



INTERNATIONAL PROGRAMS DIVISION



IPD Newsletter
January-June 2018

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Albania, Burma, Canada, China, France, Guatemala, Japan, Mexico, Netherlands, Russia, South Africa, Switzerland, Multiple Countries, and IPD-hosted Webinars

COVER PHOTO: NRCS Soil Health Division Director **Bianca Moebius-Clune** (right) speaks during a panel discussion about the importance of science-based policy development and the need for continuous international dialogue and sharing of information. Moebius-Clune was invited to participate in the “Soil Health Practices: Common Ground on Experience and Knowledge” conference, held at the Embassy of France, in Washington, D.C., June 19, 2018. Her fellow panelists in the photo are French Ministry for Agriculture and Food’s **Murielle Trouillet** (left) and The Nature Conservancy’s **Deborah Bossio** (center).

SEE ENTRY ON PAGE 3. Photo courtesy of the Embassy of France in the U.S.

The IPD Newsletter is a biannual publication produced by the International Programs Division of the Natural Resources Conservation Service (NRCS).

The document provides a six-month overview of NRCS participation in international activities, which included providing technical assistance and exchanging scientific and technical information.

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IPD Newsletter

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ACTIVITIES

Albania

The 2nd International Conference on Agriculture and Life Sciences (ICOALS) was held May 7-9, 2018, at the Agricultural University of Tirana, Albania. NRCS National Soil Survey Center Research Soil Scientist **Zamir Libohova** served as a keynote speaker, delivering a presentation titled “Big/Small and Legacy Data with Implications for Modelers and Decision Makers.” More than 200 international research scientists attended the conference to explore sustainable agriculture, forestry, biodiversity, and other natural resources conservation practices based on research and field data. Proceedings of the presentations and abstracts were summarized in the conference book, ICOALS, 2018.

Burma

NRCS Resources Inventory Division Acting Director **Patrick Flanagan** and NRCS International Programs Division Director **Lillian Woods Shawver** met with a seven-person Burmese delegation in Washington, D.C., on February 6, 2018. Flanagan introduced the agency’s nationwide efforts in documenting and assessing the status and trends of natural resources. Woods Shawver provided a general overview of the agency and explained how technical experts assist private landowners, farmers, ranchers, and foresters with implementing voluntary conservation efforts. This meeting was coordinated in support of the U.S. State Department’s International Visitor Leadership Program.

Canada

NRCS North Dakota Soil Health Specialist **Jay Fuhrer** spoke at the “Prairie Organics: Think Whole Farm Conference,” February 23-24, 2018, in Brandon, Canada. In his “What’s on Your Landscape”

presentation, Fuhrer highlighted soil health management principles used on the Menoken Farm—a conservation demonstration farm—in North Dakota. More than 500 people attended the two-day event, which continues to attract more participants, partially due to the mainstreaming of organic farming. Fuhrer’s presentation can be viewed at: www.youtube.com/watch?v=LquoYtbui4&feature=youtu.be

Forest soil scientists and forest practitioners gathered for the “13th North American Forest Soils Conference,” which was held jointly with the 9th International Symposium on Forest Soils, June 11-14, 2018, in Québec City, Canada. NRCS New York Resource Soil Scientist **Olga Vargas** was among the nearly 200 participants from 18 countries.

Throughout the week, presentations and scientific discussions followed six themes, such as “The Role of Forests and Forest Soils in Climate Change Adaptation and Mitigation,” “Technological Advances in Forest Soils Research,” and “Forest Soil Monitoring Networks and Environmental Change.” As part of the poster session, Vargas presented a poster, which was completed in collaboration with the U.S. Forest Service and other NRCS scientists, on the USDA National Forest Soil Interpretations from the National Cooperative Soil Survey for the USA. Additionally, a full-day field excursion and two-day post-conference tour provided plentiful opportunities to study forest soils and management practices in diverse ecosystems. In reviewing the scientific engagement, Vargas noted that the value of ecological site descriptions was widely discussed among experts, as was the need for more than one description, per soil component, if climatic conditions significantly impact vegetation.

On June 18, 2018, NRCS International Programs Division Director **Lillian Woods Shawver** and Conservation Engineering Division Director **Noller Herbert** met with a government official from Agriculture and Agri-Food Canada. During the meeting, Woods Shawver explained the agency's conservation efforts and implementation, while Herbert discussed how knowledge from American Indian tribes is incorporated into conservation plans.

China

The NRCS Indiana State Office accepted an invitation from the Indiana Soybean Alliance (ISA) to speak with a delegation from China, on June 12, 2018. NRCS Assistant State Conservationist for Partnerships **Jill Reinhart** presented on conservation planning and soil health, and shared recommended practices to encourage sustainable farming. The 23 Chinese industry representatives were participating in a trade mission organized by the U.S. Soybean Export Council. The meeting took place at ISA's office in Indianapolis.

France

On June 19, 2018, the Embassy of France in Washington, DC, held a conference to raise awareness of the critical role agricultural soils have and the strategies to protect them. The "Soil Health Practices: Common Ground on Experience and Knowledge," conference attracted approximately 85 participants from academia, government entities, non-governmental organizations, agricultural journalists, and the public. NRCS Soil Health Division Director **Bianca Moebius-Clune** was invited to be part of a panel to discuss how scientific evidence is used to formulate and influence soil health policy. In her presentation, Moebius-Clune

explained how NRCS attempts to integrate soil health management principles in conservation planning and how local producers are encouraged to adopt these through training, technical assistance, and incentives. Other conference agenda items included a panel discussion on local implementation of healthy soils programs, as well as a presentation on the "4 per 1000" initiative. The voluntary initiative was launched by France in 2015 to increase carbon storage in soils by encouraging countries to develop feasible soil management practices across their agricultural sectors. Continued international dialogue, sharing of scientific information, and discussing best practices are important to ensure the strategic significance of soils is recognized by all stakeholders.

NRCS staff hosted three representatives from the French Ministry of Agriculture and Food, June 20, 2018, in Washington, DC. The purpose of the meeting was to discuss the international "4 per 1000" initiative, which was launched by France in 2015. This voluntary initiative envisions increasing the carbon storage in soils by 4 percent each year through use of sustainable soil management practices and sharing of scientific knowledge. As part of domestic conservation efforts in the U.S., NRCS is actively raising awareness about four basic soil health principles to build healthy and resilient agroecosystems, which supports the spirit of the French-led model. At the meeting, NRCS was represented by Acting Deputy Chief for Science and Technology **Kurt Readus**, National Leader for Technical Soil Services and National Leader for World Soil Resources **Michael Robotham**, Soil Health Division Director **Bianca Moebius-Clune**, and International Programs Division Director **Lillian Woods Shawver**. Additionally, Foreign Agricultural Service International Trade

Specialist **Mark Hanzel** participated in the meeting.

Guatemala

NRCS National Soil Survey Center Research Soil Scientist **Zamir Libohova** traveled to Guatemala City, Guatemala, January 13-18, 2018, for consultations on digital soil mapping efforts. Libohova traveled to El Salvador, Honduras, and Nicaragua in 2016 to provide digital soil mapping training at workshops. During the 2018 trip, Libohova was able to review the progress and consult with officials from Guatemala's Ministry of Environment and Natural Resources to assess requirements for high resolution soil maps. The digital soil mapping efforts were in support of the Water Smart Agriculture Initiative, funded by the Howard G. Buffett Foundation and co-organized by the Catholic Relief Services and USDA's Agricultural Research Service.

Japan

On May 8, 2018, NRCS Delaware State Conservationist **Kasey Taylor** hosted four Japanese officials at the State Office in Dover. The meeting, at the request of the Japanese Ecosystem Conservation Society, allowed Taylor and her local field office staff to explain the 2014 Farm Bill and the implementation of conservation programs with an emphasis on wetland restoration projects in Delaware. Other NRCS staff included Soil Conservationists **John Bushey** and **Bobby Gorski**, District Conservationists **Brooke Jones** and **Thelton Savage**, and Public Affairs Specialist **Dastina Wallace**.



*NRCS Soil Conservationist **John Bushey** (right) explains the importance of soil health to Japanese officials during a visit to observe conservation practices at the Wyatt Farm in Harrington, Delaware, May 8, 2018.*

Photo by Dastina Wallace, USDA NRCS

The NRCS Missouri State Office supported a presentation request from the U.S. Soybean Export Council and Missouri Soybean Association for a visiting group from Japan. Assistant State Conservationist for Partnerships and Initiatives **Karen Brinkman**, Assistant State Conservationist for Programs **Curt McDaniel**, and State Resource Conservationist **Nate Goodrich** met with seven Japanese industry representatives at the State Office in Columbia, on June 5, 2018. During the afternoon visit, NRCS shared information about agency conservation efforts and compliance requirements for beneficiaries seeking assistance through specific programs.

Mexico

NRCS National Soil Survey Center Research Soil Scientist **Zamir Libohova** assessed digital soil mapping efforts and visited coffee farms, January 7-13, 2018. The engagements were in support of a Howard G. Buffett Foundation project, which was co-organized by the Catholic Relief Services, USDA's Agricultural Research Service, and Mexico's National Commission for the Knowledge and Use of Biodiversity. Libohova met with approximately 25

conservationists, farmers, and local soil scientists. Eight coffee plantations were visited in Oaxaca, a state in southern Mexico, which provided ample opportunities to study individual production challenges. Libohova and the experts noted steep slopes, shallow and poor soils, coffee tree pruning, and soil erosion as the most significant concerns facing local coffee growers. With input from the farmers, the experts hope to generate soil property maps and improve soil fertility throughout the state.

Netherlands

The International Soil Reference and Information Centre (ISRIC), located at Wageningen University, Netherlands, invited NRCS National Soil Survey Center Chemist **Richard Ferguson** to attend a seminar, March 26-30, 2018. The seminar was on the findings from ISRIC's seven-year program that sampled reference profiles at 70 sites in 12 countries. Samples from the collection were analyzed at the NRCS National Soil Survey Center's Kellogg Soil Survey Laboratory (KSSL). As part of the weeklong activities, various experts served as guest speakers to discuss the

importance of soil data. Ferguson's presentation focused on mid-infrared spectrometry, which allows for soil analysis without use of chemicals. The technology is used at the KSSL to develop models and predict soil properties.

Russia

On March 28, 2018, NRCS New Jersey State Soil Scientist **Richard Shaw** and Assistant State Soil Scientist **Edwin Muñiz** met by web conference with a World Bank consultant based out of Moscow, Russia. The consultant was working on a project that examines global cases of bringing technology to small and medium farms. Shaw and Muñiz explained how soil survey data are collected and used to provide various customers with vital information for their planning purposes. Additionally, the features of the publicly accessible Web Soil Survey—an online collection of soil maps and data for most of the United States—were also discussed.

South Africa

A popular South African farming publication organized two conferences to raise awareness about conservation practices to improve cropping and grazing systems. The Regenerative Agriculture Conference 2018 was held in Reitz, South Africa, March 19-20, 2018, and the Second Annual Soil Health Day took place in Cape Town, South Africa, March 22, 2018. At both venues, NRCS North Dakota Soil Health Specialist **Jay Fuhrer** served as the keynote speaker. In Reitz, he opened the two-day conference with his presentation “Regenerative Agriculture as the Farming Solution.” Fuhrer has been a strong advocate of soil health and has conducted many educational activities on restoring soil function, both in the U.S. and internationally. At the start of the second day, Fuhrer provided a summary of the discussions from the previous day and highlighted the observations made during the farm visits. The second day included a panel with farmers who discussed high-density grazing and regenerative agriculture in different regions of South Africa. Fuhrer participated with the panel

during the discussions with the audience to share additional insights from his experience. The conference in Reitz had 630 registered participants, not only from South Africa, but also neighboring Mozambique, Namibia, and Zimbabwe. The Soil Health Day conference in Cape Town focused on small to mid-scale farmers and attracted 200 registered farmers, primarily from the Western Cape area. Fuhrer also provided the keynote address on regenerative agriculture to open the conference. The full day of presentations from various speakers aimed at helping agricultural producers improve their profits on their orchards, vegetable farms, and vineyards.

Switzerland

NRCS National Soil Survey Center Research Soil Scientist **Zamir Libohova** conducted a workshop at Agroscope, an agricultural research institute of the Swiss Government, in Nyon, Switzerland, May 2-3, 2018. Libohova was asked to share his digital soil mapping expertise and recommendations for use of

collected soil data. Agroscope has been monitoring soil fertility on a 250-site network for the last 30 years and hopes that the long-term study will provide farmers with practical information to improve production goals. This cooperation has resulted in several publications in high impact peer review scientific journals. These efforts of the Swiss Government are like those of NRCS in the U.S. The ongoing scientific collaboration will benefit both countries with implementation of new digital soil mapping techniques.

Multiple Countries

On June 18, 2018, staff from the NRCS Ecological Science Division met with a 21-person multinational delegation in Washington, DC. National Nutrient Management Specialist **Dana Ashford-Kornburger** informed the group about cropping sustainability and National Wetlands and Highly Erodible Lands Compliance Specialist **Jason Outlaw** explained policies farmers must abide by when enrolled in federal conservation programs. Additionally, Farm Service Agency Agricultural Economist **Kent Lanclos** joined the discussion and explained how crop insurance helps producers mitigate risks. The presentations supported a U.S. Soybean Export Council-hosted mission, which aimed at demonstrating the sustainability of U.S. soy. The foreign delegation consisted of industry representatives from Colombia, Dominican Republic, Ecuador, Guatemala, Mexico, Peru, and Venezuela.

*NRCS North Dakota Soil Health Specialist **Jay Fuhrer** (center) gives a post-conference interview in Reitz, South Africa, March 20, 2018. Fuhrer served as the keynote speaker during the Regenerative Agriculture conference in which he promoted soil health as a method to restore and increase soil function.*

Photo courtesy of Jay Fuhrer, USDA NRCS



Webinars

NRCS International Programs Division hosted three webinars to share information with agency employees. On January 9, 2018, NRCS Soil Health Division Director **Bianca Moebius-Clune** and National Soil Survey Center Agronomist **Mike Kucera** led an “Improving Soil Health Globally” webinar. Participants learned how agricultural systems around the world are following the four basic soil health principles the agency rigorously puts forward. During the “Taking Government Mobile Devices on Foreign TDYs” webinar, March 22, 2018, NRCS Chief Information Security Officer **Michael Gardner** talked about many important travel considerations, such as espionage awareness, obtaining permission to use equipment in a foreign country, and quarantine requirements. Retired NRCS Mississippi Assistant State Soil Scientist **Tom Kilpatrick** returned to NRCS to share his experience with “Providing International Technical Assistance After Retirement,” during a webinar, June 27, 2018. Kilpatrick discussed how he became involved with nongovernmental organizations and the types of activities he has supported after retiring from NRCS.