



Graduate Student of the Month

Jake Montgomery – Ph.D. Student at Colorado State University

What university do you attend and what is your research focus?

I attend CSU as a PhD student. My projects center around understanding the genetic and physiological basis of herbicide resistance in weeds and to develop new herbicide resistance traits in wheat. I like to think of myself as sort of a double agent in the evolutionary arms race of herbicide resistance, stealing secrets from weedy evolution to help improve crop production.

What drew you to weed science?

I grew up on a corn and soy farm in central Illinois. Competition from glyphosate-resistant weeds was biggest issue for our farm many others in the area. I chose to study weed science because I wanted to make an impact on farming communities like the one that I grew up in. Along the way, I have come to love the research community within weed science. It has been a great opportunity to inform practical applications in agricultural management as well as to contribute to our basic understanding of plant biology.



What is your favorite thing about the WSSA or your regional society?

I have had the pleasure of attending three annual WSSA meetings throughout my graduate career. My favorite thing about the meetings has been the diversity of research topics that the community is working on. In one room, I can learn about the latest findings in optimization in cover crop termination; the next, evaluation of new herbicide program to be used with a new stack of herbicide resistance traits; next, population genetics to understand ecology of new invasive species. Weed science is a multifaceted discipline, and I think this is most on display at our national meeting.

What is your favorite weed and why?

Many weeds compete for my heart, but henbit reminds me of home. It covers fields in beautiful pink flowers every spring and does not stick around to compete with summer annual crops. It can be an issue while planting because it can plug up planting implements but usually does not make farmers' lists of their most hated weeds.

What is your long-term goal?

I want to make an impact on farming communities and the clearest way I can see myself accomplishing this goal is by joining industry researchers in developing new technologies for farmers. I hope to use the diverse experiences I have had to generate innovative approaches that are helpful and realistic for agriculturalists.

If you know a hardworking graduate student you would like to be featured, nominate them by emailing ngodara@vt.edu

WSSA Alumni Spotlight

Dr. Dawn Refsell – Central US Field Sciences Leader, Corteva Agriscience

What universities did you attend/degrees did you earn?

B.S. in Agronomy, M.S. in Crop Production and Physiology, Iowa State University
Ph.D. in Agronomy, Kansas State University

What is your current job title and how long have you been with your current employer?

Central US Field Sciences Leader, Corteva Agriscience for 2.5 years

What is the favorite thing about your job so far?

I love the diversity of people and talents at Corteva. There is so much unrealized potential to network, innovate, and collaborate. I am constantly considering how I can help elevate the uniqueness and contributions that everyone brings to the organization.

What is something you wished you knew as a student that you know now?

Your ceiling is limited to what you think you know. Don't limit yourself or be blind to ideas, be willing to learn along your journey. Inclusivity goes to long ways.

What is the biggest piece of advice you'd give students searching for a job?

Be willing to apply for positions you may not feel comfortable or qualified for (take the chance). They are opportunities to learn about a role, or organization, and build a network even if you don't get it. Believe in yourself.

Any final thoughts?

Experience in leadership can be obtained through committees and service in professional societies, be engaged and serve your passion. Do not let your career define who you are as a person, there is so much to life so go enjoy the ride.



WSSA GSO Contact Info

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Graduate Student of the Month

Matthew Fatino – Ph.D. Student at the University of California, Davis

What university do you attend and what is your research focus?

I am a Ph.D. candidate at the University of California, Davis, and my research focus is on in-season management of the invasive noxious weed, branched broomrape (*Phelipanche ramosa*). It is a parasitic plant that attaches to a host plant's roots and presents a major threat to the California processing tomato and seed industries.



What drew you to weed science?

My introduction to weed science was through an internship during my undergraduate degree doing applied research for a chemical company. The applied nature of weed science was very appealing to me, as well as the intricacies of managing weeds in the various specialty cropping systems we have in California.

What is your favorite thing about the WSSA or your regional society?

My favorite thing about WSSA is its ability to connect scientists from all over the world. Working with a unique weed in a unique cropping system, it is often hard to meet with folks regionally with experience studying or managing branched broomrape in tomatoes. Attending a WSSA conference enabled me to meet with researchers from across the nation and the globe who have experience working with branched broomrape, and our discussions and connections were invaluable to my research and career in weed science.

What is your favorite weed and why?

Branched broomrape, and broomrapes in general, are a very unique and challenging species to work with and I really enjoy the dynamic challenges they present. My least favorite weed by far is field bindweed (*Convolvulus arvensis*).

What is your long-term goal?

My long-term goal is to land a career in industry or the public sector that enables me to work with growers and stakeholders and help address the issues they face. I have been fortunate to see the positive impacts on growers while working in the industry as well as working with extension professionals of the University of California throughout the state, and would be honored to serve my local stakeholders in either setting.

If you know a hardworking graduate student you would like to be featured, nominate them by emailing ngodara@vt.edu.

WSSA Alumni Spotlight

Dr. John Buol – North America Technical Manager for Selective Herbicides, Bayer Crop Science

What Universities did you attend/degrees did you earn?

B.S. in Biochemistry, University of Wisconsin-Madison
M.S. and Ph.D. in Plant and Soil Science (Major - Weed Science & Minor - Statistics), Mississippi State University

What is your current job title and how long have you been with your current employer?

North America Technical Manager for selective herbicides at Bayer and have been with the company for about 4.5 years.

What is the favorite thing about your job so far?

One of the best aspects of my role is the amount of cross-functional collaboration with internal and external stakeholders I've had the opportunity to engage in, as well as the genuine friendships I have been able to make with many colleagues. I get to meet and collaborate with people both inside and outside of Bayer who are from all over the world; the diversity of experiences and perspectives is inspiring!

What is something you wished you knew as a student that you know now?

As a graduate student, it was very easy to fall into the trap of complete absorption with work and academic pursuits. This often came at the expense of very important life values such as adequate sleep, a good diet, time unplugged, etc. I often wish I'd struck more of a balance between these values and work, because at some point that extra hour formatting a dataset after hours pays less of a life dividend than reading a book, going for a walk, or meeting up with friends.

What is the biggest piece of advice you'd give students searching for a job?

Something I have learned since beginning my career is the importance of intentional networking. As scientists, sometimes we may feel inclined to let our work speak for itself; but regardless of career goals, networking is a skill that should be developed much the same as one might learn about technical skills. Graduate school is an excellent incubator for developing networking skills that will pay real dividends later in your career. At first, intentional networking felt somewhat unnatural to me, but has led to real and lasting friendships – I've recently planned vacations with colleagues who have become genuine close friends.

Any final thoughts?

WSSA is a truly exceptional community of researchers, educators, innovators, advocates, and more. As graduate students, you are not on the fringes of that community- you are its core! Graduate school may be one of the most challenging endeavors you can pursue, but as my major professor once told me: "you can get as much out of it as you put into it." This endeavor is an investment in yourself and will benefit you in so many ways along the journey, and at its end-stay the course! Two thoughts that have helped me (neither are original to me):

1. Money is exchanged, only time is truly spent. Spend yours on things you are passionate about and that bring you fulfillment within the contours of professional and personal lives.
2. Nobody cares how much you know until they know how much you care. Let your passion and commitment to your values shine on your journey.



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2023 WSSA Travel Enrichment Experience Award Winners

- **CWSS** – Isabelle Aicklen (University of Guelph); Hosted by Dr. Mark Fisher (Corteva Agriscience, Sacramento, CA)
- **WSWS** – Victor Hugo Vidal Ribeiro (Oregon State University), Hosted by Dr. Gary Schwarzlose (Bayer Crop Science, Corpus Christi, TX)
- **SWSS** – Bholuram Gurjar (Texas A&M University); Hosted by Dr. Darrin Dodds and Dan Reynolds (Mississippi State University)
- **NCWSS** – Jeanine Arana Cordonero (Purdue University); Hosted by Drs. Lauren Lazaro, William Patzoldt, Jesaelen Moraes (Sunnyvale, CA)
- **NEWSS** – Eli Russell (Virginia Tech); Hosted by Dr. David Simpson (Corteva Agriscience, Indianapolis, IN)
- **WSSA Graduate Students!! Please RSVP for graduate student mixer for the upcoming 2024 WSSA/SWSS annual meeting.**



TOPGOLF

YOU'RE INVITED

TO OUR

GRADUATE STUDENT MIXER

SUNDAY, JANUARY 21, 2024 | 6-9PM

STUDENT FEE: \$25
NON-STUDENT FEE: \$100
PAYMENT CAN BE MADE AT THE TIME OF SWSS/WSSA MEETING REGISTRATION

RSVP HERE or scan QR Code
<https://graduatestudentmixer.rsvpify.com>

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WEED SCIENCE SOCIETY OF AMERICA

SWSS
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GRADUATE STUDENT
ORGANIZATION

VOLUME 3

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November 2023

Graduate Student of the Month

Jake Patterson – Ph.D. Student at Mississippi State University, Starkville, MS

What university do you attend and what is your research focus?

I am a PhD student with Dr. Darrin Dodds at Mississippi State University. My research evaluates novel application methods to mitigate auxin + graminicide herbicide antagonism in cotton and soybean cropping systems. The traditionally accepted solution for overcoming antagonism is to increase the rate of the antagonized herbicide. While this may be effective in the short term, it is not sustainable in the long term. Hopefully, my research will provide viable on-farm solutions for growers.



What drew you to weed science?

My passion for weed science began while taking the Principles of Weed Science course during undergrad at Auburn University. I enjoyed learning about all the herbicide MOAs, along with their associated symptomology, weed identification, and sprayer calibration. After excelling in the course, I knew I had found an agricultural discipline that I was good at and passionate about, which prompted me to pursue an internship with a chemical company to see if this was something I wanted to do for a career. I ended up completing an internship with DuPont Crop Protection in field research and development that next summer. The work I did and the skills/knowledge I gained that summer confirmed that weed science is my passion and inspired me to embark on my newly found career via graduate school.

What is your favorite thing about the WSSA or your regional society?

My favorite thing about WSSA and SWSS is how they provide numerous opportunities to better myself by being surrounded by highly competitive environments of graduate students from my region and across the country. Opportunities provided by WSSA and SWSS, such as annual meetings and the weed contest, to network with other students, academic professionals, and industry professionals are invaluable.

What is your favorite weed and why?

While many people may despise the weed, my favorite weed is Palmer amaranth (*Amaranthus palmeri*). The ability of the weed to evolve resistance so rapidly, display vast biotypic and ecotypic differentiation, and possess overall resilience is fascinating. The weed species reminds me of humans – constantly adapting and overcoming, regardless of adverse situations. I like the weed so much that I named my four-month-old puppy Palmer.

What is your long-term goal?

While I enjoy conducting field research, I also immensely enjoy working with people. My long-term goal is to work for an agrochemical company in field research and development or a technical support role, where I can make a difference and aid in providing solutions for growers.

If you know a hardworking graduate student you would like to be featured, nominate them by emailing ngodara@vt.edu

WSSA Alumni Spotlight

Dr. John Brewer – Research and Development Scientist, Syngenta

What Universities did you attend/degrees did you earn?

B.S. in Agriculture, University of Tennessee at Martin (UT Martin)
Ph.D. in Plant Pathology, Physiology, and Weed Science,
Virginia Tech

What is your current job title and how long have you been with your current employer?

Research and Development Scientist with Syngenta at the Vero Beach Research Center in Vero Beach, FL. I have been in this position for 2 years.



What is the favorite thing about your job so far?

The part that I enjoy most about my job is having the ability to work on a broad range of innovative projects across multiple teams within the company that range from early-stage development all the way to formulation and commercialization of herbicides, which also allows me to network with a lot of people throughout the company.

What is something you wished you knew as a student that you know now?

That being heavily involved in your regional and national societies can be one of the most valuable factors in helping you secure a potential job in the future after school. This can include competing in contests, being active on committees, attending grad mixers, and many other similar events. The more people that remember your name through direct interaction and networking or indirectly through society events will help pave the road for your future career no matter if it's in industry or academia.

What is the biggest piece of advice you'd give students searching for a job?

That they shouldn't be scared to apply for jobs that might be outside of your exact expertise or that may not fit their perfect job description. Some jobs are difficult to get due to overall availability, and you will have a better chance of securing that job if you're already an employee within that company. Many times, it is easier to move within your preferred company than trying to get a job when you're external. Also being too rigid in your job search (type, location, pay) can make it difficult in finding and securing employment.

Any final thoughts?

Please don't forget to enjoy your time in graduate school. I know that it can be stressful, difficult, and all-consuming, but take time to make friends and lifelong colleagues with other students, professors, and industry professionals. It will benefit you in so many ways once you graduate, and your mental and physical health is more important than that degree.

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- **Congratulations to the 2023 Science Policy Fellows!**

Annu Kumari – Ph.D. candidate at Auburn University

Cynthia Sias – Ph.D. candidate at Virginia Tech

- **Graduate Student Mixer – 2024 WSSA/SWSS annual meeting**

Please RSVP for the student mixer at the 2024 WSSA/SWSS annual meeting. The WSSA GSO team is looking forward to seeing all of you in San Antonio!



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Graduate Student of the Month

Het Desai – Ph.D. Student at Montana State University, Bozeman, MT

What university do you attend and what is your research focus?

I am currently undertaking a Ph.D. program at Montana State University. My research is centered on assessing the suitability of triple-stacked sugarbeet cultivar and the feasibility of harvest weed seed control methods for Montana cropping systems.

What drew you to weed science?

Farming has been the primary occupation of my family for generations. With a deep-rooted desire to contribute to the agricultural community, I was encouraged by my father to pursue a career in agricultural research. During my MS in Australia, I had the privilege of meeting Dr. Bhagirath Chauhan, who introduced me to the fascinating realm of Weed Science. Dr. Chauhan also inspired me to apply for a scholarship in the USA. In summary, my longstanding aspiration to make a meaningful contribution to society has found its purpose through my involvement in weed science research.

What is your favorite thing about the WSSA or your regional society?

WSSA and regional societies offer an excellent platform for students to showcase their work. Additionally, these societies provide me with the opportunity to meet many working professionals in my field, facilitating valuable connections.

What is your favorite weed and why?

My favorite weed is *Chloris virgata* because it holds a special place in my heart as the first weed species I ever worked on.

What is your long-term goal?

My preference is to work in academia after my Ph.D.



WSSA Alumni Spotlight

Dr. Todd Gaines – Associate Professor, Colorado State University, Fort Collins, CO

What Universities did you attend/degrees did you earn?

B.S. in Soil and Crop Science; M.S. in Plant Breeding and Genetics; and Ph.D. in Weed Science from Colorado State University.

What is your current job title and how long have you been with your current employer?

Associate Professor of Molecular Weed Science in the Department of Agricultural Biology at Colorado State University for the last 10 years.



What is the favorite thing about your job so far?

I love looking at all the fascinating questions and problems that arise in weed science, and using the tools and approaches of molecular biology and genomics to try to learn new information and develop new technologies to help with weed management. Getting to work with amazing students and colleagues on the research is so much fun!

What is something you wished you knew as a student that you know now?

That although getting critical reviews on manuscripts and grant applications is tough at the time, you can use it to improve your own current and future work. Also, to take a leaf sample of every plant you ever use in a genetics study, you never know when you might need to check something in its DNA later!

What is the biggest piece of advice you'd give students searching for a job?

For an academic job, my advice would be to be bold and clear about your vision for your research program in the position, to show specific things you would do that would be innovative and impactful.

Any final thoughts?

Weed science continues to grow with challenges, needs, and opportunities. I want to encourage all the students to keep up the great work, explore a range of career opportunities, and know that you're in a field that makes a huge impact!

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- **Top Golf Graduate Student Mixer – 2024 WSSA/SWSS annual meeting**

Please RSVP and register for the student mixer at the 2024 WSSA/SWSS annual meeting. The WSSA GSO team is looking forward to seeing all of you in San Antonio!



- **Graduate Student Events at the 2024 WSSA/SWSS annual meeting**

Top Golf Graduate Student Mixer – Sunday, January 21, 2024 (6:00 PM - 9:00 PM)

WSSA/SWSS Student Meeting & Luncheon – Monday, January 22, 2024 (11:00 AM - 1:00 PM)

Women in Weed Science Event – Monday, January 22, 2024 (2:00 PM - 3:30 PM)

“Overcoming Hurdles in Graduate School” Student Breakfast – Tuesday, January 23, 2024 (7:00 AM - 8:00 AM)

Quiz Bowl/Mixer – Tuesday, January 23, 2024 (5:00 PM - 7:00 PM)

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