WSSA Science Policy Report
August 17, 2023
Lee Van Wychen

New Science Policy Fellows (SPFs)

- **Annu Kumari**- USDA-ARS Auburn. Ph.D. expected May 2024; Advisor: Dr. Andrew Price.
- **Cynthia Sias** – Virginia Tech. Ph.D. expected Dec. 2023; Advisor: Dr. Michael Flessner.

Weed Science Society Presidents Visit to Washington DC.

During the week of April 17, the presidents from the four regional weed science societies and WSSA traveled to Washington DC to advocate on behalf of weed science policy initiatives and help WSSA achieve its mission of promoting research, education, and awareness of weeds in managed and natural ecosystems. Our primary mission during the week was meeting with the president's elected members of Congress and their staff from their home states. Talking points included:

- Support $8 billion in mandatory agricultural research funding in the next Farm Bill. U.S funding peaked in 2002 and has declined by 1/3 since then, hitting the lowest levels since 1970. While U.S. investments decline, China's funding for ag research has grown to more than $10 billion – **double of what the U.S. currently spends**. Current U.S. ag research funding is just under $5 billion and most of that is discretionary funding that relies on year-to-year appropriations from Congress.

- Support USDA-NIFA IR-4 Project funding at $25 million in FY 2024. The IR-4 Project was funded at $15 million in FY 2023.
    - There is a phenomenal need for specialty crop protection products to help feed the world. The IR-4 Project was established in 1963 by USDA to conduct research and develop the data needed to facilitate the registration of crop protection products, including reduced risk and bio-based pesticides, for minor use crops such as fruits, vegetables, herbs, spices, ornamental plants and other horticultural crops. The IR-4 Project provides an incredible return on investment as it contributes $8.97 billion to the annual U.S. GDP.

- Support the USDA-NIFA Crop Protection and Pest Management (CPPM) program at $25 million in FY 2024. The CPPM program was funded at $21 million in FY 2023.
    - The CPPM program is a highly effective competitive grant program that tackles real world weed, insect, and disease problems with applied solutions through the concepts of integrated pest management (IPM). The CPPM also funds the Regional IPM Centers and Extension IPM programs.

- Amend the definition of a "plant pest" in the Plant Protection Act so that it includes noxious weeds and invasive plants. Currently, only "parasitic plants" are listed in the definition of "plant pest" (7 USC 104, S.7702 – Definitions, (14) Plant Pest, (C)).
    - USDA-APHIS receives almost $400 million per year in their Plant Health account to prevent the introduction and spread of "plant pests" in the U.S., but only a fraction

goes toward weed prevention and surveillance. One example is their "Plant Pest" and Disease Management and Disaster Prevention (PPDMDP) program,, which directs $75 million a year to state governments, universities, non-profit institutions, industry, and tribal nations – to support projects that protect specialty crops, nursery systems, forestry, and other agricultural production systems and natural resources from harmful and exotic "plant pests." Very few of the 300+ "plant pest" projects supported by the PPDMDP involve noxious weeds or invasive plants.

Pictured (L to R): ***Wes Everman****, NC State, NEWSS President****; Curtis Rainbolt****, BASF, WSWS President;* ***Carroll Moseley****, Syngenta, WSSA President;* ***Eric Castner****, FMC, SWSS President; and* ***Reid Smeda****, University of Missouri, NCWSS President*

- We also discussed a letter to the House and Senate Appropriations Subcommittee for Transportation leadership requesting funding for the Invasive Plant Elimination Program authorized in the 2021 Infrastructure Law. It was authorized at $50M annually from FY 2022 to 2026, but has not been appropriated any money yet. We are requesting $10M to start a pilot program. Link: Section 11522 - Invasive Plant Elimination Program description in 2021 Infrastructure Law. Read the letter here.
    - 49 organizations endorsed the letter, including the national and regional weed science societies.
    - Letter was sent to 562 House and Senate staff working on transportation issues.
    - Leadership at the US Department of Transportation and Federal Highway Administration, including Sec. Pete Buttigieg were copied as well.

2023 Farm Bill

There is less than a 50% chance the Farm Bill will be completed this year. Expect a one-year extension. There is a concentrated effort among ag research stakeholders to make ag research spending in Title 7 of the Farm Bill **mandatory** spending instead of discretionary spending.

FY 2024 House Agriculture Appropriations

-USDA research accounts stayed level for the most part in the House bill (which is considered a victory this year), plus ARS received a slight increase. However, the $4.7M Area-Wide Pest Management (AWPM) account in ARS was not in the president's budget request. This program is used to fund large-scale projects such as Getting Rid Of Weeds Through Integrated Weed Management (GROW). We are working with other stakeholder groups, like the Entomology Society of America to make sure AWPM funding is not cut from the USDA-ARS.

FY 2024 House Interior, Environment and Related Agencies Appropriations

- Sets funding levels for EPA and the US Fish and Wildlife Services (FWS) programs. The committee cut EPA's budget to its lowest level since 1991. However, many of the provisions that the national and regional weed science societies supported, along with many other stakeholder groups, were in the House bill. Here is a summary:

- Pesticide Program Funding – The Committee report recommended funding the pesticide licensing program at $120.2M for FY24, which is the same as the final funding level enacted for FY23. While it may seem disappointing not to have received an increase given that we requested $145M, please note that the entire Environmental Programs and Management account, where the pesticide licensing program is housed, received a $857M cut.

- FWS Consultation Funding – The Committee report recommended providing no less than $2M for pesticide-specific ESA consultations at FWS. While we requested $3M, this is still a significant accomplishment given that the report recommends cutting $12.1M or 10.0% from FY23 enacted levels for the whole FWS planning and consultation account.

- FIFRA Labeling Language – We requested bill language specifying that no funds may be used by EPA to approve labels inconsistent with the agency's human health findings under FIFRA. That language was included in the bill text.

- EPA Pesticide Implementation Language – We requested several language related provisions related to 1) what types of data EPA must consider in its ESA effects determinations (existing conservation data, pesticide usage data, real-world spray drift and water concentration studies, etc.) 2) directing the agency to consult with USDA/impacted stakeholders on mitigations and pilot projects pre-publication, and 3) direct the agency to ensure that epidemiological studies used by EPA meet data quality standards and can be independently verified. All this language was included in the report as well as directives for the agency to update its guidance on these matters as necessary.

- Sub-County Species Level Maps Language – We requested language directing FWS to, when possible, develop subcounty level species range maps. This language was included in the House Interior Appropriations committee report as well.

- NOTE: The House Interior Appropriations Committee bill is **only the first step** in this process!

APMS Leaders Meeting

-Brett Hartis, APMS President; Jay Ferrell, APMS President-Elect; Rob Richardson, APMS Science Policy Rep, and I attempted to meet in Washington DC the week of March 27. However, due to 106 Congressional committee hearings during that week and not being able to secure enough appointments on Capitol Hill (I was only able to schedule 6 appointments out of 31 requests), we decided to cancel their visit a few days prior.

- Our meeting with Stacey Brown, Deputy Assistant Secretary of the Army for Civil Works Management and Budget still occurred via Zoom, even though the meeting was originally scheduled as an in-person meeting at the Pentagon.

-We discussed why there has not been a request in the President's budget (for at least the past 20 years) for funding for the Army Corps Aquatic Plant Control program. Instead, Congress adds this line item to their Energy and Water appropriations every year. Need to meet with OMB.

-The House FY 2024 appropriations for the **Aquatic Plant Control (APC) program is $16.5M, only half of the $33.5M received in FY 2023, with no money for hydrilla control in the CT river basin.** The Senate FY 2024 appropriation for APC is $27M, with $6.3M for CT river hydrilla.

LSU and Army Corps of Engineers Host Aquatic Weed Tour in Louisiana

Touring Dr. Chris Mudge's mesocosm research trials on giant salvinia at LSU. Pictured (L to R): ***Kristy Crews****, Product Manager, EPA Office of Pesticide Programs (OPP) Registration Division (RD), Fungicide Branch;* ***Jessica Post****, Economist, EPA OPP Biological and Economic Analysis Division,* ***Francisco Llarena-Arias****, Environmental Protection Specialist, EPA OPP RD, Fungicide and Herbicide Branch;* ***Chris Mudge****, Research Biologist: U.S. Army Engineer Research & Development Center and Adjunct Professor: LSU School of Plant, Environmental & Soil Sciences;*

***Jeremy Crossland**, US Army Corps of Engineers, Land Uses and Natural Resources Program Manager; and **Lee Van Wychen**, WSSA Executive Director of Science Policy.*

During the week of June 5, I had the chance to tour Dr. Chris Mudge's aquatic weed research trials at LSU along with staff from the EPA and Army Corps of Engineers. We also got to explore the different aquatic weed problems they face in the Atchafalaya National Wildlife Refuge (NWR) and Lake Henderson. From August through October, Lake Henderson is lowered to 6 feet MSL. These draw-downs expose the lake bottom, which helps to control aquatic plant infestations like water hyacinth, hydrilla, giant salvinia and Cuban bulrush.

I would like to send a **huge thank you to Dr. Mudge** and his staff for organizing the tour and sharing their knowledge and expertise on aquatic weed management.

Touring Belle River in the Atchafalaya National Wildlife Refuge. *Dr. Mudge attempts to drive his boat through an untreated area full of giant salvinia. Note: behind us is open water that has been treated by the Louisiana Department of Wildlife and Fisheries.*

Supreme Court Rules on Waters of the United States

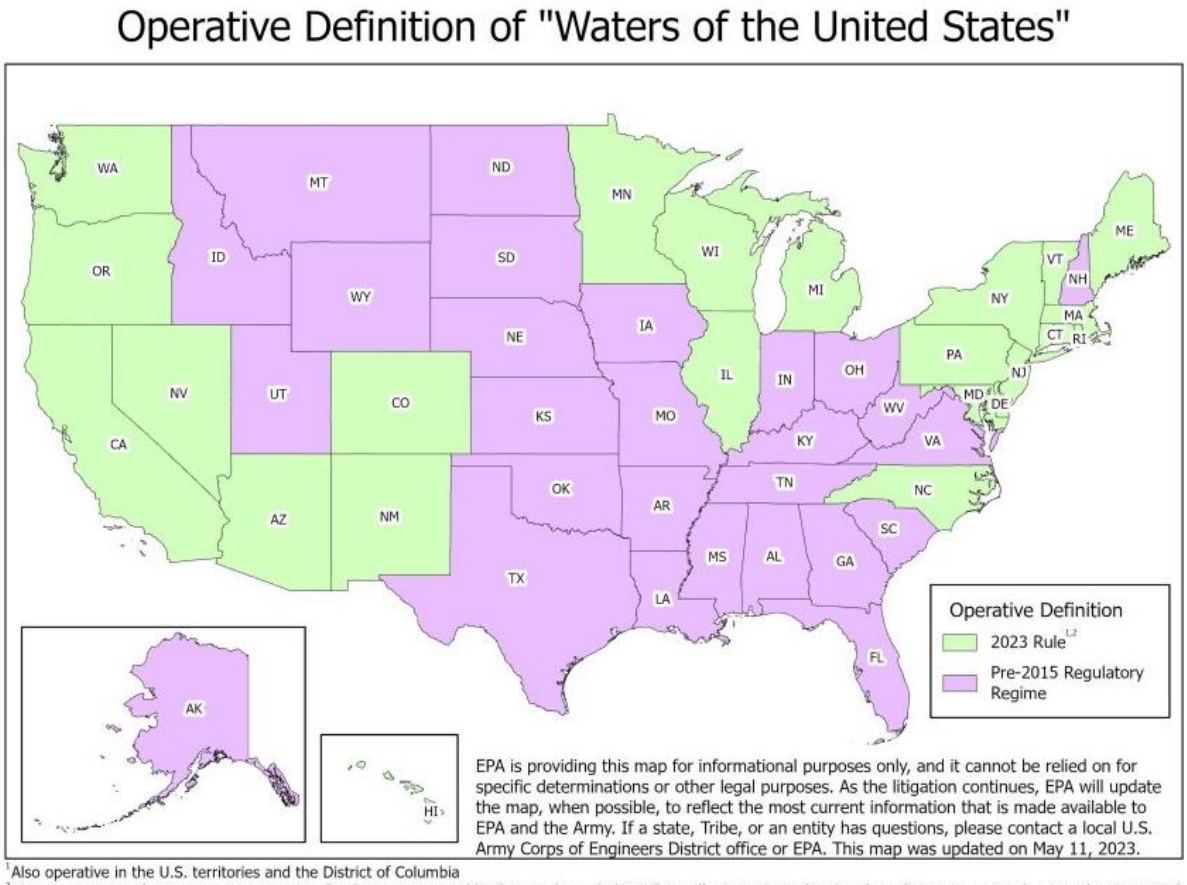
The US Supreme Court released its opinion on May 25 in *Sackett v. EPA* and ruled in favor of the Sacketts. All **nine members of the court rejected** the federal government's "**significant nexus**" test, which was crafted by former Justice Anthony Kennedy in the 2006 *Rap*anos decision. In other words, the "significant nexus test" is no longer an appropriate measure to determine a Water of the United States (WOTUS). Although there was a 5-4 split over what the test should be, not one justice attempted to defend "significant nexus" as an appropriate test.

As a result of on-going litigation, 27 states (in purple) should use the **pre-2015 regulatory rule** where WOTUS are:

1. Traditional interstate navigable waters
2. Relatively permanent bodies of water connected to traditional interstate navigable waters

3. Wetlands that have a continuous surface connection with either (1) or (2)

-EPA said it expects to release post-*Sackett* guidance by September 1 for their 2023 Rule where they can no longer use the "significant nexus test" to determine what is a WOTUS.



[1]Also operative in the U.S. territories and the District of Columbia

[2]The pre-2015 regulatory regime is operative for the Commonwealth of Kentucky and Plaintiff-Appellants in Kentucky Chamber of Commerce, et al. v. EPA (No. 23-5345) and their members (Kentucky Chamber of Commerce, U.S. Chamber of Commerce, Associated General Contractors of Kentucky, Home Builders Association of Kentucky, Portland Cement Association, and Georgia Chamber of Commerce).

EPA FIFRA SAP on Atrazine is a Virtual Meeting from August 22 – 24.

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) provides independent scientific advice to the EPA on health and safety issues related to pesticides. There was a call for nominations this summer for an SAP on the "**Examination of Microcosm/Mesocosm Studies for Evaluating the Effects of Atrazine on Aquatic Plant Communities**".

I have verified that **four** of the **nine** members of the SAP are WSSA and APMS members: 1) **Aaron Hagar**, University of Illinois; **Jay Ferrell**, University of Florida; **John Madsen**, retired USDA-ARS, and **Kurt Getsinger**, US Army Corps of Engineers. The SAP will take place August 22-24, 2023, from 10 a.m. to approximately 5:30 p.m. (ET). The public virtual meeting will be held via a webcast platform. You must register to receive the links. More info at: https://www.regulations.gov/document/EPA-HQ-OPP-2023-0154-0001

A Survey of Weed Research Priorities: Key Findings and Future Directions

- The WSSA Research Priorities Committee published the results of their weed research priorities survey from the winter of 2021. The last time there was a published report of weed science research priorities was in 2007.
- Authors: Daniel C. Brainard, Erin R. Haramoto, Ramon G. Leon, James J. Kells, Lee R. Van Wychen, Pratap Devkota, Mithila Jugulam, Jacob N. Barney. DOI: 10.1017/wsc.2023.24
- ABSTRACT

We conducted an online survey of weed scientists in the US and Canada to 1) identify research topics perceived to be important for advancing weed science in the next 5-10 years, and 2) gain insight into potential gaps in current expertise and funding sources needed to address those priorities. Respondents were asked to prioritize nine broad research areas, as well as five to ten subcategories within each of the broad areas. We received 475 responses, with the majority affiliated with academic institutions (55%) and working in cash crop (agronomic or horticultural) study systems (69%). Results from this survey provide valuable discussion points for policymakers, funding agencies, and academic institutions for allocating resources for weed science research. ***Notably, our survey reveals a strong prioritization of Cultural and Preventative Weed Management (CPWM) as well as the emerging area of Precision Weed Management and Robotics (PWMR).*** *Although Herbicides remain a high-priority research area, continuing challenges necessitating integrated, non-chemical tactics (e.g., herbicide resistance) and emerging opportunities (e.g., robotics) are reflected in our survey results. Despite previous calls for greater understanding and application of weed biology and ecology in weed research, as well as recent calls for greater integration of social science perspectives to address weed management challenges, these areas were ranked considerably lower than those focused more directly on weed management.* ***Our survey also identified a potential mismatch between research priorities and expertise in several areas including CPWM, PWMR, and Weed Genomics, suggesting that these topics should be prime targets for expanded training and collaboration.*** *Finally, our survey suggests an increasing reliance on private-sector funding for research, raising concerns about our discipline's capacity to address important research priority areas that lack clear private-sector incentives for investment.*

WSSA Endangered Species Committee

- Chaired by Bill Chism, retired after 20+ years with EPA Office of Pesticide Programs (OPP) Biological and Economics Analysis Division (BEAD). Bill is doing a phenomenal job.
- Committee members are: Cameron Douglass, USDA OPMP; Stanley Culpepper, WSSA Past President; Taylor Randell-Singleton, grad student rep; Brad Hanson, UC-Davis; Mark VanGessel, WSSA-EPA Liaison; Sarah Lancaster, Kansas State, and me.
- The committee is proposing a communications webpage and is also looking to find a new graduate student representative
- ESA Label Format – Culpepper. Chism, and I met with Billy (Charles) Smith, Director of the Registration Division in EPA OPP to talk about a **standard label format**. OPP had proposed a standard format back in 2019 but the project never really took off. Proposing a standard format should be doable and would reduce the time for users to find key information.

    - Ideally our suggestions would end up in the Label Review Manual where they are visible to everyone.
    - Step one: review the format and make suggestions with a small group of weed scientists as they prepare their state recommendations in the spring.
    - Step two: walk registrants, crop consultants, USDA through the format and any suggestions; and step three: take suggestions to EPA OPP.
- IR-4 has been collecting crop efficacy data for 60 years. Need to make sure EPA is aware of the data and use it for ESA surrogate species. EPA should select representative crop groupings for an herbicide's efficacy trial. Don't do herbicide trials on every crop. Not necessarily a need to do it on every endangered species.
- Comments on EPA's **Vulnerable Species Pilot Project** strategy submitted on Aug. 6, This project lists 27 endangered species that are considered most representative of the over 1700 endangered species on the list.
- On July 24, EPA released its **draft Herbicide Strategy** for public comment. The Strategy describes proposed early mitigations for more than 900 listed species and designated critical habitats to reduce potential impacts from the agricultural use of these herbicides while helping to ensure the continued availability of these important pesticide tools and increase the efficiency in which EPA consults with USFWS on endangered species.
- The draft herbicide framework and accompanying documents are available in docket EPA-HQ-OPP-2023-0365. Comments are **due SEP. 22, 2024.**

Organized a Capitol Hill Seminar on July 11: "Protecting Endangered Species While Feeding the World" presented by Culpepper and Chism.

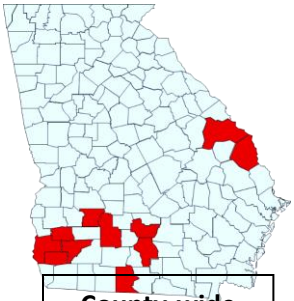
-Very well received. Approximately 75 staffers.

-The event sponsors were: WSSA, National Association of State Departments of Agriculture (NASDA), Extension Committee on Policy (ECOP), CropLife America (CLA), and Syngenta. Additional collaborators were the National Corn Growers Association (NCGA) and American Soybean Association (ASA).

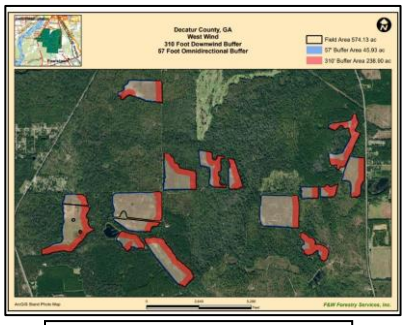
-**One-Page Leave Behind:**

*Fifty years ago, the **Endangered Species Act** (ESA) was signed into law to protect and conserve imperiled species from extinction. Few understand the complexities and challenges associated with this Act and how it potentially threatens agriculture, family farm sustainability, and having an ample supply of food, feed, and fiber needed by humankind.*

*In an abundance of caution to protect species listed under the ESA and help minimize the risk of litigation, the **U.S. EPA has been inserting large spatial buffers** on certain pesticide labels that restrict applications in counties where listed species **may be present**. For example, an herbicide was eliminated from use on approximately one million acres in 11 counties in Georgia. However, after further research, only 0.37 percent of the total acres in those counties represented suitable habitat. Although the effort of protection is important and supported by agriculture, current label restrictions are excessive in some situations as restrictions are not based on high-resolution data where a species likely occurs nor where and how pesticides are applied.*



County-wide restrictions



In-field downwind buffers (in red)

While entire counties have been removed from some product labels, EPA has also imposed in-field restrictions to mitigate ***potential*** *off-target movement such as conservation practices to reduce runoff and no-spray buffers to reduce spray drift. For example, some required downwind buffers could eliminate as much as 49.6% of the field from a product application. These restrictions are preventing the use of tools needed to control threatening weedy pests in fields that are nowhere near the documented historical habitats of concerned species.*

As the ***number of farms decline*** *rapidly and the* ***loss of U.S. agricultural land*** *exceeds 200 acres every hour, there is an expectation that we will need to* ***produce 70% more food by 2050*** *to sustain a growing population. This monumental task will only be accomplished if economically effective tools are available helping farmers prevent pests from stealing food, feed, and fiber.*

Methods developed from sound science can protect both concerned species and agriculture; in fact, protecting agriculture is the key to providing healthy habitats for wildlife. ***Funding is needed to help educate farmers on ways to protect endangered species, create better maps of where species occur, and research additional ways to reduce the risks from pesticides.***

National Invasive Species Awareness Week (NISAW)

NISAW 2023 was held virtually from February 20-26 and organized by the North American Invasive Species Management Association (NAISMA). Sponsors included the WSSA, Wyoming Weed and Pest Council, Washington Invasive Species Council, SePRO, UPL, Pacific States Marine Fisheries Commission, and Bayer.

NISAW 2024 is scheduled for **February 26 – March 3, 2024** in Washington DC. This will be the 25th anniversary and planning is already under way. My hope is that all the invasive species stakeholder groups traveling to Washington DC will make **establishing an invasive species management fund** their #1 priority. (see below)

Establishing an Invasive Species Management Fund

A common theme during the **Invasive Species Advisory Committee (ISAC)** meeting held virtually on March 6 – 8, and the first ISAC meeting since 2019, is that we need a consolidated all-purpose **source of funding for invasive species prevention, research, and management**.

Global trade provides many benefits to us as consumers, but there is no question that one of the indirect costs is the importation of invasive species, whether intentional or unintentional. I have begun work on Capitol Hill discussing legislation similar to what Hawaii passed into law in 2008 (HB2843) where an inspection, quarantine, and eradication service fee was assessed on the net weight of freight, computed on the basis of **50 cents for every 1,000 pounds of freight** brought into the state.

- As an example, there would be a $3 fee assessed for a 6,000 pound SUV imported into the U.S. A rough estimate of U.S. import data suggests that this inspection, quarantine, and eradication service fee would **generate about $1 billion per year** for a federal invasive species management fund. Please email me with suggestions.

-After speaking with the Congressional Invasive Species Caucus co-chairs, Reps. Elise Stefanik-R-NY and Mike Thompson-D-CA, as well as the Senate Interior & Environment Appropriations staff, the bigger question may be who gets the money and how to prioritize invasive species management projects.