WASHINGTON REPORT
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EPA Proposes Changes to Certification and Training Requirements for Pesticide Applicators

The EPA has 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. There is no doubt the proposed rule will have significant costs and impacts on state lead agencies, university extension programs, and the applicators subject to regulatory certification. The proposed rule is complex and 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

EPA is accepting comments on the proposal until **December 23, 2015**. To comment, please see docket number EPA-HQ-OPP-2011-0183 at regulations.gov

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 that 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 their bill (H.R. 1732). However, in the Senate last month, they needed 60 votes to invoke cloture to end debate on their bill (S. 1140), but only got 57 votes. In addition, the President said he would veto the bill, so a two-thirds majority vote would be needed to override his veto.

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 WSWS) submitted the following comments:

> *Our scientific societies are nonprofit 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."*
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> *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:*
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> 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 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.

Congress avoided a lot of budget heartaches this fall when they passed a 2 year budget-debt ceiling pact on October 29. The budget deal would raise the discretionary spending caps for defense and nondefense accounts by $80 billion above the sequester level for FY 2016 and FY 2017. The increased discretionary spending is offset with cuts to various entitlement programs and revenue raisers.

The agreement also suspended the debt limit until March 15, 2017 so the U.S. doesn't default on its $18.1 trillion debt in early November. Congress also passed a 3 week extension on federal highway funding that would have expired on Oct. 29. This is the 35th short-term extensions over the past six years. We'll see if the new Speaker of the House, Paul Ryan from Wisconsin, can capitalize on all the camaraderie on Capitol Hill following his election on Oct. 29 and negotiate a long term highway funding bill.

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.

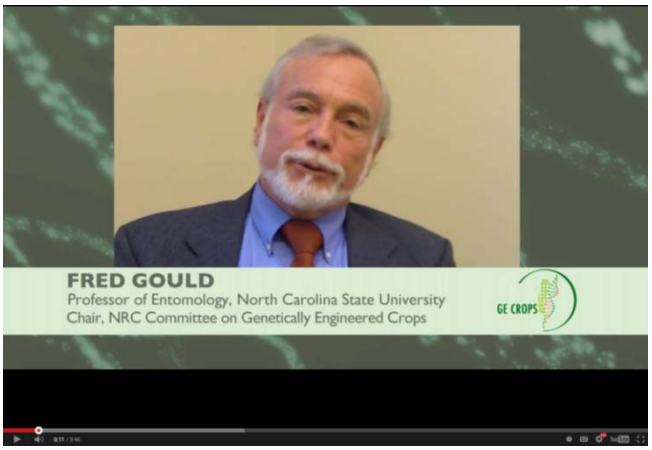
Both models failed to reliably distinguish weeds from crops. For example, cereal rye received a higher risk score than kudzu, which is a widespread and damaging invader across the Southeast.

"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.



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/

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 particularly 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.

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.

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/

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