



Science
Societies

Team USA wins the World Cup of soil judging

Fifth International Soil Judging Contest hosted in Nanjing, China

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Team USA participants. Clockwise from top left: Holden Mrizek, India Williams, Callie Goodwin, Sinclair Anderson, Cole Chapman, Zie Goodman, Coach Paul Tietz, Coach Gordon Rees, Coach Joey Meinert, and Coach Damon LeMaster. Center left: Emma Quint. Center right: Jake Scheckel. Photos courtesy of Paul Tietz/Team USA Soil Judging.

What does it take to become a world champion in soil judging? Follow Team USA's journey from a national competition in North Carolina to a fifth consecutive international title in China and then test your own skills with the [soil horizon quiz](#) at the end.

As the World Cup brought nations and cultures together in North America this summer, the world was also united for soil in China. The sport, sponsors, and viewership may have differed, but the effort, spirit, celebration, and unity were one and the same.

The Fifth International Soil Judging Contest brought 18 teams from 14 countries to Nanjing, China for a week of training and competition in soil description. The event took place June 1–6, 2026, immediately preceding the [23rd World Congress of Soil Science](#).

For the 12 Americans representing the United States, the road to China began just two months earlier at the [2026 U.S. National Soil Judging Contest](#) in Raleigh, NC. The Team USA soil judges were selected from the top-placing individuals, which consisted of Sinclair Anderson of Virginia Tech, Cole Chapman of the University of Maryland, Zie

Goodman of the University of Maryland, Callie Goodwin of the University of Tennessee–Knoxville, Holden Mrizek of Virginia Tech, Emma Quint of West Virginia University, Jake Scheckel of the University of Wisconsin–Platteville, and India Williams of the University of Missouri. Tegan Macy of the University of Idaho and Jose Villanos of the University of Kentucky also qualified but were unfortunately unable to participate.

Team USA was coached by Damon LeMaster of West Virginia University, Joey Meinert of the University of Missouri, Gordon Rees of Cal Poly–San Luis Obispo, and Paul Tietz of the University of Idaho. Invitations to the coaching staff were determined by the 2026 U.S. National Soil Judging Contest overall team rankings.



Practice soil pit described as Aquic Hapludalf (USDA Soil Taxonomy) and Stagnic Luvisol (Aric, Cutanic, Transportic) (WRB) in an orchard on an anthropogenic terrace. Photo courtesy of Paul Tietz/Team USA Soil Judging.

With the team members selected but dispersed across the country, Team USA's preparation took place over virtual meetings. Of many differences from soil judging in

the U.S., the international contest required participants to complete their soil descriptions and classifications using both the World Reference Base (WRB) and USDA Soil Taxonomy systems. Learning how to use the WRB was a new and high priority for the Americans. The team learned highly detailed characterizations of redoximorphic (wetness) features of the soil and how to assess soils' suitability for paddy rice production, wheat production, and home gardens. Gaining proficiency in WRB was one of the many beneficial outcomes for Team USA participants, just as proficiency in USDA Soil Taxonomy was for other students from around the world.



Team USA participants at the International Soil Judging Contest awards banquet. Top from left: Coach Joey Meinert, India Williams, Emma Quint, Callie Goodwin, Jake Scheckel, and Coach Damon LeMaster. Bottom from left: Coach

Paul Tietz, Cole Chapman, Holden Mrizek, Zie Goodman, Sinclair Anderson, and Coach Gordon Rees. Photos courtesy of Liz Eroshenko.

As teams gathered in China, participants were quick to build networks and friendships over their shared enthusiasm for soil. The event began with presentations, hands-on demonstrations, and practice soil pits for participants to develop skills in soil description, classification, and interpretation. Many soil pits featured human-altered and human-transported soils, a legacy of China's agricultural terraces that date back to ancient times. Profiles included Aquic Hapludalfs/Stagnic Luvisol (Aric, Cutanic), Anthraquic Epiaquolls/Mollic Fluvic Stagnosol (Aric, Eutric), and similar soils.

After three days of practice, participants were ready for contest day. The official competition consisted of four soil pits—two described individually and two as a group—with 75 minutes allotted for each. Submitted description sheets were graded according to the soil pit answer keys created by the contest coordinators, with points awarded for matching assessments. In World Cup fashion, a trophy and medals were on the line!

Americans captured six of the top eight individual positions, including all of the top four. Mrizek took first place out of 72 individuals, with Scheckel, Goodwin, and Goodman close behind. Top honors in the group judging event went to Team Germany. The overall champions, which combines the individual and group scores, were Team USA for the fifth consecutive international contest.

The 2026 contest was organized by the International Soil Judging Working Group, led by the Contest Co-Chairs John Galbraith and Fei Yang. The contest was hosted by the Institute of Soil Science, Chinese Academy of Sciences (ISSAS). For Team USA,

traveling to China and participating in the contest would not have been possible without the support of the [Agronomic Science Foundation \(ASF\)](#).

Freshly graduated from UT-Knoxville and the proud winner of a World Soil Judging bronze medal, Callie Goodwin, reflected on the experience: “[My soil judging career] is officially over and I can’t believe it led me to China. [I’m] incredibly grateful to have met so many amazing people from across the country and the world who love soil just as much as I do. Who knew dirt could do all that!”

"Horizonate" this soil profile!

Have some soil science knowledge? Want to play along? The authors of this article also put together a mini quiz, so you could see how well *you'd* do during this competition. Try naming the soil horizons from three different practice pits, using photos of the profile, the landscape, and some additional data needed to properly name the horizons. Try the activity [here](#).

Take the quiz

More soil judging

Back to issue

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