



**Science
Societies**

From Brazil to Capitol Hill

A member's journey in research and science advocacy

By Alison Jennings

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Endy Lopes Kailer with the U.S. Capitol in the background.

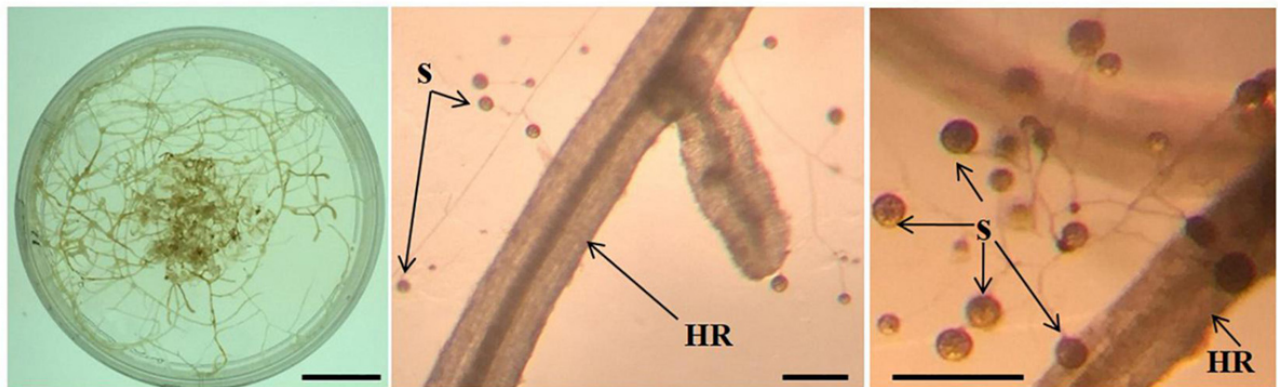
- Every year, Society members and certified professionals travel to Washington, DC for Congressional Visits Day (CVD), a two-day long opportunity to engage with policymakers and advocate for agricultural research funding.
- Endy Lopes Kailer, Ph.D. candidate in Agronomy at Kansas State University, was one of the 50+ participants at last year's CVD, thanks in part to a CVD award she received from the Societies.
- With award applications currently being accepted now through December 3 for the next CVD in March, Kailer shares her journey in research and science advocacy and offers tips for prospective award applicants.

Crops and soils have been a part of Endy Lopes Kailer's life for as long as she can remember. She grew up on a small family farm in Brazil, where the whole family pitched in to raise dairy cattle and grow sugarcane, corn, beans, and other crops. Some of her favorite childhood memories involve going to the field with her mother and father, spending the early mornings together harvesting crops and collecting fresh milk from their cows.

“I’ve always been involved with soils and plants,” she says. “I always saw them as our livelihood—everything was dependent on them. I always knew that I wanted to work with something related to that.”

As she got older, she hit the books. She went on to work toward her bachelor's in Agronomy first at the University of Kentucky, finishing her degree at Federal University of Viçosa (UFV) in Brazil. She stayed at UFV to finish her master's in Agronomy, where she began to research how soil microbiology influences agronomic practices and crop yields. Just this week, she defended her Ph.D. at Kansas State University, building off of the work she began during her master's.

Small but mighty



*Endy Lopes Kailer studies arbuscular mycorrhizal fungi (shown here), which connect to plant roots and provide many benefits to soils and crops. This image is part of a figure originally published in *Frontiers in Plant Science* by [Qi et al. \(2026\)](#). S=spores and HR=hairy root. [CC BY 4.0](#).*

Now, she spends her days balancing field and lab work, teaching, and writing. She studies a group of soil microorganisms with a big impact: arbuscular mycorrhizal fungi (AMF). These tiny organisms have a symbiotic relationship with the majority of plants on earth, including many crops. The fungi expand plant root systems, which help plants

more efficiently take up essential nutrients like phosphorus. The fungi also help the surrounding soil form clumps (aggregates), which reinforces soil structure, helping with water retention and erosion reduction. This is possible as AMF utilize their fungal network (hyphae), which Kailer describes as akin to a spider web or a hair net, to physically hold soil particles together. These aggregates are further cemented by sticky substances the AMF produce alongside other soil microbes like bacteria. But, she adds, this web is fragile and can be easily disturbed by outside forces.

“Imagine that you have a hair net and you fill it up with pebbles,” she explains. “That hair net is going to be able to hold the pebbles together. But if you till your soil, or, you poke a hole in that hair net, the pebbles are going to fall and you're going to lose part of them.”

Kailer aims to protect and restore these microbial communities on our crop fields. Her research investigates how different agricultural practices affect presence of AMF: Tillage and excess fertilization, for example, have been shown to lower natural abundance of the fungi. So, how do we bring them back? She compares different regenerative practices, like bioinoculants, cover crops, and no-till agriculture, to see what works best.

“It's very exciting work,” she says. “It has a lot of potential for saving farmers money on phosphorus fertilizer, but especially for building soil health and decreasing the dependence on external inputs.”

Advocate for your work

The long-term science experiments that occur on agricultural fields need to happen over the course of multiple years to effectively capture slow acting, but significant, ecological changes. This means that stable, reoccurring funding is critical to get the actual results that growers need.

There is a gap between what happens at research hubs and what policymakers hear. Kailer argues that some of the best people suited to bridge that gap are those involved in ag research.

"It takes time for carbon to build up in the soil," she says. "Projects that monitor shifts in microbial communities and changes in soil health can take up to four years before you start seeing the results. So, what happens if you lose your funding on Year 2?"

There is a gap between what happens at research hubs and what policymakers hear. Kailer argues that some of the best people suited to bridge that gap are those involved in ag research. By making it clear where the money goes, the goals of the research, and how the expected results will help our food systems, she hopes to better emphasize why science and its funding matters.

Kailer has done some advocacy work within her state, thanks to opportunities awarded to her from Kansas State University. But she wanted to push the needle further and bring her efforts to the national level. That's why she applied for an award to attend Congressional Visits Day (CVD), a two-day opportunity hosted by the Societies each year to communicate with federal policymakers and their staff about the importance

of food and agricultural research. In February this year, she and more than 50 other members and Certified Crop Advisers traveled to DC to participate in CVD.



Endy Lopes Kailer meeting with a staff member in the office of Sen. Jerry Moran (KS) in February.

For people with no experience in science policy, jumping straight into meetings with elected officials can be an intimidating idea. That's why on the first day of CVD, all attendees go through training on topics in science policy and science communication.

"As researchers, we are used to using jargon and talking a certain way to other scientists. But it is really important for us to learn how to translate that to the general population—or to policymakers who don't necessarily have an ag background," she says.

The next day, the newly minted science advocates are grouped together by home state and sent to talk with congressional staff. That way, not only is each group talking as scientific experts, but as constituents, which makes each meeting more impactful for both parties.

Kailer's group met with representatives, senators, and staffers from the offices of Reps. Tracey Mann, Ron Estes, Sharice Davids, and Derek Schmidt as well as Sens. Roger Marshall and Jerry Moran. The policymakers got to hear about real science that is happening right in their own backdoor.

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"We were running around the whole time. That was something that I did not expect—Congress is huge," she says. "So, sometimes we would have a meeting on one side [of the building], and then we had 10 minutes to run to the other side."



Endy Kailer meeting with Reps. Tracey Mann (KS, left image, second from left) and Ron Estes (KS, right image, second from right). Also pictured are Certified Crop Adviser Skylar January (blue suit, red tie) and CSSA member Aaron Kusmec (gray suit, black tie).

Most of their time was spent talking to staff, who would go on to forward what they learned to the representative or senator they work for. Occasionally, Kailer and the others were able to talk to the policymakers themselves, but these meetings were always kept brief—there’s always something happening in the Capitol. Regardless of who they were talking to, each meeting had to make a quick and powerful impression.



Endy Kailer brought this pamphlet to CVD explaining arbuscular mycorrhizal fungi (AMF). These types of visuals can quickly grab the attention of policymakers and their staff.

Kailer had ideas about how to quickly grab her audience's attention. She brought two kinds of visuals with her—pamphlets explaining what AMF is and resin blocks with preserved soil samples inside. The clear blocks contained a series of soil aggregates from either a farm that had done conventional tilling for 35 years or a prairie—undisturbed and full of fungi. The pamphlets contained pictures of plant roots that either had an established association with AMF or were missing their symbiotic fungi. The difference in the root systems was clear and illustrated the fungi's impact on soil and plant health. Kailer advises attendees to bring some type of easy-to-understand

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For those who are interested in attending CVD, applications for travel awards are open until December 3. Selected participants will receive fully funded travel and lodging to attend. Kailer has some tips for the prospective applicants:

- Describe what the opportunity would mean to you and be sure to be specific. “It’s much more than just physically being in Congress,” she says. “Why do you want to learn more about science policy? What’s the big picture?”

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- Research the policymakers from your state, and their political beliefs, ahead of time. It's very important to know who you'd be paired with if you're awarded funding to go to CVD.
- If possible, reach out to previous winners to hear why they applied and what they included in their application. "I am always happy to help," she adds. "Whoever wants to contact me, I will always be more than happy to talk about my experience." You can contact Kailer at endy@ksu.edu ([send message](#)).

But most importantly, "I think as long as you talk from the heart," she says, "about why you want to be there and the importance of that award to you. I think that will give you a pretty good chance."

Apply now!

The next Congressional Visits Day will take place in **March 2027**.

Applications for [the Congressional Visits Day Award](#) are now open. These awards, available to all Society members, help support participation in CVD and ensure scientists' voices are represented in conversations with policymakers. If you're interested in joining CVD in March, apply by December 3.

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