellite-teaching program at the University of Florida and expanded his research program to include weed management in turfgrass. Even though he is located at an off-campus facility, Dr. Brecke was major advisor for 8 M.S. and 5 Ph.D. students and served on the advisory committees of 24 other graduate students. Dr. Brecke has been an active member of SWSS since 1976. He served on numerous SWSS committees and chaired the following: Graduate Student, Weed Scientist of the Year Award, Distinguished Service Award, Outstanding Graduate Student Award and Outstanding Young Weed Scientist Award. Dr. Brecke was a member of the SWSS Board of Directors and was elected SWSS President for the 2012 annual meeting. He received the SWSS Distinguished Service Award in 2007. Dr. Brecke is also active in the Weed Science Society of America having served on and chaired many committees, was a member of the Board of Directors as SWSS Representative and was selected as a WSSA Fellow in 2004. In addition he is a past president of the Florida Weed Science and served on the FWSS Board of Directors. Dr. Brecke is listed as an author or co-author of 6 book chapters, 80 refereed publications, 248 abstracts and 240 extension publications. He is a frequent reviewer for Weed Technology, Weed Science and Peanut Science and has served as Associate Editor for Weed Technology.

### 2013 Outstanding Young Weed Scientist-Academia- Shawn Askew



Shawn Askew was born on May 22, 1973 and raised in Mt. Olive, MS. He completed his B.S. in Agriculture Pest Management from Mississippi State University in 1995. He obtained his M.S. degree in Weed Science with a minor in Botany under the direction of Dr. David Shaw at Mississippi State University in 1997 and his Ph.D. degree under the direction of the late Dr. John Wilcut in Crop Science at North Carolina State University in 2001. His M.S. research dealt with red rice control in soybean/rice rotations and his Ph.D. work concentrated on competition between *Polygonum* weeds and cotton. Barely 10 days after defending his dissertation, Shawn started his career as Assistant Professor and Extension Specialist in turfgrass weed science at Virginia Polytechnic Institute



and State University in Blacksburg. He is responsible for the state's weed management recommendations in turfgrass and coordinates the Phytochemistry and Radiological Materials Laboratory in the Department of Plant Pathology, Physiology, and Weed Science where he now serves as Associate Professor. His research has focused on turfgrass weed management, lateral movement of turfgrass herbicides, and managing transition of overseeded turfgrasses. Shawn's research in turfgrass weed science over the past 10 years has generated \$2.25 million and he has mentored 26 undergraduate and hourly employees and 14 graduate students. Shawn has authored or coauthored 60 peer-reviewed journal articles, 295 abstracts, and 164 trade journals and extension publications. He has extended weed science research through 437 invited or volunteered publications since 1996. In addition to his extension endeavors, Shawn currently mentors four Ph.D. students and one M.S. student, teaches two courses and guest lectures in 7 different courses at Virginia Tech.

Shawn and his students are very active in SWSS, NEWSS, and WSSA and have presented data at every meeting for these societies since he started at Virginia Tech in 2001. Shawn's students have been honored by the societies; one student received the Outstanding Graduate Student Award at the MS level and several students have placed in student poster, talk, and weed contest competitions. He actively promotes student involvement in the societies by coaching weed team participants for Virginia Tech in addition he and his students hosted the 2007 Northeast Weed Contest. He has been a member of the SWSS since 1995 and has not missed an annual meeting since then. He has served on several committees for SWSS and other societies and as Webmaster for NEWSS. He is currently chair of the computer science committee and serves on several other committees for SWSS. He completed two terms as Associate Editor for Weed Technology. Shawn has received numerous honors from the societies including being the first recipient of the SWSS Outstanding Graduate Student Award at the MS level in 1998 and the WSSA Outstanding Graduate Student Award in 2002. He was awarded the Outstanding Researcher Award by NEWSS in 2008 and the Allen H. Kates Extension Employee of the Year by Virginia Tech in 2010, and the WSSA Outstanding Early Career Award in 2012.

### **2013 Outstanding Young Weed Scientist- Industry-Greg Armel**



Greg Armel was born and raised in Winchester, VA and received all three of degrees from Virginia Tech. Greg received his B.S. degree in Forestry and Wildlife Management in 1997 and his M.S. in Vocational and Technical Education the following year. In 1998, Greg started his Ph.D. project under the guidance of Dr. Henry Wilson at Virginia Tech's Eastern Shore Agricultural Research and Extension Center. His dissertation project centered on evaluations of the herbicide mesotrione and these efforts led to his invitation as a guest biokinetic researcher at Syngenta's Jealott's Hill International Research Centre in Berkshire, UK. Upon completion of his graduate studies in 2002, Greg

went to work for DuPont Crop Protection in their Herbicide Discovery Group where he discovered new chemistries like the auxin herbicide aminocyclopyrachlor and helped characterize novel herbicides with new modes of action like the azolecarboxamides. Following his stint in Herbicide Discovery, Greg then worked in DuPont's U.S. Field Development organization as their Corn and Soybean Product Development Specialist helping bring to market several products including Enive<sup>®</sup>, Enlite<sup>®</sup>, Require<sup>®</sup> Q, and Resolve<sup>®</sup> Q. Greg then returned to academia in 2007, accepting a Weed Science faculty position at the University of Tennessee in Knoxville. In this joint extension and research position, he developed a program to address weed management issues in vegetables, small fruit, tree fruit, ornamental plants, and invasive weeds as they related to non-crop environments, roadsides, and forested areas. In addition to several applied research projects, Greg's basic research projects revolved around radiolabeled herbicide biokinetic studies, herbicide discovery, the impacts of pesticides on the nutrient quality and stress management in crops, and characterization of proprietary genes that conferred tolerance to auxin mimic herbicides. Also while at the University of Tennessee, Greg co-hosted the first ever WeedOlympics that brought nearly 150 students from all 4 regional weed science societies together for competition in an educational event. In June of 2012, Greg accepted an offer in Research Triangle Park, NC from BASF to be their Technical Market Manager for Zidua<sup>®</sup>, Facet L<sup>®</sup>, Raptor<sup>®</sup>, Cadre<sup>®</sup>, Newpath<sup>®</sup>, Clearpath<sup>®</sup>, and Beyond<sup>®</sup> herbicides. During his career Greg has authored or co-authored 35 refereed journal articles, 29 world and individual country patent applications, 20 extension publications, 83 professional meeting abstracts, and 6 popular press articles. In addition to the SWSS, Greg has also participated in other professional societies including ACS, ASHS, IWSS, WSSA, NCWSS, WSWs, and the NEWSS where he currently serves as Vice-President. Greg and his wife Julie have two sons, Carson who is 4 and Brenton who is 19 months old.

### **2013 Outstanding Educator Award- Tim Grey**



Dr. Timothy Grey is an Associate Professor of Research and Teaching in Weed Science with a program focused on herbicide use and dissipation, herbicide resistant weeds, agronomic and alternative crop production, and weed control in vegetable and tree crop production systems. His research and teaching has been conducted in laboratory, greenhouse, and field environments. Dr. Grey grew up on a farm focused on production of burley tobacco, row crops, oil seeds, hay and livestock, and he maintains close ties to his families' 2500 acre farm in Central Kentucky. He obtained his BS from the University of Kentucky and MS and PhD. from Auburn University. Dr. Grey has been with the University of Georgia since 1999 and in Tifton since 2002. Dr. Grey is involved with teaching multiple classes at the University of Georgia along with several other colleagues. These classes include Weed

Science and laboratory, Pesticides and Transgenic Crops, and Agroecology. He is very active in graduate education in the Department of Crop and Soil Sciences as a member of the University of

Georgia Graduate School Faculty. Dr. Grey has served as the major professor for 6 graduate students, served on over 20 graduate student committees, and help direct post-doctoral personnel and visiting scientist. Dr. Grey serves as a member on the Graduate Admissions Committee for the Crop and Soil Sciences Department and for the Colleges Masters of Plant Protection and Pest Management degree program. Along with his graduate students, Dr. Grey has presented research and invited talks at regional, national, and international meetings. Dr. Grey is a co-author on over 80 referred articles with graduate student and fellow scientist in various agronomic and weed science related publications. He also serves on several committees for the Weed Science Society of America, Southern Weed Science Society, and American Peanut Research and Education Society, and an associate editor for *Weed Science* and editor of *Peanut Science*.

### **2013 Outstanding Graduate Student Award (MS) Bob Cross**



Robert B. (Bob) Cross is a MS student at Clemson University studying Weed Science under the direction of Drs. Bert McCarty, Ted Whitwell, and Nishanth Tharayil. His innovative thesis had dealt with Sulfonylurea-resistant weeds (*Poa annua*) in turf. He has identified the mechanism of this resistance and has conducted numerous trials to identify alternative means of control. Mr. Cross has a BS in Turfgrass Management from Clemson University with a minor in Business Management, graduating Magna Cum Laude. While an undergraduate, he served as President and Vice President for the Clemson University Turf Club, won the Outstanding Senior Award within the College, and was a recipient of SC Golf Association Scholarship and SC Educational Life Scholarship. As a graduate student, Mr. Cross has been a teaching assistant for two horticultural classes: Weed Science and Advanced Turfgrass Management. In addition, he has worked full and part time at very prestigious golf courses such as The Players Championship, Ponte Vedra, FL; Sage Valley Golf Club, Graniteville, SC; The Reserve Club at Woodside Plantation, Aiken, SC; and, The Walker Golf Course at Clemson University, Clemson, SC. He won First Place in the 2012 SWSS Graduate Student Paper Contest. He and his wife Meredith, are expected their first child in March, 2013.

### **2013 Outstanding Graduate Student Award (PhD) Kelly Barnett**



Kelly Barnett grew up on corn and soybean farm in Amity, Indiana. From an early age, she was very involved in the daily tasks of running their third generation family farm. After high school, Kelly attended Saint Mary's College, Notre Dame to pursue her Bachelor's of Science in Biology. She completed a senior comprehensive research project that evaluated the allelopathic effects of goldenrod on common teasel. She received several awards for this research including honors for her Senior Comprehensive Research Project, the George & Juanda Bick

Nature Award for work in Environmental Biology, and the University of Notre Dame Chapter of Sigma Xi Outstanding Research Award. However, it wasn't until a couple of internships with Dow AgroSciences that Kelly realized she wanted to pursue a career in agriculture (and specifically weed science). In 2008, Kelly started her MS degree in weed science with Dr. Christy Sprague at Michigan State University. Her research focused on the potential effect of glyphosate on Rhizoctonia crown and root rot in glyphosate-resistant sugarbeets. She was also involved in projects that evaluated winter annual weeds as hosts for soybean cyst nematode in Michigan. In May of 2010, Kelly began her PhD in weed science with Dr. Larry Steckel at the University of Tennessee. She received the University of Tennessee J. Wallace and Katie Dean Multi-Year Fellowship for her accomplishments to date. Her dissertation research focused on glyphosateresistant giant ragweed biology and competition in cotton and also evaluated potential control options. Kelly was responsible for several other research projects that evaluated the effect of glufosinate applications to WideStrike cotton, confirmation of glyphosate-resistant goosegrass in Tennessee, and 2,4-D drift in cotton. Since 2008, Kelly has four published peer reviewed journal publications, with several more expected to come from her dissertation research. She also has been an author on 18 non-referred publications, 18 abstracts, and has spoken at dozens of field days and extension meetings. Kelly has presented at numerous professional meetings including Beltwide Cotton Conference, Michigan State CSS/Horticulture Symposium, WSSA, NCWSS, and SWSS where she has won eight awards for poster and paper presentations. She also has won several awards at the NCWSS and SWSS weed contests, including 1st place overall individual at the 2012 SWSS weeds contest. Kelly completed her PhD in 2012 and started a job with DuPont Crop Protection as the field development representative for Indiana and Kentucky.

### **2013 Distinguished Service Award from Industry- Renee Keese**



Renee received a B.S. degree in Horticulture from Clemson University, a Master's degree in Agronomy and Ph.D. in Plant Physiology, also from Clemson. She began working in the ornamentals business at the age of 10 in a family greenhouse operation. Upon graduation, and after a 12 year stint at Clemson running research labs, she worked for Dow AgroSciences and then Syngenta Crop Protection as a discovery or field R&D Scientist. Currently Renee is Biology Project Leader – Turf & Ornamentals, for BASF Corporation in Research Triangle Park, NC. In her current position she helps develop herbicides and fungicides for the turfgrass and ornamentals markets.

Dr. Keese first attended SWSS in 1992. She is a past student paper competition winner and is a frequent presenter. Over the years she has served the society as section chair on several occasions, has served on the Young Weed Scientist Award Committee and frequently judges the student paper contest. At the 2011 Puerto Rico meeting Renee organized the industry-sponsored Southern Hospitality and Tradeshow, and has organized coffee breaks and other hospitality events for SWSS. Currently she is serving on the SWSS

Endowment Board. Renee is also a member of the Northeastern Weed Science Society (served as president), the Weed Science Society of America, the American Phytopathological Society, the Crop Science Society of America and NAADA (National Agriculture Alumni and Development Association).

Renee resides in Cary, NC and has been married to her husband Larry for 30 years. They have a son in Ft. Lauderdale, FL who is a landscape architect and alum of Purdue University.

### **2013 Distinguished Service Award from Academia Donn Shilling**



Donn G. Shilling received his B.S. degree in Agronomy from Virginia Polytechnic Institute and State University and his M.S. in Plant Physiology from the same university. He received his Ph.D. in Crop Science from North Carolina State University in 1983. From 1983 to 1986, Dr. Shilling worked as a Senior Research Biologist for Monsanto Co. In this position he was responsible for the development of methods used to evaluate natural products as herbicides. He also managed herbicide evaluation and development. He accepted the position of assistant professor at the University of Florida in 1986 with research and teaching responsibility. He was promoted to full Professor in 1994.

Dr. Shilling's research involves studying fundamental and applied aspects of chemical and physiological factors affecting herbicides and weedy plant species. He has also focused on the management of invasive and perennial plants and land restoration. Dr. Shilling had an active graduate and undergraduate education program. He was responsible for teaching both undergraduate and graduate courses. As a consultant, he has worked with several organizations on various issues related to Weed Science, pesticides, the environment.

From 1998 to 2004, Dr. Shilling was the Director for the University of Florida's West Florida Research and Education Center and the Mid-Florida Research and Education Center. These centers support research, teaching and extension programs relevant to the state. In January, 2004 Dr. Shilling became the Department Head of Crop and Soil Science at the University of Georgia. This department has teaching, research and extension programs at three locations in agronomic crop and turf grass management and improvement; soil, environment and water sciences; and genetics and molecular biology.

## Position Announcements

Assistant Professor SCSC TAMU

04-24-2013

Position Title Assistant Professor

Hiring Unit Soil & Crop Sciences Department

NOV Number 06878

Job Type Full-Time

Salary Commensurate

Pay Basis Monthly

Budgeted? Budgeted - with benefits

Position open to internal candidates only? No

Location College Station/Bryan

**Major/Essential Duties of Job** The Department of Soil and Crop Sciences ([soilcrop.tamu.edu](http://soilcrop.tamu.edu)) at Texas A&M University ([www.tamu.edu](http://www.tamu.edu)) invites application for a 10-month, tenure-track position as Assistant Professor of Weed Science. The position is split 50% teaching and 50% research, and will provide leadership in research and teaching in weed science with major emphasis on 1) biology, ecology, management, distribution and mechanisms of herbicide-resistant weeds, 2) chemical and spatial crop-weed interactions, 3) plant-herbicide interactions, 4) cultural and chemical control programs for specific crops and cropping systems, and 5) weed population shifts with emphasis on invasive species.

A major responsibility of this position is to develop an extramurally-funded, internationally-recognized research program in weed science in diverse cropping systems particularly as they relate to herbicide-resistance technology and herbicide-resistant weeds. Teaching responsibilities will include a graduate level Weed Biology and Ecology course and/ or Mode of Action and Environmental Fate of Herbicides along with direction of the undergraduate course in Weed Ecology and Management. Direction and mentoring of graduate students and postdoctoral scientists is an important component of this position. The incumbent will be expected to develop strong cooperative relationships with others within the department, Texas A&M AgriLife Research, the College of Agriculture and Life Sciences, and other state and national agencies and universities.

### Occasional Duties

**Required Education:** Ph.D. in in Plant Sciences, Weed Science or closely related field by time of appointment

**Preferred Education:**

**Required Experience:** Experience in fundamental and applied research; ability to compile competitive grant applications and a demonstrated ability to publish in top-tier scientific journals. Ability to write grant proposals to secure external funding. Evidence of publishing in peer-reviewed journals.

Participation in professional societies.

**Preferred Experience:** Experience working in effective interdisciplinary research teams and a demonstrated ability for quality teaching and graduate student mentoring are preferred. Desired qualifications include a background in plant ecosystems and/or cropping systems with experience in weed biology, chemistry, ecology, physiology, or ecophysiology.

**Required licenses, certifications, or registrations:** None

Required special knowledge, abilities, and skills: Excellent oral, written, and electronic communication skills. Ability to effectively use personal computer to communicate, prepare proposals to include cost information on spread sheet as applicable, and provide reports of activities. Ability to effectively communicate with faculty students and staff. Ability to multi task and work cooperatively with others.

Preferred special knowledge, abilities, and skills:

Other requirements or other factors: The position will be available September 1, 2013 or upon completion of the selection process. The deadline for application is July 8, 2013 or until a suitable candidate is identified.

Please provide names, physical addresses, email addresses, and phone numbers of three references.

Documents associated with this posting Cover Letter - required

Other Documents

Transcript - required

C.V. - required

List of References - required

Comments to Applicants Employment is contingent upon the agency's verification of credentials and/or other information required by agency procedures, including the completion of a criminal history check.

Finalists may be required to furnish a copy of official transcript documenting degree conferred.

Texas law requires all males 18-25 show proof of compliance with federal Selective Service law to be eligible for employment.

Does this position accept online applications? Yes

Quicklink for Posting [greatjobs.tamu.edu/applicants/Central?quickFind=188972](http://greatjobs.tamu.edu/applicants/Central?quickFind=188972)

Security-Sensitive Designation All positions are security-sensitive. Applicants are subject to a criminal history investigation, and employment is contingent upon the agency's verification of credentials and/or other information required by agency procedures, including the completion of the criminal history check.

EEO Statement Equal Opportunity Employer

## SWSS WEED CONTEST

*BASF Corporation will be hosting the 34th Annual Southern Weed Science Society Weed Contest on Wednesday, August 7th at the BASF Research Farm in Holly Spring, NC. While the deadline for team entry has already passed there is still time for individuals to register for this event. To register or to get more information please visit the web address below:*

<https://www.signup4.net/Public/ap.aspx?EID=SWSS10E&TID=7NvPZUg%2bCKjekl7cooRaRw%3d%3d>

*You may also contact Tom Eubank, Chairman of the SWSS Weed Contest, at 662-686-3232 or [teubank@drec.msstate.edu](mailto:teubank@drec.msstate.edu) for additional information.*

**BASF Research Farm, 7308 Rouse Rd., Holly Springs, NC, 27540**

**Primary contact: Tom Holt [thomas.holt@basf.com](mailto:thomas.holt@basf.com)**

**August 6-7, 2013**

### **RULES, REGULATIONS, AND GUIDELINES**

#### **Purpose:**

The purpose of the Southern Weed Contest is to provide an educational experience from which undergraduate and graduate students in Southern Universities can broaden their applied skills in Weed Science. The contest provides an opportunity for Weed Science students be exposed to weed scientists from other universities and industry, apply what they have learned using a contest to measure their capabilities, as well as to socialize. It is hopeful that the contest will increase the visibility of Weed Science and intensify the interest level of those participating in the discipline of Weed Science.

#### **Eligibility:**

Any undergraduate or graduate student currently enrolled and pursuing a B.S., M.S., or Ph.D. degree is eligible to participate. Each graduate team will consist of three or four members, composed of (a) graduate, (b) undergraduate, or (c) a combination of graduate and undergraduate students. If undergraduates are part of a graduate team, those students are subject to the same guidelines as the graduate students. If a university does not have sufficient students for a team, up to two students may enter as individuals. Universities are allowed to enter multiple teams. All students will compete using the same contest material. A team may also bring three alternates. Alternate scores will only count toward individual awards. Team scores will be determined from averaging the individual's scores from each team member; unless a three-person team is entered. Then the three highest individuals will be averaged. A maximum of two coaches per team can attend the contest. Students will be allowed to participate in the contest five times as a team member or alternate; however, the student can only participate as a team member three times. Undergraduate participation will not count against the five-time rule. **All teams must enter the contest by May 1, 2013.** Names of team members and alternates must be provided by July 1, 2013. Primary contact: Tom Holt [thomas.holt@basf.com](mailto:thomas.holt@basf.com)



## Awards:

**TEAM**-The highest average team score from all events will determine the overall contest winner. A traveling "**Broken Hoe**" trophy will be presented to the overall winner and will rotate yearly. The first place team will receive a check for \$500 and each member and coach will receive an engraved plaque. The second and third place teams will receive checks of \$300 and \$200, respectively. Each will also receive an engraved plaque as described above.

**INDIVIDUAL**-The highest combined score from all events, except team sprayer calibration, will determine the overall-winning individual. The top 10 individuals will be recognized and awarded a plaque. The winning individual will receive a check for \$400. Individuals finishing second, third, fourth, and fifth will receive checks from \$250, \$100, \$75, and \$50, respectively. The high individual in Weed Identification, Crop Response to Herbicides, Sprayer Calibration Problem Set, and Crop/Weed Situation and Recommendations will be recognized and awarded a plaque. If at least four undergraduate students participate in the contest, the top three individual scores will be recognized with first, second, and third place plaques and checks for \$200, \$100, and \$50, respectively.

## Events:

**The contest will consist of four major events plus a mystery event. Inclement weather may delay the contest; however, it will continue as soon as conditions permit.**

While contestants are briefed on contest details during breakfast, coaches will be taken to the contest site to review all aspects of the contest. Coaches will review the six phases of the contest: weed identification, herbicide identification, sprayer calibration, math problem set, field problem solving, and mystery event. The coaches will then be taken to a neutral site for breakfast. No contact or electronic contact with contestants will be allowed until all events have been completed. A committee meeting will also be conducted, if needed, either the day before the contest or on the day of the contest.

### 1. **Weed Identification** (100 points)

From the contest weed identification list of 135 weeds and 122 weed seeds/tubers, the host will pick a total of 50 weeds and/or weed seeds to be identified. Plants will be grown in a field weed nursery or pots and may be in any stage of growth or development within reason. A complete weed identification list is provided with the correct spelling of each species (Table 1). Students will be responsible for the correct WSSA common and scientific name and spelling (Weed Science Composite List of Weeds - 2011). **Undergraduate students will only use the common names.** The fall preceding the contest the host should evaluate its weed seed supply and obtain additional seeds/tubers if needed so that an excellent representation of the weed species can be selected for identification. **It is important to utilize as many plant species as possible.** The plants will be grown in sufficient numbers so that adequate samples are available so that 30 to 70 contestants can have specimens for identification. The contestants will be allowed ample time to identify each specimen. The percentage of samples will range from 50 to 80% weeds and from 50 to 20% seeds. Uncontaminated weed seed and plant samples are essential for effective identification. **So make sure samples are pure.** The contestant's score will be figured as follows: 2 points for each correctly identified species (1 point for common name and 1 point for scientific name with 0.5 points for Genus and 0.5 points for species) x 50 = 100 points. **If names are not spelled correctly or capitalized correctly, they are wrong. Likewise,**

**answers must be in the correct column.** Teams will not be supplied weed seed for study, but rather rely on their own training resources. However, teams are encouraged to expand/improve their training resources through contacts with other weed scientists. This approach may better reflect individual and team preparation for the contest.

## 2. Calibration (100 points)

This event consists of two sections: an individual written test worth 50 points and a team sprayer calibration event worth 50 points.

The individual written test will cover problems and factual information about sprayer and seed treatment calibration of all types; the written portion will be scored as an individual and team event (50 points per person). The host should take particular care to insure all banded application and skip-row calibration problems are stated clearly. Individual team members and alternates will be given a maximum of 1 hour to complete the written exam. **The host will not provide calculators and students will be required to bring their own. Any make or model is acceptable, but programmable calculators are not allowed.** The three or four individual team member scores will be added and divided by the number of individuals on the team to give the number of points out of 50 for the team score.

In the team section, the host will provide a hands-on calibration activity that focuses on team, rather than individual performance. Students should have practical calibration knowledge for air blast sprayers, tractor sprayers, backpack sprayers, granular applicators, greenhouse spray chambers, etc. **Differences in time for the competition will count no more than 40% of the overall score. Accuracy of calibration is critical.**

To determine final team score for the calibration event, the number of points scored out of 50 obtained in the team event will be added to the average score of the three or four high team members from the individual calibration problems for a maximum possible of 100 points.

Reference material for the individual problems will be Chapter 23 of Applied Weed Science by Ross and Lembi (2009); Circular 1192 - Equipment and Calibration; Low-Pressure Sprayers, and Circular 1240 - Equipment and Calibration: Granular Applicators, both by Bode and Pearson (University of Illinois); Roth, L.O. and H.L. Fields, eds. 1991. Introduction to Agricultural Engineering: A Problem Solving Approach, Second Edition, New York: Chapman and Hall; Aerial Application Handbook for Applicators by Dennis K. Kuhlman, Kansas State University; Research Methods in Weed Science, 3rd ed. SWSS 1986; Physiology of Herbicide Action. M.D. Devine, S. O. Duke, and C. Fedtke, 1993; Herbicide Handbook. WSSA 9th ed. 2007, and various unit conversions.

## 3. Crop Response to Herbicides (100 points)

This is an area of extreme difficulty for the students. **Thus, the host must have available a sprinkler irrigation system so that residual herbicides will be activated and weeds and crops maintained in an active growth stage for postemergence treatments.** A list of possible crops and herbicides with rate and method of application are provided in Table 2. The test must contain at least 6 crops and 6 weeds and will be planted and treated with a wide range of preemergence and postemergence herbicides from the list. Each herbicide plot will contain a 1X rate of the unknown herbicide. It is suggested that the test be planted 4 to 5 weeks prior to the contest, with

postemergence herbicides being applied 10 to 14 days prior to the contest. Each contestant will be required to identify the unknown herbicides by WSSA-approved chemical family and common name by observation of crop and weed responses. Both names will be given equal credit; in other words missing family or common name will be half right. Put the letter for the correct family listed above, and follow it with the correctly spelled common name. For the aryloxyphenoxy or cyclohexane family, the host may choose the specific product. There should be from 10 to 15 plots. Herbicide plots may be duplicated and check plots can be utilized. It would be of great benefit to the students if they could be led back through the plots following the event. **Students will not be allowed to pull any portion of the plants in the plots. If plants are pulled, the student will lose the points for that plot.**

#### 4. **Crop/weed Situation and Recommendations** (100 points)

Contestants will be required within 15 minutes to determine and evaluate a crop/weed situation and recommend the most effective legal remedy to the problem. **Each contestant will have two field problems to solve.** Recommendations must comply with the label of each herbicide recommended. Students should give consideration to such factors as stage of growth, crop tolerance, climatological factors, agricultural spraying procedures, weed control, economics, and impact upon the environment. The host will determine the best answer considering all alternatives for a situation, although several possible answers may be correct. The latest Federal (Section 3) or State (Section 24C) labels of the product constitutes legal control. The event will be conducted as a "role-play" situation and the potential problem will be in one of the crops on the problem-solving sheet. Also, the potential herbicide and weed problem will involve only the listed herbicides and weeds on the predetermined problem-solving sheet. The contestant will be asked to assume the role of a chemical company representative, state extension specialist, or independent crop consultant when dealing with the farmer and scored as follows:

- 5 points - proper approach to farmer
- 20 points - understanding and solving problem
- 12.5 points - recommendations for this year's crop
- 12.5 points - recommendations for next year's crop

Each team will be divided at random into two groups in order to handle one of two different problem situations. Following completion of the first problem, the groups will switch problems and repeat the procedure. **Each participant will evaluate the same two problems.** Alternates and other individuals will be equally divided between the two groups. The assigned judge and farmer will independently score each participant from a predetermined scoring sheet with assigned points for each statement, compare scores, and adjust if necessary. **Prior to the contest, judges and farmers will be tested to insure that the scorers will give equivalent scores within each individual field problem.** Each field problem will be worth 50 points and to obtain the participants score, the two scores will be added for a maximum of 100 points.

#### 5. **Mystery Event** (15 to 20 points)

This team or individual event will be an agronomic related problem and the contestants will not be advised of the area to study prior to the contest. The mystery event will count toward the team score and individual scores.

Each phase of the contest will be scored equally (100 pts. each) except for the mystery event (15 or 20 pts) for a total of 415 or 420 points per team. Examples are:

A. All teams with four individuals.

Events											
		Field Problem				Calibration					
Super University	ID	Crop/Weed Response	1	2	Avg.	Team	Ind.	Myst.	Score	Ind.	Team Placing
John Doe	86	60	25	19	44	--	45	5	240	9	
Bill Smith	80	65	47	31	78	--	35	5	263	5	
Jane Doe	95	75	35	25	60	--	45	0	275	1	
Roy James	63	50	43	43	86	--	45	3	247	7	
Total	324.0	250.0	--	--	268	--	170	13			
Team Avg.	81.0	62.5	--	--	67	40	42.5	3.25			
Team											3
Total	296.25										
Alternates											
Pat Ray	80	60	31	20	51	--	45	5	241	8	
Jim Jones	65	45	27	18	45	--	50	0	205	20	

B. Mixed three and four individual teams (if teams with three individuals attend).

Events											
		Field Problem				Calibration					
Super University	ID	Crop/Weed Response	1	2	Avg.	Team	Ind.	Myst.	Score	Ind.	Team Placing
John Doe	--	--	--	--	--	--	--	--	240	9	
Bill Smith	80	65	47	31	78	--	35	5	263	5	
Jane Doe	95	75	35	25	60	--	45	0	275	1	
Roy James	63	50	43	43	86	--	45	3	247	7	
Total	238.0	190.0	--	--	224	--	125	8			
Team Avg.	79.33	63.33	--	--	74.6	40	41.67	2.67			
Team											3
Total	301.67										
Alternates											
Pat Ray	80	60	31	20	51	--	45	5	241	8	
Jim Jones	65	45	27	18	45	--	50	0	205	20	

Alternates and low individuals of four member teams will not be scored as part of a team, but can win individual prizes.

### **Contest Committee:**

All coaches and individuals within academia, research, and industry, as well as potential contest hosts are invited to serve on the committee. On the morning of the contest, prior to contestants entering the events, individuals from the host location and all committee members will review each event and last minute corrections will be made and be the authority for all questions relating to the contest. If questions arise that cannot be resolved through interpretation of the standing rules or cannot be resolved through communication with the committee chairman or members of the committee, the contest host has the authority to make the final decision in the best interest of the contest.

### **Expenses:**

Each university will provide its own transportation to and from the contest and cover all expenses incurred during travel. The host will provide meals the evening before and the day of the contest. The weed contest committee will provide the prize money and the plaques.

### **Location:**

The Southern Weed Contest will be held at any facility within the Southern Weed Science Region with the capability of providing all the designated events.

### **Dishonesty:**

All coaches are charged with ensuring that teams abide by rules of the contest, and that no team gains an unfair advantage. This includes, but is not limited to, cheating. Cheating is defined as a dishonest violation of rules as determined by the coaches attending the contest. A committee made up of all coaches attending the contest will deal with acts related to cheating. A team and/or individual that does not abide by the rules of the contest will be disqualified and will automatically receive last place at the contest. Teams are not allowed to visit contest site 30 days prior to contest without permission of host. **All contestants' cell phones, iPad's, or computers will be collected by team coaches and bagged by individual name when arriving at the contest site on the morning of the event.**

### **Score Sheets:**

The host will provide the original score sheets back to the coaches as soon as possible after the contest. Score sheets must be completed according to directions. **Answers that are not placed in the correct blank will be counted wrong.**

**Table 1. 2013 SWSS WEED CONTEST WEED LIST**

\*Highlighted names have been edited since first posting.

\*Contestants will not be penalized for incorrect spelling from original document

<b>Common name</b>	<b>Genus</b>	<b>Species</b>
velvetleaf	<i>Abutilon</i>	<i>theophrasti</i>
hophornbeam copperleaf	<i>Acalypha</i>	<i>ostriifolia</i>
bristly starbur	<i>Acanthospermum</i>	<i>hispidum</i>
northern jointvetch	<i>Aeschynomene</i>	<i>virginica</i>
wild garlic	<i>Allium</i>	<i>vineale</i>
<b>alligatorweed</b>	<b><i>Alternanthera</i></b>	<b><i>philoxeroides</i></b>
<b>prostrate pigweed</b>	<b><i>Amaranthus</i></b>	<b><i>blitoides</i></b>
<b>livid amaranth</b>	<b><i>Amaranthus</i></b>	<b><i>blitum</i></b>
Palmer amaranth	<i>Amaranthus</i>	<i>palmeri</i>
<b>redroot pigweed</b>	<b><i>Amaranthus</i></b>	<b><i>retroflexus</i></b>
<b>spiny amaranth</b>	<b><i>Amaranthus</i></b>	<b><i>spinosus</i></b>
<b>tall waterhemp</b>	<b><i>Amaranthus</i></b>	<b><i>tuberculatus</i></b>
common ragweed	<i>Ambrosia</i>	<i>artemisiifolia</i>
giant ragweed	<i>Ambrosia</i>	<i>trifida</i>
purple ammannia	<i>Ammannia</i>	<i>robusta</i>
broomsedge	<i>Andropogon</i>	<i>virginicus</i>
spurred anoda	<i>Anoda</i>	<i>crinata</i>
hemp dogbane	<i>Apocynum</i>	<i>cannabinum</i>
trumpetcreeper	<i>Campsis</i>	<i>radicans</i>
balloonvine	<i>Cardiospermum</i>	<i>halicacabum</i>
musk thistle	<i>Carduus</i>	<i>nutans</i>
smellmelon	<i>Cucumis</i>	<i>melo</i>
southern sandbur	<i>Cenchrus</i>	<i>echinatus</i>
<b>coontail</b>	<b><i>Ceratophyllum</i></b>	<b><i>demersum</i></b>
partridgepea	<i>Chamaecrista</i>	<i>fasciculata</i>
prostrate spurge	<i>Chamaesyce</i>	<i>humistrata</i>
spotted spurge	<i>Chamaesyce</i>	<i>maculata</i>
nodding spurge	<i>Chamaesyce</i>	<i>nutans</i>

common lambsquarters	<i>Chenopodium</i>	<i>album</i>
bull thistle	<i>Cirsium</i>	<i>vulgare</i>
Benghal dayflower	<i>Commelina</i>	<i>benghalensis</i>

spreading dayflower	<i>Commelina</i>	<i>diffusa</i>
field bindweed	<i>Convolvulus</i>	<i>arvensis</i>
horseweed	<i>Conyza</i>	<i>canadensis</i>
showy crotalaria	<i>Crotalaria</i>	<i>spectabilis</i>
woolly croton	<i>Croton</i>	<i>capitatus</i>
tropic croton	<i>Croton</i>	<i>glandulosus var. septentrionalis</i>
field dodder	<i>Cuscuta</i>	<i>pentagona</i>
honeyvine swallowwort	<i>Cynanchum</i>	<i>laeve</i>
bermudagrass	<i>Cynodon</i>	<i>dactylon</i>
yellow nutsedge	<i>Cyperus</i>	<i>esculentus</i>
purple nutsedge	<i>Cyperus</i>	<i>rotundus</i>
rice flatsedge	<i>Cyperus</i>	<i>iria</i>
crowfootgrass	<i>Dactyloctenium</i>	<i>aegyptium</i>
jimsonweed	<i>Datura</i>	<i>stramonium</i>
Florida beggarweed	<i>Desmodium</i>	<i>tortuosum</i>
<b>smooth crabgrass</b>	<b><i>Digitaria</i></b>	<b><i>ischaemum</i></b>
large crabgrass	<i>Digitaria</i>	<i>sanguinalis</i>
Virginia buttonweed	<i>Diodia</i>	<i>virginiana</i>
junglerice	<i>Echinochloa</i>	<i>colona</i>
barnyardgrass	<i>Echinochloa</i>	<i>crus-galli</i>
<b>eclipta</b>	<b><i>Eclipta</i></b>	<b><i>prostrata</i></b>
<b>waterhyacinth</b>	<b><i>Eichhornia</i></b>	<b><i>crassipes</i></b>
<b>Brazilian egeria</b>	<b><i>Egeria</i></b>	<b><i>densa</i></b>
goosegrass	<i>Eleusine</i>	<i>indica</i>
southwestern cupgrass	<i>Eriochloa</i>	<i>acuminata</i>
wild poinsettia	<i>Euphorbia</i>	<i>heterophylla</i>
dogfennel	<i>Eupatorium</i>	<i>capillifolium</i>

mulberryweed	<i>Fatoua</i>	<i>villosa</i>
Carolina geranium	<i>Geranium</i>	<i>carolinianum</i>
ground ivy	<i>Glechoma</i>	<i>hederacea</i>
common sunflower	<i>Helianthus</i>	<i>annuus</i>
<b>ducksalad</b>	<b><i>Heteranthera</i></b>	<b><i>limosa</i></b>
<b>roundleaf mudplantain</b>	<b><i>Heteranthera</i></b>	<b><i>reniformis</i></b>
<b>hydrilla</b>	<b><i>Hydrilla</i></b>	<b><i>verticillata</i></b>
cogongrass	<i>Imperata</i>	<i>cylindrica</i>

red morningglory	<i>Ipomoea</i>	<i>coccinea</i>
ivyleaf morningglory	<i>Ipomoea</i>	<i>hederacea</i>
pitted morningglory	<i>Ipomoea</i>	<i>lacunosa</i>
bigroot morningglory	<i>Ipomoea</i>	<i>pandurata</i>
tall morningglory	<i>Ipomoea</i>	<i>purpurea</i>
cypressvine morningglory	<i>Ipomoea</i>	<i>quamoclit</i>
purple moonflower	<i>Ipomoea</i>	<i>turbinata</i>
palmleaf morningglory	<i>Ipomoea</i>	<i>wrightii</i>
smallflower morningglory	<i>Jacquemontia</i>	<i>tamnifolia</i>
<b>green kyllinga</b>	<b><i>Kyllinga</i></b>	<b><i>brevifolia</i></b>
henbit	<i>Lamium</i>	<i>amplexicaule</i>
<b>common duckweed</b>	<b><i>Lemna</i></b>	<b><i>minor</i></b>
Amazon sprangletop	<i>Leptochloa</i>	<i>panicoides</i>
bearded sprangletop	<i>Leptochloa</i>	<i>fusca var. fascicularis</i>
sericea lespedeza	<i>Lespedeza</i>	<i>cuneata</i>
tall fescue	<i>Lolium</i>	<i>arundinaceum</i>
Italian ryegrass	<i>Lolium</i>	<i>perenne ssp. multiflorum</i>
<b>Japanese honeysuckle</b>	<b><i>Lonicera</i></b>	<b><i>japonica</i></b>
common mallow	<i>Malva</i>	<i>neglecta</i>
pineapple-weed	<i>Matricaria</i>	<i>discoidea</i>
redweed	<i>Melochia</i>	<i>corchorifolia</i>
carpetweed	<i>Mollugo</i>	<i>verticillata</i>



cultleaf evening-primrose	<i>Oenothera</i>	<i>laciniata</i>
red rice	<i>Oryza</i>	<i>sativa</i>
yellow woodsorrel	<i>Oxalis</i>	<i>stricta</i>
fall panicum	<i>Panicum</i>	<i>dichotomiflorum</i>
torpedograss	<i>Panicum</i>	<i>repens</i>
dallisgrass	<i>Paspalum</i>	<i>dilatatum</i>
cutleaf groundcherry	<i>Physalis</i>	<i>angulata</i>
clammy groundcherry	<i>Physalis</i>	<i>heterophylla</i>
common pokeweed	<i>Phytolacca</i>	<i>americana</i>
blackseed plantain	<i>Plantago</i>	<i>rugelii</i>
buckhorn plantain	<i>Plantago</i>	<i>lanceolata</i>
annual bluegrass	<i>Poa</i>	<i>annua</i>
prostrate knotweed	<i>Polygonum</i>	<i>aviculare</i>

Pennsylvania smartweed	<i>Polygonum</i>	<i>pensylvanicum</i>
ladysthumb	<i>Polygonum</i>	<i>persicaria</i>
common purslane	<i>Portulaca</i>	<i>oleracea</i>
devil's-claw	<i>Proboscidea</i>	<i>louisianica</i>
kudzu	<i>Pueraria</i>	<i>montana var. lobata</i>
wild radish	<i>Raphanus</i>	<i>raphanistrum</i>
Florida pusley	<i>Richardia</i>	<i>scabra</i>
<b>broadleaf dock</b>	<b><i>Rumex</i></b>	<b><i>obtusifolius</i></b>
curly dock	<i>Rumex</i>	<i>crispus</i>
sicklepod	<i>Senna</i>	<i>obtusifolia</i>
coffee senna	<i>Senna</i>	<i>occidentalis</i>
hemp sesbania	<i>Sesbania</i>	<i>herbacea</i>
giant foxtail	<i>Setaria</i>	<i>faberi</i>
yellow foxtail	<i>Setaria</i>	<i>glauca</i>
green foxtail	<i>Setaria</i>	<i>viridis</i>
arrowleaf sida	<i>Sida</i>	<i>rhombofolia</i>
prickly sida	<i>Sida</i>	<i>spinosa</i>

wild mustard	<i>Sinapis</i>	<i>arvensis</i>
horsenettle	<i>Solanum</i>	<i>carolinense</i>
silverleaf nightshade	<i>Solanum</i>	<i>elaeagnifolium</i>
eastern black nightshade	<i>Solanum</i>	<i>ptychanthum</i>
lawn burweed	<i>Soliva</i>	<i>sessilis</i>
johnsongrass	<i>Sorghum</i>	<i>halepense</i>
<b>giant duckweed</b>	<b><i>Spirodela</i></b>	<b><i>polyrhiza</i></b>
Florida betony	<i>Stachys</i>	<i>floridana</i>
common chickweed	<i>Stellaria</i>	<i>media</i>
dandelion	<i>Taraxacum</i>	<i>officinale</i>
puncturevine	<i>Tribulus</i>	<i>terrestris</i>
broadleaf signalgrass	<i>Urochloa</i>	<i>platyphylla</i>
Texas millet	<i>Urochloa</i>	<i>texana</i>
common mullein	<i>Verbascum</i>	<i>thapsus</i>
common vetch	<i>Vicia</i>	<i>sativa</i>
common cocklebur	<i>Xanthium</i>	<i>strumarium</i>

\* **Bold -- plants only**

**Table 2. 2013 SOUTHERN WEED CONTEST CROP AND WEED RESPONSE TO HERBICIDES**

<u>Crops*</u>		<u>Weeds</u>	
1. cotton	6. southern pea	1. broadleaf signalgrass	7. Palmer amaranth
2. field corn	7. soybean	2. ivyleaf morningglory	8. pitted morningglory
3. grain sorghum	8. sunflower	3. giant foxtail	9. prickly sida
4. peanut	9. squash/zucchini	4. hemp sesbania	10. seedling johnsongrass
5. rice	10. sweet potato	5. large crabgrass	11. velvetleaf
		6. barnyardgrass	12. sicklepod

\*At least 6 crops and 6 weeds must be included

<b>Potential Herbicide Families and Herbicides</b>	
<b>Amide</b> 1. propanil (4.0 lb ai/A POST)	<b>Nitrile</b> 16. bromoxynil (0.25 to 0.5 lb ai/A POST)
<b>Pyrimidinyl Benzoate</b> 2. pyriothiac (0.0475 lb ai/A PRE) 3. pyriothiac (0.064 lb ai/A POST) + NIS	<b>Phenoxy</b> 17. 2,4-D (0.375 lb ae/A POST) 18. 2,4-DB (0.25 lb ae/A POST)
<b>Benzoic acid</b> 4. dicamba (0.25 lb ai/A POST)	<b>N-Phenylphthalimide</b> 19. flumioxazin (0.096 lb ai/A PRE)
<b>Benzothiadiazinone</b> 5. bentazon (1.0 lb ai/A POST) + COC	<b>Phosphinic acid</b> 20. glufosinate (0.4 lb ai/A POST)
<b>Bipyridylum</b> 6. paraquat (0.5 lb ai/A POST) + NIS	<b>Pyrimidinedione</b> 21. saflufenacil (0.44 lb ai/A POST) + MSO
<b>Chloroacetamide</b> 7. S-metolachlor (1.25 lb ai/A PRE)	<b>Pyridine carboxylic acid</b> 22. triclopyr (0.38 lb ae/A POST) + NIS
<b>Cyclohexanedione</b> 8. sethoxydim (0.187 lb ai/A POST) + COC	<b>Quinoline carboxylic acid</b> 23. quinclorac (0.75 lb ai/A POST) + MSO
<b>Dinitroaniline</b> 9. pendimethalin (1.0 lb ai/A PRE)	<b>Substituted urea</b> 24. diuron (0.5 lb ai/A PRE) 25. fluometuron (1.0 lb ai/A PRE)
<b>Diphenylether</b> 10. fomesafen (0.25 lb ai/A PRE)	<b>Pyridine</b> 26. dithiopyr (0.5 lb ai/A PRE)
<b>Glycine</b> 11. glyphosate (0.77 lb ae/A POST) + NIS	<b>Sulfonylurea</b> 27. halosulfuron (0.031 lb ai/A POST) + NIS 28. chlorimuron (0.008 lb ai/A POST) + COC 29. nicosulfuron (0.031 lb ai/A POST) + COC 30. trifloxysulfuron (0.004 lb ai/A POST) + NIS
<b>Imidazolinone</b> 12. imazethapyr (0.063 lb ai/A POST) + NIS 13. imazamox (.047 to .094 lb ai/A POST) + NIS	<b>Triazine</b> 31. atrazine (2.0 lb ai/A PRE) 32. metribuzin (0.375 lb ai/A PRE)
<b>Isoxazolidinone</b> 14. clomazone (0.375 lb ai/A PRE)	<b>Triazolinones</b> 33. sulfentrazone (0.125 lb ai/A PRE) 34. carfentrazone (0.023 lb ai/A POST) + COC
<b>Isoxazoline</b> 15. pyroxasulfone (0.106 lb ai/A PRE)	<b>Triketone</b> 35. mesotrione (0.094 lb ai/A POST) + COC 36. tembotrione (0.082 lb ai/A POST) + MSO

(continued from chart on previous page)

\*\*COC = crop oil concentrate at 1% (v/v); NIS = nonionic surfactant at 0.25% (v/v); MSO = methylated seed oil at 1% v/v. The soil types will range from a sandy loam to loamy sand (1.0-1.2% O.M., CEC = 8-13, pH 5.8 – 6.3).

## **PROBLEM SOLVING AND RECOMMENDATIONS**

### **Potential Crops:**

Cotton  
Field corn  
Grain sorghum  
Pumpkin  
Soybean  
Sunflower  
Tomatoes  
Turf (bermudagrass, zoysia, and bentgrass)

### **Weeds:**

Any weed from the 2013 weed identification list.

### **Herbicides:**

Any herbicide labeled in the crops listed above.

### **Scoring:**

The 'farmer' and a judge will independently score each contestant from predetermined scoring sheet.

### **Role:**

Each contestant will be assuming the role of a chemical company representative, independent crop consultant, or state extension specialist.