Science Societies

Classroom to career: Heidi Peterson

By Riley McCauley

November 24, 2026



Heidi Peterson standing in a field of cover crops that will be grazed.

Our "Classroom to Career" series spotlights members who began as students and grew into thriving professionals.

This article features Heidi Peterson, who shares her journey into soil science, the challenges she faced when she first became a member of the Societies, what leadership positions have taught her, and how she’s mentoring the next generation of soil scientists.

From soils to classrooms

Dr. Heidi Peterson was leading a recitation session for Introduction to Soil Science at Purdue University when she looked up and saw a familiar face in the back of the room.

“I remember, I was in the front of the classroom teaching my recitation, and I saw my dad's head pop in the window. And he has this big smile,” recalls Peterson. Her father was not only proudly cheering on a first-generation college graduate, but he was also watching his daughter, a master’s student at the time, instructing the very same class that first sparked her interest in soil science as an undergrad. “After my first lecture, I came back to my room, and said, ‘That's it. I am going to major in soils, and I'm going to work in soils.”

Growing up, Peterson appreciated spending time outdoors with her parents and sisters while on vacation. It was there that she first discovered a love for the natural world. Years later, her father would watch her share that same passion with her students.

She went on to earn a master's degree in Agronomy with a focus on Pedology from Purdue and a Ph.D. in Biosystems and Agricultural Engineering from the University of Minnesota. Today, she holds multiple leadership positions where she shares her passion for soils and the environment, including as vice president of Agricultural Research & Conservation at the Sand County Foundation, a national non-profit that encourages farmers, ranchers, and forestland owners to adopt land management that supports the environment and their bottom line. She also serves as an adjunct professor at the University of Minnesota.

But how did she make those leaps from student to leader?

Growing into new roles and familiar faces

As an undergrad at Purdue, Peterson worked within a robust soil science department and engaged faculty, with strong connections and mentors. Her adviser at Purdue encouraged her to go to conferences and present her work, so while she was working toward her master's degree, Peterson became a member of the Societies to foster more connections and opportunities. At the time, she felt a bit intimidated. "I just remember thinking, oh, this is kind of scary because it's so big, and I didn't know a lot of people," she says. She observed how these well-established researchers presented their findings, interacted with each other, and used the experience to help guide her own communication and leadership skills.



Heidi Peterson became a member of the Societies while she was working towards her master's degree. Over time, the pool of people she didn't know continually got smaller, and the faces became more familiar at conferences.

She soon realized that with time, being a part of the Societies "just becomes more personal." Over the years, Peterson has volunteered in numerous capacities with the Societies, serving on committees and editorial boards, and has taken on a number or leadership roles, including Presiding Leader of the Nutrients and Environmental Quality Community, Chair of the Environmental Quality Section, and most recently, Chair of the Agronomic Science Foundation Board of Trustees. Through volunteering within the Societies, the pool of people she didn't know continually got smaller, and the faces became more familiar at conferences.

While Peterson was serving as Chair of the Environmental Quality Section, she met Dr. Jim Ippolito, a professor of environmental soil health (and 2027 ASA President). She remembers running into Ippolito at another scientific meeting and how he invited her to sit at his table and introduced her to other scientists he was chatting with. By being an active member of the Societies, she "felt more comfortable asking other members more direct questions because I was able to get to know them better by sitting alongside them during committee meetings," she says.

Beyond personal connections and leadership opportunities, membership in the Societies introduced Peterson to research with real-world impact. While working toward her Ph.D. and as a post-doc, she volunteered to review scientific manuscripts for the *Journal of Environmental Quality* and later served the journal as an associate editor and now as a technical editor. “I've had the chance to see research that really is practical and can make a difference to the way we manage our agricultural landscapes. And that was a fear of mine as a graduate student,” she admits. “I didn't want to be working and doing research that was just going to sit on a shelf. I wanted to make sure that my research was going to make a difference and could be actionable on the landscape.”

Connecting farmers with new practices

Dr. Peterson served as a Research Scientist for the State of Minnesota and as a Program Director for the International Plant Nutrition Institute before joining the Sand County Foundation, an organization that provides on-farm conservation demonstrations, K-12 pollinator habitat education, and landowner recognition through the Leopold Conservation Award.

Making the world smaller through participation

“What I always tell people, especially graduate students, is that as you participate and you put yourself out there, [the Societies become] smaller and smaller and smaller," says Heidi Peterson. "And you start to get delayed going to meeting rooms because you run into all these people that you've met along the way that you wouldn't have known otherwise if [you] hadn't been a member.

"You start to know others on a more personal level. And I really like that. And it has helped me learn and grow and think about my own leadership and communication skills because you just see how people interact with each other."

Peterson's role as vice president of Agricultural Research & Conservation allows her to develop research priorities that connect her team of scientists with landowners to address regenerative and soil health management concerns. She has applied her experience editing for the *Journal of Environmental Quality* to improve her approach to proposal writing by more effectively communicating the research need.



Heidi Peterson at a grassfed beef operation practicing intensive rotational grazing in Kentucky.

To create an effective team, Peterson looks for scientists who can adapt to any situation. "I really enjoy working with scientists who [are]...humble because... it is so important that when we're working with [landowners], we are truly working with them. We are listening to them, and we are learning with them."

Dr. Peterson says the best research ideas come directly from the farmers. "To be relevant, you need to get out to the field days and workshops where the land managers are. If there are side conversations going on between farmers, I might scooch over and join in. It's easy to build out research with those farmers who are curious to learn how soil health management impacts productivity and environmental outcomes," she says.

Peterson credits the Societies for her ability to evaluate what issues landowners are facing and bring together an effective, interdisciplinary team to solve it. “When I think about the takeaways from the Societies, to be really good at conservation work, I think you have to understand how all the pieces fit together, and you have to look at it from a system perspective,” she says.

Moving into the future



Cattle drive to kick off Sand County Foundation's grassland resilience project.

The ability to take initiative and present solutions is how farmers and landowners are confronting changing environmental conditions. And as the next generation enters the world of conservation sciences in uncertain climates, Peterson is teaching students that anyone can step up and make a difference. She reflected on a memory during one of Sand County Foundation’s programs for K-12 students.

“We heard from one of the students involved in the project that after growing their own plants indoors and transplanting them outside to create a pollinator habitat, it gave them hope that they can make a difference.” She paused for a moment before saying, “I get emotional because so many kids, they don't have the chance to get outside anymore to explore nature. And I think that that is a really important part of what we do—we can get kids outside doing something that matters, and they see that connection to the land.”

"I think that that is a really important part of what we do—we can get kids outside doing something that matters, and they see that connection to the land."

As a member of SSSA and ASA for two decades, Peterson has connected with fellow soil scientists, mentors, and peers who have built her confidence in the field, the office, and within leadership positions. She gives back through editing, mentoring, and educational roles to carry on and support the passion of the next generation of agricultural scientists. Now, Peterson remains curious and hopeful for the future by engaging with people of all backgrounds and learning alongside innovative farmers who are passionate about what they do.

> "I think the best part of it is the days when my phone pings, and it's a picture from a farmer or a rancher of just something that they're enjoying on their land."

More career profiles

Back to issue

Back to home

Member Hub

Text © . The authors. CC BY-NC-ND 4.0. Except where otherwise noted, images are subject to copyright. Any reuse without express permission from the copyright owner is prohibited.