



WSSA

WEED SCIENCE SOCIETY OF AMERICA

Volume 43, No. 4
October, 2015

Newsletter



PRESIDENT'S MESSAGE

Another summer growing season has passed and fall crop harvest is winding down. It's now time for farmers to reassess last year's weed control programs and start planning for next year. Planning is well under way for the 2016 joint meeting of WSSA and SWSS in San Juan, Puerto Rico next February. Program co-chairs Kevin

Bradley and Peter Dotray, along with Joyce Lancaster and Tony Ballard, have been busy organizing a very interesting and busy meeting.

For those that are planning to come early, there is a preconference tour on Sunday afternoon to the El Yunque Rainforest on the eastern side of the island that will explore the flora and fauna of the only tropical rainforest in the U.S. National Forest System. Guests will also have an opportunity to sign up for tours and visits to historic old San Juan and a local beach during the meetings.

The meeting will get started with the general session and WSSA awards presentations on Monday afternoon, followed by the WSSA social. The general session will include local speakers who will focus on the history, agriculture, and ecology of Puerto Rico. These presentations should help us all become more familiar with our island host.

Oral paper and poster submissions are up substantially from past years so it will be a busy meeting with more concurrent sessions than normal. The program will also include four diverse symposia. The first symposium will focus on "21st Century Challenges in Aquatic Weed Management" and is being organized by John Madsen. The second symposium is titled "The Intersection of Agricultural and Wild Areas: Management of the Non-Crop Vegetation as Habitat for Pollinator, Beneficial and Iconic Species" with coordination by Michael Horak. The third symposium is being organized by William Bruckart on the topic of "Use of Endemic Plant Diseases and Insect Pests for Biologic Control of Invasive Weeds." The final symposium will be on "Weed Control in 2050: Imagining Future Strategies and the Knowledge Needed to Achieve Them" and is being spearheaded by James Westwood. The meeting will conclude at noon on Thursday. Hopefully,

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PHOTO CONTEST 2016 GUIDELINES

(details inside on page 4)

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many of you can extend your stay and have a chance to check out the beaches and sites of Puerto Rico.

There are a number of other activities that the WSSA board and our members have been working on the last several months. The herbicide resistance education committee has developed a plan and is working on developing a "Herbicide Resistance Information" portal to be located on the WSSA website. Hopefully, the new website page will be up and going by the end of the year. Thanks to Michael Horak for moving the process forward.

In conjunction with the herbicide resistance website, the herbicide resistance education committee also recommended that WSSA endorse the "Take Action" herbicide resistance educational program and materials. Take Action is an educational project involving a number of Extension Weed Specialists from the North Central and Southern regions to develop herbicide resistance management educational materials (<http://takeactiononweeds.com/>). The committee felt that there was no need for WSSA to duplicate the type of information that had already been produced by many of our members. The WSSA board agreed and recently approved endorsement of the Take Action program and materials.

WSSA was recently invited to participate in an upcoming meeting of agricultural scientific societies to develop a unified message regarding federal funding priorities. The meeting is being coordinated by the Charles Valentine Riley Memorial Foundation at the American Association for the Advancement of Sciences headquarters in Washington, DC. WSSA Vice-President Janis McFarland will be representing WSSA at the meeting.

WSSA was also invited to participate in the development of a Natural Resource Council sponsored workshop on recruitment of students into agricultural sciences. The workshop apparently is an outgrowth of the Coalition of Societies for Agriculture Workforce that David Shaw was involved with while he was President of WSSA. David has agreed to participate on behalf of WSSA on the steering committee that is planning the workshop.

Dr. Shaw also will be presenting an educational seminar on Herbicide Resistant Weed Management as part of the National Coalition for Food and Agricultural Research (NC-FAR) Hill Seminar Series on December 4. The goal of the

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WSSA FUTURE MEETING SITES AND DATES

2016

**56th Joint Annual Meeting
SWSS and WSSA**

San Juan Sheraton

San Juan, Puerto Rico

Kevin Bradley, Co-Chair

Email: bradleyke@missouri.edu

Phone: 573-882-4039

Peter Dotray, Co-Chair

2017

Tucson, Arizona

**WSSA HOME PAGE
ACCESSED AT:**

www.wssa.net

THINK NEWSLETTER

**Deadline for January issue
December 1, 2015**

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Regarding: Reviewer questions

WSSA NEWSLETTER

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PRESIDENT'S MESSAGE CONTINUED from pg 2

seminar series is to inform Capitol Hill staff and other policy stakeholders about the value of public investment in food and agricultural research featuring leading edge researchers on topics of high interest.

David's participation in the seminar series was coordinated by Lee Van Wychen, just one of the many things that Lee does on our behalf as the WSSA Science Policy Director. Please refer to the Washington Report elsewhere in the newsletter to get up to date on Lee's other activities and the hot topics in DC the last several months.

Joyce Lancaster and the WSSA board have been in the process of site selection for the annual meetings in 2018 and 2019. The board has approved having the 2018 meeting at the Crystal Gateway Marriot in Arlington, Virginia in 2018 and the Sheraton New Orleans in New Orleans, Louisiana for 2019 contingent on finalizing satisfactory contracts from the respective hotels.

Finally, WSSA will be sending out an RFP in the next several weeks to solicit proposals for future executive secretary and business services in advance of Joyce's retirement in 2017. This will be done in conjunction with several of our affiliated societies who will also be searching for a replacement for Phil Banks in a similar capacity. Interested companies or individuals can submit proposals for any or all of the societies included in the RFP. This will be a very important decision for the future of our societies. Kevin Bradley has led this charge and worked with leaders of the other societies, Joyce, and Phil to develop the RFP and start the process. Please forward any prospective organizations or individuals that you think might be interested in providing these services.

Dallas Peterson
WSSA President

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Elizabeth Simpson

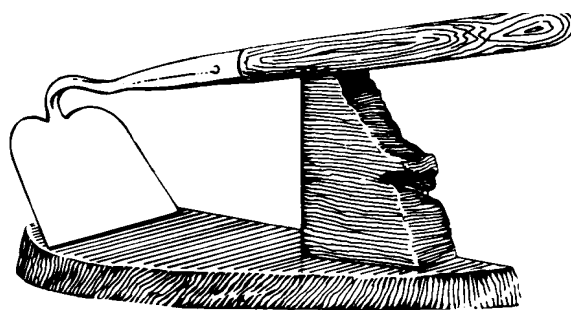
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**The California Weed Science Society
68th Annual Conference**

“Addressing Diverse and Dynamic Challenges in Weed Management”

January 13-15, 2016

**Hyatt Regency- Sacramento
1209 L Street
Sacramento, CA 94814**

Tel: 916.443.1234 Fax: 916.321.3779

www.cwss.org

Featured Sessions Include:

- Experts in the general sessions including experts in herbicide injury
- Student Oral Paper and Poster contests
- New research and updates on weed biology and management in CA agricultural crops and orchards, turf & ornamentals, roadside & industrial sites, forestry, range & natural areas, and aquatic sites.
- Laws and Regulations Sessions

DPR CEU's have been requested

To register online and view hotel reservation details, visit www.cwss.org or call (831) 442-0883 for a program agenda and registration form.

THINK NEWSLETTER

**Deadline for January issue
December 1, 2013**

WSSA PHOTO CONTEST

Deadline: January 29, 2016

Subcommittee Chair:

Michael DeFelice

michael.defelice@pioneer.com

7100 NW 62nd Ave., Johnston, IA 50131-1150

(515) 535-6705

This contest is open only to members of the WSSA and the subject of the photo must be related to weed science. There are three divisions: 1) Flowers and other reproductive structures; 2) Vegetative growth and structures; and 3) Weeds in the Landscape. Judges consider factors such as subject, composition, technical aspects, and overall appeal.

Attention photographers! Please read the following rules regarding photo contest entries and evaluations below:

General Rules

1. Contest is open only to WSSA members.
2. All images must be submitted in digital format (see specifics below)
3. Subject of the photo should meet the criteria specified for one of the three divisions.
4. Each contestant can enter a maximum of 3 images per division but can win only one prize per division.
5. Prizes in each division are \$150 for the winner and \$75 for the runner-up.
6. In some cases, an overall winner may be selected and presented the "WSSA Outstanding Photographer Award," which includes a \$300 prize.
7. Members of the Photo Contest Subcommittee will judge the contest.
8. Judges will consider factors such as subject, composition, lighting, technical aspects, and overall appeal.
9. E-MAIL IMAGES TO THE SUBCOMMITTEE CHAIR BY **JANUARY 29. Note: We are not accepting submissions at the meeting this year. Images must be emailed to the sub-committee chair by end of business, Friday, January 29, 2016.**

Photo File Submission

1. Photo files must be submitted by email as an attachment.
2. Digital files must be a minimum of 2120 x 1416 pixel resolution or at least 3 megapixels for consideration.
3. Digital media should be labeled with your name and address and the PC file format, which must be in .jpg, .png format. Convert your files before submission. Other types will not be judged. Name your files to match all or a portion of your image title. A separate text file in Microsoft Word *.doc or ASCII text *.txt format must be included giving the following information for each photo submitted.

Water Drops on Palmleaf Morningglory

Circa 1998

Raleigh, NC

Shawn Askew

Division (Flowers, Vegetative or Landscape)

Flowers and Fruit Division

Photo submissions in this division should have flowers, flowering inflorescences, fruit or seeds as the main subject of the photo. This also includes close-up (macro) photos of floral or fruit structures.

Vegetative Structures Division

Photo submissions in this division should have leaves, stems, roots (rhizomes and other vegetative reproductive structures are also included in this division) and other vegetative structures as the main subject of the photo. This also includes close-up (macro) photos of any part of a weed that is not floral or fruit.

Weeds in the Landscape Division

Photo submissions in this division can be of any weed related subject that does not fit in the first two categories. Examples include – but are not limited to – vines growing over fences or crops, a cluster or population of weeds in a field, roadside, or pond, herbicide symptoms on weeds or crops, or the effects of management practices on weeds or the environment.

Helpful tips and judging criteria

1. Photos should not include identifiable people. Photos with people featured prominently and identifiable as part of the photo subject will automatically be disqualified from the contest.
2. Photos should not include insects unless they are incidental in the background. Photos with insects featured prominently as part of the photo subject will automatically be disqualified from the contest.
3. The judges will be looking for creativity and technical excellence when selecting the photographs. Aspects of creativity include composition, lighting, use of color and contrast, and unusual subjects or viewpoints. Technical aspects include focus, sharpness, appropriate depth-of-field, exposure, and the presence of distracting elements in the photo.

Northeastern Plant, Pest, and Soils Conference

January 3–7, 2016 • Philadelphia, Pennsylvania

The Northeastern Plant, Pest, and Soils Conference will be held at the Sheraton Society Hills Hotel, One Dock Street, Philadelphia, from January 3rd to 7th, 2016. The conference will be hosted by the Northeastern Weed Science Society and will mark the first joint-meeting with peer societies; the Eastern Branch of the Entomological Society of America, Northeastern Division of the American Phytopathological Society, American Society of Horticultural Science-Northeast Region, and the Northeast Branch of the American Society of Agronomy, Crop Science Society of America, and the Soil Science Society of America. The participating societies will not hold separate meetings in 2016. Various committee meetings are expected to occur on January 3rd along with a Statistics Workshop. January 4th morning will feature a symposium on biological control of weeds, two concurrent sessions in Entomology, two additional Statistics Workshop followed by a Roundtable Extension/Industry workshop in the afternoon. This afternoon workshop will bring together specialists and scientists representing academia and industry to discuss emerging and current pest and other cultural issues related to various commodities in the region. Informal roundtable discussions during subsequent days are expected to bring researchers and educators who share common goals from a multidisciplinary perspective as a follow up to this workshop.

An opening ceremony is planned for Monday late afternoon to be followed by a mixer. A cross-disciplinary "Quiz-Bowl" will take place that evening. The quiz-bowl will be an informative yet fun-filled activity that brings together students from different disciplines who may compete as teams represented by various Universities.

Graduate students will be offered venues to present their research in competitive oral and poster presentations, and also to enhance career placement skills through an exclusive workshop. Breakout sessions will consume bulk of the remaining days with the goal of bringing together researchers to form synergistic partnerships and foster interdisciplinary activities. Most sessions will be arranged based on broad, multi-disciplinary areas and are expected to integrate research from all relevant disciplines. The Linnaean games will be scheduled for Tuesday evening.

Concurrent sessions are expected to include Agronomic Crops; Soils; Physiology, Molecular Biology, & Toxicology; Environmental Quality; Biology, Ecology, Taxonomy, & Evolution; Vegetable Crops; Fruit Crops; Turf & Ornamentals; Vegetation Management & Restoration; Invasive Species; Forestry Pests; Medical and Urban Pests; Insect Detection, Evaluation, and Prediction; Organic Production Systems; Beneficial Plants and Insects; and Biological Control.

Various receptions scheduled for Tuesday and Wednesday evenings will also provide opportunities for spirited discussions among peers.

www.neppsc.org

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THINK NEWSLETTER

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WASHINGTON REPORT

by Lee Van Wychen, Director of Science Policy

COURT STOPS NATIONWIDE IMPLEMENTATION OF WOTUS EXPANSION RULE

An Ohio federal appeals court ordered a nationwide hold on the Waters of the United States (WOTUS) rule on October 9, amid disparate rulings by courts around the country on the EPA's ability to define which waters fall under the Clean Water Act.

The stay was granted so the court may determine jurisdiction on the several pending WOTUS lawsuits challenging the rule, and sort out confusion about its requirements. A North Dakota federal district court had blocked enforcement of the rule in 13 states in August. The EPA said after the August ruling that it would still enforce the rule in the rest of the nation even though numerous lawsuits to overturn it were still pending in other federal courts.

The EPA and Army Corps of Engineers first proposed the WOTUS rule in April 2014 and finalized it in May 2015. The rule has been controversial from the start because it greatly expands the jurisdiction of the Clean Water Act by adding some two million acres of streams and 20 million acres of wetlands.

The Ohio federal appeals court decision, [available here](#), was agreed upon 2 – 1 by the three-judge panel. "A stay allows for a more deliberate determination whether this exercise of executive power, enabled by Congress and explicated by the Supreme Court, is proper under the dictates of federal law. A stay temporarily silences the whirlwind of confusion that springs from uncertainty about the requirements of the new rule and whether they will survive legal testing," the opinion states. "A stay honors the

policy of cooperative federalism that informs the Clean Water Act and must attend the shared responsibility for safeguarding the nation's waters."

The stay in implementation will only last until the judges determine whether the law gives them authority over the measure or the case must be remanded to a district court. Whatever the court decides will have to be in line with a ruling from the 11th U.S. Circuit Court of Appeals, which is considering the same issue. If the circuit courts don't agree, the jurisdictional issue will have to be decided by the Supreme Court, which could take several years.

A better fix to all of this would be for Congress to pass the bipartisan Federal Water Quality Protection Act (H.R. 1732, S. 1140). This legislation would repeal the WOTUS rule and require the administration to develop an alternative rule in consultation with state and local governments. In May, the House voted 261-155 to pass H.R. 1732. In the Senate, S. 1140 was passed by the Environment and Public Works Committee in June, but is awaiting a vote from the full Senate. The Administration said it would likely veto the House and Senate bills, so a two-thirds majority would be needed in both chambers.

WEED SCIENCE SOCIETIES COMMENT ON EPA MILKWEED AND MONARCH PLAN

Earlier this year, the White House's Office of Science and Technology Policy issued the [Pollinator Research Action Plan](#). The plan focuses on increasing honeybee and monarch butterfly numbers through the creation and maintenance of pollinator habitat.

Following that, EPA published a

white paper for comment titled "Risk Management Approach to Identifying Options for Protecting the Monarch Butterfly." The National and Regional Weed Science Societies (WSSA, APMS, NCWSS, NEWSS, SWSS, and WWS) submitted the following comments:

Our scientific societies are non-profit professional associations of academic research, extension, government, and industry scientists committed to improving the knowledge and management of weeds in managed and natural ecosystems. We appreciate the opportunity to comment on EPA's white paper titled "Risk Management Approach to Identifying Options for Protecting the Monarch Butterfly."

As stated in the white paper, this is the start of a process of stakeholder input and collaboration that will balance weed management needs with the conservation of milkweed for protecting the monarch butterfly. We are happy to be part of that process and would like to emphasize the following points:

- 1. More research is needed on milkweed species (*Asclepias* spp.).*
- 2. Consideration for the management of herbicide resistant weeds.*
- 3. Utilizing noncropped areas for milkweed habitat.*
- 4. A complex issue without a "one size fits all" answer.*

More research is needed on milkweed species (*Asclepias* spp.)

*There are 100 plus species of *Asclepias* across the United States. While some research has been done on common milkweed (*Asclepias**

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syriaca), there is a paucity of scientific information on the *Asclepiadaceae* family, whose members are the main food source for monarch butterfly larvae. Because common milkweed typically does not drive weed management decisions, there has been little public or private investment on researching this perennial weed's long term growth and reproduction, population dynamics, response to herbicides, impact on crop yield, and distribution. We agree with the white paper that this type of scientific information will be crucial in developing options to conserve monarch butterfly habitat.

Consideration for the management of herbicide resistant weeds

We believe it is critical for the Agency to balance weed management needs, especially the management of herbicide resistant weeds, with efforts to assist the monarch butterfly. Programs for herbicide-resistance management should employ the following best management practices:

1. Understand the biology of the weeds present.
2. Use a diversified approach toward weed management focused on preventing weed seed production and reducing the number of weed seed in the soil seedbank.
3. Plant into weed-free fields and then keep fields as weed free as possible.
4. Plant weed-free crop seed.
5. Scout fields routinely.
6. Use multiple herbicide mechanisms of action (MOAs) that are effective against the most troublesome weeds or those most prone to herbicide resistance.
7. Apply the labeled herbicide rate at recommended weed sizes.
8. Emphasize cultural practices that

suppress weeds by using crop competitiveness.

9. Use mechanical and biological management practices where appropriate.
10. Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
11. Manage weed seed at harvest and after harvest to prevent a buildup of the weed seedbank.
12. Prevent an influx of weeds into the field by managing field borders.

Some of the above best management practices counter what is outlined in the white paper's "Analysis and Actions" section that discusses the possibility of lowering herbicide rates, modifying application timing, or establishing field buffers. These are all critical areas of concern to agricultural producers and should not be considered without a thorough discussion with producers and registrants to gauge their impact.

Utilizing noncropped areas for milkweed habitat

The utilization of noncropped lands to develop perennial milkweed habitat makes good biological sense. In general, higher infestations of perennial plants are expected in undisturbed areas. In addition, transportation rights-of-ways and utility corridors are uniformly distributed across the landscape which may aid monarch butterfly migration.

Weed scientists can advocate steps to promote habitats where pollinators and other iconic insects such as the monarch butterfly can flourish, beginning with the adoption of a prudent approach to weed management. While it is crucial that we control invasive, noxious, and herbicide-resistant weeds that

can overtake crops and native plants, other weeds such as common milkweed might be left to grow in areas where it is likely to do no harm. The key is to exercise good judgment about which weeds to control, when and where.

A complex issue without a "one size fits all" answer

Initiatives like the [Monarch Butterfly Conservation Fund](#), the [Iowa Monarch Conservation Consortium](#), and other science-based conservation initiatives will allow private and public landowners to develop local knowledge of milkweed species for their area. Milkweed conservation efforts will vary according to the management of other weed species present in their area and there will not be a "one size fits all" solution. For example, recommending reduced mowing or herbicide use on weeds in ditches where kochia (i.e. tumbleweed) is prevalent could create a public safety hazard due to the buildup of kochia carcasses.

We hope that EPA's actions are consistent with the Interagency Pollinator Health Task Force Report that recognized the importance of evidence-based decision making, collaborative public private partnerships, and expanded research that will balance local weed management needs with the conservation of the monarch butterfly.

We appreciate this opportunity to make initial comments on the white paper "Risk Management Approach to Identifying Options for Protecting the Monarch Butterfly" and look forward to working with the Agency on this important topic.

CONGRESS PASSES A CONTINUING RESOLUTION FUNDING GOVERNMENT THROUGH DEC. 11

On Sept. 30, both the House and Senate passed a continuing resolution (CR) funding the federal government at FY 2015 levels through Dec. 11. It was a “clean” CR in that it contained no policy riders, but it did include \$700 million in emergency funding to fight wildfires in the West. Since 1977, there have been only four Congresses that have not needed a CR – the most recent was almost two decades ago, in 1997 – and lawmakers have sent the president an average of six CRs per year to avoid shutdowns. Before Congress can decide on how to fund the remainder of FY 2016, they need to pass a federal highway bill that expires on Oct. 29 (it has already received 34 short-term extensions over the past six years) and pass a debt limit increase so the U.S. doesn’t default on its \$18.1 trillion debt in early November.

WEED RISK ASSESSMENT MODELS PROVE UNRELIABLE AT PREDICTING WHICH BIOFUEL CROPS ARE LIKELY TO BECOME INVASIVE WEEDS

The following WSSA press release highlighted a paper published in the latest issue of *Invasive Plant Science and Management* by L. Smith, D. Tekiela, and J. Barney titled: “[Predicting Biofuel Invasiveness: A Relative Comparison to Crops and Weeds.](#)” I am redistributing this release because this paper represents a shift in policy on how we might “weed out” biofuel candidate species. Past biofuel policy recommendations have relied heavily on the outcomes of [weed risk assessments conducted by APHIS.](#)

WSSA Press Release: Several of the plants grown as biofuel crops have proved to be invaders in some environments – spreading rapidly and

overwhelming surrounding natural ecosystems. Concerns about these weedy tendencies have led many to contend that risk assessments should be conducted before any bioenergy crop becomes widely cultivated. A new study featured in the journal *Invasive Plant Science and Management*, though, shows that current “gold-standard” weed risk assessment techniques simply aren’t up to the task.

Scientists at Virginia Tech used two of the best-respected and most widely used weed risk assessment models to develop invasive species risk scores for three categories of plants. They assessed 16 bioenergy crops, 14 agronomic crops and 10 known invasive weeds introduced for agronomic purposes.

Both models failed to reliably distinguish weeds from crops. For example, cereal rye received a higher risk score than kudzu, which is a widespread and damaging invader across the Southeast.

“We found the majority of all the species we evaluated had high weed risk assessment scores, including crops that we predicted would score low,” said Jacob Barney Ph.D., assistant professor of Invasive Plant Ecology at Virginia Tech. “It is clear we should be cautious about using current risk assessment models in setting biofuels policy.”

In the absence of effective risk models, the Virginia Tech research team stressed the importance of field evaluations to determine whether crops are escaping field borders.

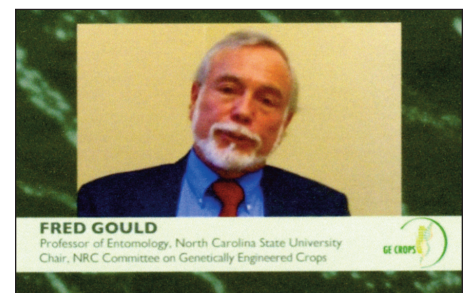
NAS GE CROPS STUDY TO BE RELEASED IN SPRING OF 2016

Many people around the world have a wide range of questions and opinions about the agronomic, environmental, socioeconomic, and health impacts of genetically engineered (GE)

crops, and claims and research that extol both the benefits and the risks of these crops have created a confusing landscape for the public and for policy makers.

An ongoing study by the National Academies of Sciences, Engineering, and Medicine (NAS) seeks to address the confusion. The goal is to bring an independent, objective voice to the sometimes contentious debate around genetic engineering of crop plants. The study is reviewing current understanding of the socioeconomic, agronomic, environmental, and health effects of GE crops. In addition to assessing whether initial concerns and promises have been realized since the introduction of GE crops, it is also focused on the opportunities and challenges related to genetic-engineering technologies coming down the pike such as RNA-interference (RNAi) technology. WSSA member Carol Mallory-Smith from Oregon State is one of the [twenty scientists serving on the committee](#) that is conducting the study. The committee plans to complete the study and publish its report in the spring of 2016.

Since the launch of the study last year, the committee has heard from 80 presenters at a series of public meetings and webinars on a wide range of topics. All the presentations were recorded. Weed scientists may be par-



Committee chair Fred Gould, Professor of Entomology at North Carolina State University, outlines the study’s objectives in this short video.

<http://nas-sites.org/ge-crops/2015/02/19/study-objectives-video/>

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ticularly interested in: 1) [Pest Management Practices Workshop](#), which included a panel on Contemporary Practices for Suppressing Weeds; 2) a webinar on [US Agricultural Extension](#), which included a presentation by Dallas Peterson, Professor and Extension Weed Specialist, Kansas State University; 3) a presentation by Andreas Weber, Head of the Institute of Plant Biochemistry, University of Dusseldorf, on [converting C3 plants to C4 plants](#); and 4) an [introduction to RNAi technology](#) and a discussion of strategies for using plant mediated RNAi in crop protection.

More about the NAS study, including all the meeting and webinar recordings, can be found at the study website, <http://nas-sites.org/ge-crops>. If you have comments for the committee, they can be sent through the website, and you can stay informed about the study by [subscribing to the email newsletter](#) or following the study on Twitter: [@NASciences_Ag](#), #GECropStudy.

THE NEXT GREAT GMO DEBATE – RNAI?

A good article in the *MIT Technology Review* on the various issues surrounding the advancement of RNA interference technology for pest management:

<http://www.technologyreview.com/featuredstory/540136/the-next-great-gmo-debate/>

UPDATE ON BROMUS TECTORUM BIOCONTROL AGENT

Management of *Bromus tectorum* (downy brome, cheatgrass) remains a hot topic on several fronts as it fuels wildfires in the West and destroys sage grouse habitat. The New York Times recently published the following article: [“Researcher Finds Way to Fight Cheatgrass, a Western Scourge.”](#) The article provides a nice update on the

progress being made for a couple strains of *Pseudomonas fluorescens*, a native soil bacterium that inhibits root growth in *Bromus tectorum*, *Taeniatherum caput-medusae*, and *Aegilops cylindrica*. EPA approved the use of *Pseudomonas fluorescens* strain D7 as a biopesticide in August 2014. Dr. Ann Kennedy with USDA-ARS discovered and developed an application method for the bacterial strains. While the bacterium isn't a silver bullet for eradicating cheatgrass, the biocontrol agent can be a critical component in an area-wide cheatgrass management program that should be modeled after the successful [TEAM Leafy Spurge](#) area wide management program.

SAGE GROUSE NOT TO BE LISTED AS ENDANGERED SPECIES

The U.S. Fish and Wildlife Service (FWS) announced on Sept. 22, that it would not list the greater sage-grouse under the Endangered Species Act. This decision represents a change of direction for FWS, which announced in 2010 that the grouse was “warranted for listing,” but now says that new information about the status of the species, potential threats, regulatory mechanisms, and conservation efforts by Federal, State, and private landowners indicate that listing is not warranted.

There is no shortage of controversy on either side of this decision. A Washington Post article by Darryl Fears titled [“Decision not to list sage grouse as endangered is called life saver by some, death knell by others”](#) does a good job of capturing this debate and providing an overall “big picture” in this precedent setting conservation effort. No matter your political persuasion, there is still much research that needs to be done on restoring the sage brush habitat of the sage grouse and more importantly, on developing and establishing an area wide weed

management program for *Bromus tectorum*. These sentiments are captured in an excellent commentary by Steve Williams, former Director of FWS from 2002–2005 and now president of the Wildlife Management Institute (WMI). His commentary [“Sage Grouse Listing Decision is Hugh Accomplishment, But Not the Finish Line”](#) is published in WMI's Outdoor News Bulletin.

EPA PROPOSES CHANGES TO CERTIFICATION AND TRAINING REQUIREMENTS FOR PESTICIDE APPLICATORS

On August 24, EPA proposed changes to the existing regulations concerning the certification and training standards that have been implemented by individual states for the past 40 years. The proposed changes are intended to improve the competency of certified applicators of restricted use pesticides (RUPs), increase protection for noncertified applicators of RUPs operating under the direct supervision of a certified applicator through enhanced pesticide safety training and standards for supervision of noncertified applicators, and establish a minimum age requirement for certified and noncertified applicators. The proposed rule will have significant impacts on state lead agencies, university extension programs, and the applicators subject to regulatory certification. The proposed rule is complex. It includes numerous new, revised, and deleted definitions, and would change the way both state lead agencies and university extension programs do business with the public.

[Chart – Comparisons of the major new proposed protections to the existing protections](#)

[Full Rule Proposal – Pesticides: Certification of Pesticide Applicators](#)

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WASHINGTON REPORT CONTINUED from pg 9

EPA is accepting comments on the proposal until November 23, 2015. However, due to the complexity of the rule, many stakeholder groups are asking EPA for an additional 60 days. To comment, please see docket number

[EPA-HQ-OPP-2011-0183](#)

at [regulations.gov](#).

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NECROLOGY

THOMAS TROST BAUMAN **1939 – 2015**



Dr. Thomas Trost Bauman, Professor Emeritus, passed away Saturday, July 11, 2015, at his home in West Lafayette.

Born September 11, 1939, in Lafayette, he was the son of Ronald Hawkins Bauman and Martha G. (Trost) Bauman. He is survived by his loving wife of nearly 50 years, Nancy L. (Sahnd). They were married on August 14, 1965, in Cincinnati, Ohio.

Also surviving are his three children, Bob of Seattle, MaryBeth (Ken) Johnson of West Lafayette, and John (Emily) of West Lafayette; four grandchildren, Olivia and Luke Johnson, and Gretchen and Grant Bauman; his three siblings Ronald "Bill" (Irmgard) Bauman of Los Angeles, CA, Elizabeth "Sis" (Leslie) Graham of Lake Forest, IL and Naples, FL, and Richard (Sharon) Bauman of Punta Gorda, FL; as well as five nieces and seven nephews.

Tom attended West Lafayette schools and graduated from WLHS in 1957 where he was active within the student body in numerous roles including student council president and 1956 football MVP. He remained close to his classmates and treasured their friendships, often organizing frequent class reunions and still attending Friday night games. As a life-long West Lafayette resident, he often served as a West Lafayette and Purdue University amateur historian and tour guide for those visiting from out of town.

He attended Purdue University, receiving a B.S., M.S., and PhD in Agriculture. He was a member of Sigma Alpha Epsilon fraternity. Following in his father's footsteps as a professor at his alma mater, he was appointed to the Botany and Plant Pathology Department, with a focus on Extension and Research. Tom and his students were well published in both scientific and Extension journals. He was awarded Master Farmer distinction in 2010. Tom's work was acknowledged worldwide and he was fortunate to frequently travel internationally to share his work; he particularly enjoyed his extensive efforts in Brazil and remained close friends with many Brazilian scientists.

Although Tom was internationally recognized, he was humble and took his greatest joy in helping to train young people, future scientists and simply farming the black Indiana soil, whether it be corn, beans, weeds, or the greatest of hybrid sweet corn. Tom was a caring, kind, concerned person, especially sensitive to his graduate students and those who worked with him in the field. He respected Indiana farmers and enjoyed his many meetings with them, particularly his annual field day at the Purdue Agronomy Farm.

Tom was a member of Central Presbyterian Church where he served as a Trustee.

Tom loved his children and grandchildren. He attended almost every one of their sporting events, and enjoyed helping with homework, especially as a multi-generational math tutor. Tom remained jovial, kind, even-tempered and with quick wit and a wry smile throughout his lengthy illness.

A visitation was held from 1:00 pm until 2:30 pm in the Central Presbyterian Church parlor with a memorial service following at 2:30 pm on Friday, July 17, 2015. In lieu of flowers, contributions may be made to the Central Presbyterian Building and Grounds Fund; West Lafayette Schools Education Foundation, or St. Elizabeth Hospice.

You may sign the guest book or leave memories at www.soller-baker.com





NECROLOGY

EDWARD ROY HIGGINS **AUGUST 12, 2015**

Greensboro, NC: Edward Roy Higgins, PhD, 74, passed away August 12, 2015, with his family by his side. His memorial service was held at 2:00 pm, Saturday, October 31, 2015, at the Holy Trinity Episcopal Church and the family gathered with friends following the service in the Haywood Duke Room.

A native of Caribou, Maine, Ed graduated in the class of 1959 at Caribou High School. In 1963 he received a BS degree in Agronomy at the University of Maine and was a member of the Phi Kappa Sigma Fraternity. He attended Pennsylvania State University where he received a MS degree in Agricultural Science and a PhD degree in Physical Chemistry.

Ed joined the Agricultural Chemicals Division, Geigy Chemical Corporation in 1970 as a R&D Field Research Representative in the Northeast Region. He progressed rapidly through the development stages for a R&D Rep and achieved the coveted title of Senior Scientist. He was active in professional societies and served as President of the Northeastern Weed Science Society.

He moved to the Company Headquarters located in Greensboro, NC in 1987 and joined the department of Technical Sales Service. His wealth of knowledge pertaining to field agricultural practices, associated crop pests and the company products proved a valuable asset in addressing customer's special situations. He was especially skilled and effective in dealing with customers, product liability claims and always provided excellent product stewardship. He later became Director of this group.

Ed was a person of integrity, a competent scientist, a true professional, respected by his colleagues and had many positive relationships with university co-operators and the company's customers. He made many contributions to the success of the company. He retired from the company in 2001 and continued to work as a part-time consultant for several years.

With a fine sense of humor, Ed always shared a broad smile and greeted people with a hearty handshake or a hug. Company colleagues often referred to Ed as a "best friend," "jolly guy," "one of a kind" and "full of his own brand of wit."

He will be dearly missed by his many friends and colleagues in Ciba-Geigy, Novartis and Syngenta.

Ed enjoyed landscaping, carpentering, traveling, boating, participating in community programs, University of Maine and Penn State sports and spending time with the people he loved.

Preceding him in death were his mother, Ruth Libby Higgins, and father, Clyde Elwin Higgins.

Ed is survived by his wife, Janet L. Dinsmore; daughter, Kari Higgins Rowley and son-in-law, Robeert G. Rowley and grandchildren, Sydney M. Rowley, Alec R. Rowley, Thomas H. Rowley, all from Seneca Falls, NY; son, Kevin E. Higgins, and daughter-in-law, LaLannie M. Ovenshire, and grandchildren, Brandyn T. Higgins, Bethany M. Ovenshire, all from Waterloo, NY; sister, Barbara Walker and brother-in-law, James V. Walker, from Eugene, OR; nephews, James H. Walker from Austin, TX, Kent E. Walker from Portland, OR; sister-in-law, Diane Allen, brother-in-law, Don Allen from Madison, CT; and niece, Christina (Tina) Allen, Brookly, NY.

Memorial contributions may be made to the Bicentennial Gardens, Edward R. Higgins Memorial Fund, 1001 Fourth St, Greensboro, NC 27407; or to the Greensboro Civitan Club, % Dr. Albert Lochra, 300 Miltwood Dr., Greensboro, NC 27455.



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CALENDAR OF UPCOMING EVENTS

DATE	EVENT	LOCATION	CONTACT
November 23–27, 2015	Canadian Weed Science Society/ Société canadienne de malherbologie (CWSS-SCM) Annual Meeting	Westin Hotel Edmonton, Alberta Canada	www.weedscience.ca
December 7–10, 2015	NCWSS Annual Meeting	Indianapolis, Indiana	www.ncwss.org
January 3–7, 2016	Northeastern Plant, Pest, and Soils Conference	Sheraton Society Hills Hotel Philadelphia, Pennsylvania	www.neppsc.org
January 9–13, 2016	Plant & Animal Genome Conference (Weeds workshop is January 12)	San Diego, California	www.intlpag.org
January 13–15, 2016	California Weed Science Society 68th Annual Conference	Hyatt Regency-Sacramento Sacramento, California	www.cwss.org
February 8–11, 2016	Joint WSSA and Southern Weed Science Society Annual Meeting	San Juan Sheraton San Juan, Puerto Rico	www.wssa.net
March 7–10, 2016	WSWS Annual Meeting	Albuquerque, New Mexico	www.wsweedscience.org
June 19–25, 2016	7th IWSC Annual Conference	Prague, Czech Republic	
June 20–24, 2016	11th International Symposium on Adjuvants for Agrochemicals	Monterey, California	www.isaa2016.org
2017	Weed Science Society of America Annual Meeting	Tucson, Arizona	www.wssa.net

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