



2022 WSSA Travel Enrichment Experience Award

Purpose: The Travel Enrichment Experience (TEE) will provide an opportunity for WSSA graduate students to participate in a five-day, four-night educational experience with professionals in a different WSSA region.

Student Application Deadline: Mayank Malik (mayank.malik@bayer.com) must receive applications by **May 9, 2022**. Please put “WSSA Travel Enrichment Experience” in the subject line.

Description of Scholarship: Scholarship winners will have a five-day, four-night educational experience of their choosing as described in the “Host Opportunities” table below. These opportunities for broadening each student’s knowledge of weed science include visits with industry, government, or university professionals working in field, lab, or extension settings. Each recipient will be awarded \$2000 from the WSSA to pay for expenses incurred during his/her experience.

Eligibility Requirements: Applicants must meet the following criteria:

1. Enrolled as a current degree-seeking graduate student (M.S. or Ph.D.) in good academic standing at an accredited college or university
2. Currently conducting or recently finished research in weed science
3. An active member of the WSSA at the time of application
4. **Must submit an abstract and present a 10-minute oral presentation about his/her experience at the next WSSA annual meeting.** Specifics will be provided directly to recipients.

Application Procedure: Submission of the following information as a single PDF file is preferred, but not required.

1. Completed application form (the final page of this document)
2. Cover letter describing applicant’s interest in weed science and the travel enrichment experience (< 1 page)
3. Brief resume or CV summary highlighting recent relevant experiences (< 1 page)
4. Two letters of support, one of which must be from the applicant’s graduate or major advisor
5. Academic transcripts (unofficial copy is acceptable)

Email the application information to Mayank Malik (mayank.malik@bayer.com) by May 9, 2022, with “WSSA Travel Enrichment Experience” in the subject line.

Selection Criteria and Process: Applicants will be evaluated based on the contribution of their research to the discipline of weed science and to the WSSA objectives, their academic record and scholarly achievements, and their potential contributions to the future of weed science. One student from each US region and one from Canada will be selected by an independent WSSA panel with no personal or advisory affiliation with the applicants.

Timeline: The selection process will be completed by May 15, 2022. TEE recipients and their host(s) will determine the date in 2022 for the experience to occur. The selection committee will function as a liaison between the recipients and their host(s) throughout the process.

Host Opportunities Organized by Region

Host Name and Institution	Location	Experience
Canadian Weed Science Society		
Dalhousie University: Dr. Scott White	Truro, NS	Management of perennial weeds in natural and agroecosystems, with particular emphasis on perennial weed management in wild blueberry
AAFC: Dr. Sara Martin	Ottawa, ON	Whole genome sequencing, population genetics, and evolutionary biology of the mustard family and herbicide-resistant weeds
AAFC: Dr. Andrew McKenzie-Gopsill	Charlottetown, PE	Weed biology, ecology and ecophysiology; plant-plant interactions; invasive species management; herbicide-resistant weeds; integrated weed management in conventional and organic production systems
FMC: Mitch Long	Saskatoon, SK	Exposure to commercial agriculture; weed science research and demonstration; market development and new technologies

Host Name and Institution	Location	Experience
North Central Weed Science Society		
Bayer Crop Science: Matthew Nelson and John Hinz	Ames & Huxley, IA	Interaction with weed scientists in trait technology and herbicide development in IA , plus exposure to commercial agriculture. Research areas include system-based weed management, new herbicide technologies, and market development. Experience includes opportunity to meet with seed partners, product managers, and research and development team
University of Illinois: Drs. Aaron Hager & Pat Tranel	Champaign, IL	Herbicide-resistant weed challenges in Midwest corn and soybean production, from the field to the lab
Purdue University: Drs. Bill Johnson & Bryan Young	West Lafayette, IN	Weed science research bridging the basic and applied aspects of weed management; exposure to field, lab, greenhouse, and extension weed science
University of Wisconsin: Dr. Rodrigo Werle	Madison, WI	Extension and applied weed management research in annual cropping systems with focus on biology, ecology and integrated management of troublesome weeds, herbicide resistance distribution and management, and off-target herbicide movement.

<p>North Dakota State University: Dr. Joe Ikley</p>	<p>Fargo, ND</p>	<p>Exposure to an Extension weed science program and applied weed control research in corn, soybean, and dry beans in North Dakota. There will be opportunities to visit with other NDSU Weed Scientists and tour weed control research in over a dozen crops across the state of North Dakota.</p>
<p>Bayer Crop Science: Drs. Neha Rana and Dawn Wyse-Pester</p>	<p>Sioux Falls, SD and Twin City, MN</p>	<p>Interaction with weed scientists in trait technology and herbicide development in the Dakotas and MN, plus exposure to commercial agriculture. Research areas include system-based weed management, new herbicide technologies, and market development. Experience includes opportunity to meet with seed partners, product managers, and research and development team</p>
<p>Kansas State University: Dr. Mithila Jugulam</p>	<p>Manhattan, KS</p>	<p>Exposure and experience in understanding of the mechanisms of the target and non-target site herbicide resistance in weeds, including hands-on opportunity to work on whole plant physiology, biochemistry, molecular biology, and molecular cytogenetics. Other focused research areas include the effect of environmental stress on herbicide efficacy and the development of herbicide-tolerant crops.</p>
<p>Corteva Agriscience Drs. Dawn Refsell, Eric Scherder, and Frances Meeks</p>	<p>Johnston, IA</p>	<p>Interaction with weed scientists in trait technology, herbicide development, and exposure to commercial development and support. Research areas include system-based weed management, new herbicide technologies, and market development. Experience includes opportunity to meet with seed partners, product managers, and research and commercial development team.</p>
<p>Corteva Agriscience Dr. David Simpson</p>	<p>Indianapolis, IN</p>	<p>Interaction with weed scientists in Application Technology, Biological Characterization, Regulatory, and Crop Protection Development and Discovery. Discover how we bring products from the lab to the field.</p>

Northeastern Weed Science Society

<p>University of Massachusetts – Amherst: Dr. Hilary Sandler</p>	<p>East Wareham, MA</p>	<p>Factors that influence the dynamics of crop and weed ecology within the cranberry production system</p>
<p>Syngenta: Drs. Larissa Smith & Erin Hitchner</p>	<p>King Ferry, NY</p>	<p>Industry experience in crop protection and field development with Syngenta in the Northeastern US</p>
<p>Virginia Tech: Drs. Shawn Askew, Jacob Barney, & Michael Flessner</p>	<p>Blacksburg, VA</p>	<p>Exposure to multiple disciplines, including environmental, chemical, and cultural effects on weed management in turfgrass (Dr. Askew); propagule pressure and ecological/niche/habitat impacts of invasive species on natural landscapes, as well as perennial grass bioenergy potential (Dr. Barney); and high-residue cover crops for managing herbicide-resistant weeds with consideration for herbicide carry-over from the cash crop to the cover crop (Dr. Flessner)</p>
<p>North Carolina State University: Dr. Wes Everman</p>	<p>Raleigh, NC</p>	<p>Weed management in corn, soybeans, small grains, and sorghum (milo); drone research for weed detection in row crops; water stress on crop-weed competition</p>
<p>USDA ARS Dr. Stephen Young</p>	<p>Beltsville, MD</p>	<p>The USDA Agricultural Research Service (ARS) is a leader in weed science research with over a dozen scientists located all across the United States. The diversity of research includes basic and applied approaches to better understand weeds and invasive plants, thus leading to the development of more sustainable management strategies in crop and non-crop systems. Whether invasive plants, like melaleuca in the Florida Everglades, leafy spurge in the Great Plains of Montana, or cheatgrass in the Great Basin of Oregon, or crop weeds, like Palmer amaranth in cotton and soybean fields of the southeast or velvet leaf in sweet corn cropping systems of the upper Midwest, ARS weed science is working on specific weed species in addition to addressing cutting edge topics, like climate change, cover crops, and automation technology in relation to weeds and invasive plants. At the national level, ARS weed science programs are overseen by National Program Leaders in the Office of National Programs (ONP) in Beltsville, MD, who work across departments and agencies, such as APHIS, EPA, USFS, BLM, DOI, and NIFA, to support the development of</p>

		grant programs, federal policies, and regulatory oversight. For graduate students interested in the TEE, please consider ARS as an option for developing a diverse and intensive program covering multiple research locations and ONP. Contact information: Steve Young, USDA-
Syngenta: Drs. Janis McFarland, Carroll Moseley, and Dan Campbell	Greensboro, NC	The Syngenta facility in Greensboro features a unique exposure to the weed science industry with Dr. Moseley (Sr. Environmental Stewardship & Policy Manager)
Rutgers Dr. Thierry Besancon	Chatsworth, NJ	Research focusing on weed management in specialty crops, including cranberry, highbush blueberry, vegetables, grape, and tree fruits; integration of cover crops to plasticulture vegetable production systems (tomato and cucumber); evaluation of locally adapted cover crop ecotypes and their impact on soil health of highbush blueberry fields; ecology of Carolina redroot and factors affecting its spread through cranberry beds; remote sensing to identify early stages of weed infestation in cranberry production system; vision-guided sprayer technology for localized herbicide applications in highbush blueberry; screening of herbicide resistance in New Jersey <i>Amaranthus</i> species; creation of extension material on weed identification.
USDA ARS: Dr. Steven Mirsky	Beltsville, MD	Experience working on integrated weed management projects with a focus on harvest weed seed control and cover crops. Experience working with a digital weeds team to develop a national weed image repository and low-cost weed mapping tools.
Cornell University: Dr. Lynn Sosnoskie	Ithaca, NY	High commitment to creating a unique learning environment. Weed ecology/biology studies; weed seedbanks; seedling emergence models; effects of climate change (drought) on crop-weed interactions; integrated management of invasive plant species in natural Northeastern U.S. landscapes; impact of deer on plant community succession
Southern Weed Science Society		

University of Arkansas: Dr. Tommy Butts	Lonoke, AR	Inside look at the role of an extension weed scientist; applied field research in AR row crops (corn, cotton, rice, soybean); application technologies; extension activities – field calls, meeting with growers and consultants, diagnosing problems, providing recommendations
Syngenta: Dr. Ethan Parker	Vero Beach, FL	Industry experience with Syngenta in Vero Beach, FL
University of Georgia: Drs. Stanley Culpepper & Eric Prostko	Tifton, GA	Peanut, corn, soybean, cotton, and vegetable weed management from an extension specialist's point of view
University of Florida: Dr. Stephen Enloe	Gainesville, FL	The successful applicant will work with faculty, biologists, and graduate students at the UF Center for Aquatic and Invasive Plants and will gain experience in aquatic and natural area invasive plant research. This will entail time working on greenhouse and aquatic mesocosm research and visits to field sites including lakes, wetlands and upland natural areas. The applicant will gain an understanding of the rationale for managing invasive plants in Florida ecosystems and will also be exposed to operational research efforts with State and Federal Agencies. While we utilize the principles of weed science, we are a long way from the agroecosystem. Come and see what we are all about!
Valent: Dr. Mallory Everett	Olive Branch, MS	Exposure to herbicide resistance in rice, cotton, soybean, corn, grain sorghum, peanuts, and sweet potatoes; experience with how industry cooperates with universities and independent companies throughout Arkansas, Tennessee, and Mississippi
Mississippi State University: Dr. Te-Ming (Paul) Tseng	Starkville, MS	Research focused on studying the physiology of herbicide resistance and characterizing the genetic basis of competitive traits in weeds using an interdisciplinary approach including molecular biology, cell biology, genetics, remote sensing, biochemistry, pathology, and agronomy. Identifying molecular mechanisms of resistance to various herbicide modes of action. Remote sensing to identify weed species and quantify herbicide crop injury.

University of Tennessee: Dr. Jim Brosnan	Knoxville, TN	Turfgrass weed management
BASF: Drs. Greg Stapleton & Cletus Youmans	Memphis, TN	Experience with industry product development and technical service in the Mid-South
Texas A&M University: Dr. Muthu Bagavathiannan	College Station, TX	Developing IWM tools (including cover crops, HWSC) for various production systems; weed ecology, gene flow, and evolution; seedbank management; decision-support tools; UAVs and precision weed management
Corteva Agriscience: Dr. Chris Meyer	Leland, MS	Overview of the weed management market in specialty crops for the southeastern US. They would have a chance to shadow field scientists in the field and visit a research center in Bradenton, Florida. Focus would be on specialty crops including citrus and pasture and land management.
Mississippi State University: Drs. Darrin Dodds and Dan Reynolds	Starkville, MS	Research, teaching, extension, and administrative experiences that could include use of drones in agriculture (OTM, crop health); assessment of herbicide volatility; use of PWM sprayer technology; use of Canvas / Respondus in teaching and training; measurement of sprays – droplet size and imaging; use of tracer dyes to assess off-target movement; adjuvants in weed science – field and lab; weed control programs in corn, cotton, peanut; UAVs in weed science; role of extension in generating and disseminating information; role of administration in relation to faculty activities
Bayer Crop Science: Jay Mahaffey	Scott, MS	Research and demonstration trials in multiple crops and disciplines; field tours; operation of an industry research and demonstration facility
Texas Tech University: Dr. Peter Dotray	Lubbock, TX	Herbicide resistant weed management in cotton and cotton rotation systems; Extension work in the Texas Southern High Plains
Bayer Crop Science: Dr. Gary Schwarzlose, Russ Perkins, John Everitt, Greg Steele	Corpus Christi, TX	Research and demonstration trials in multiple crops and disciplines; field tours; operation on an industry research and demonstration facility. Exposure to Trait and Crop Protection R&D, Development, and Technical Services aspects of the organization. Gain experience with field

trials, University and customer interaction, and corporate activities.

Western Society of Weed Society

Colorado State University: Drs. Franck Dayan & Todd Gaines	Fort Collins, CO	Molecular genetics lab experience includes DNA extraction, genotyping assays, and qPCR for gene copy number; weed genomics for understanding competitiveness and hardiness
Montana State University: Drs. Sharlene Sing & Sarah Ward	Bozeman, MT	Explore the role of biocontrol in integrated weed management. Laboratory experience will include assessment of novel biocontrol agents and visiting a secure federal quarantine facility for newly imported biocontrol species. Field trips to map populations and monitor impacts of insect biocontrol on toadflax and tamarisk invasions in the Greater Yellowstone ecosystem surrounding Yellowstone National Park. Some high-elevation backcountry hiking required, encounters with bear and bison possible, spectacular scenery guaranteed.
Syngenta: Marty Schraer	Meridian, ID	Exposure to the life of an industry field development representative. My position covers weed science, entomology, nematology, and plant pathology in barley, spring wheat, onion, dry pea, potatoes, soybean, and sugarbeets. I'll end by stating that anyone choosing this "experience" will certainly get one.
Oregon State University: Dr. Joel Felix	Ontario, OR	Development and support of weed management tactics that address grower economic growth while enhancing environmental stewardship for a viable and sustainable agriculture. Currently, we have ongoing studies on weed management in dry bulb onions, sugar beets, corn, potato, alfalfa, and dry beans in the irrigated fields of Eastern Oregon
New Mexico State University: Dr. Brian Schutte	Las Cruces, NM	Working with farmers to develop integrated weed management strategies for field and specialty crops in New Mexico.
Corteva Agriscience: Dr. Joseph Yenish	Billings, MT	

Scholarship Application Form

(Send all documents to Mayank Malik (mayank.malik@bayer.com) by May 9, 2022)

1. Applicant Name:

2. Selection of Host Institution for the WSSA Travel Enrichment Experience:

First Choice: _____

Second Choice: _____

Third Choice: _____

3. Cover Letter (max 1 page):

4. Resume or CV Summary (max 1 page):

5. Academic Transcript (official transcripts NOT required):

6. Include two letters of support, including one from your academic advisor.