Science Societies

The grass is always greener on the healthy side of the fence

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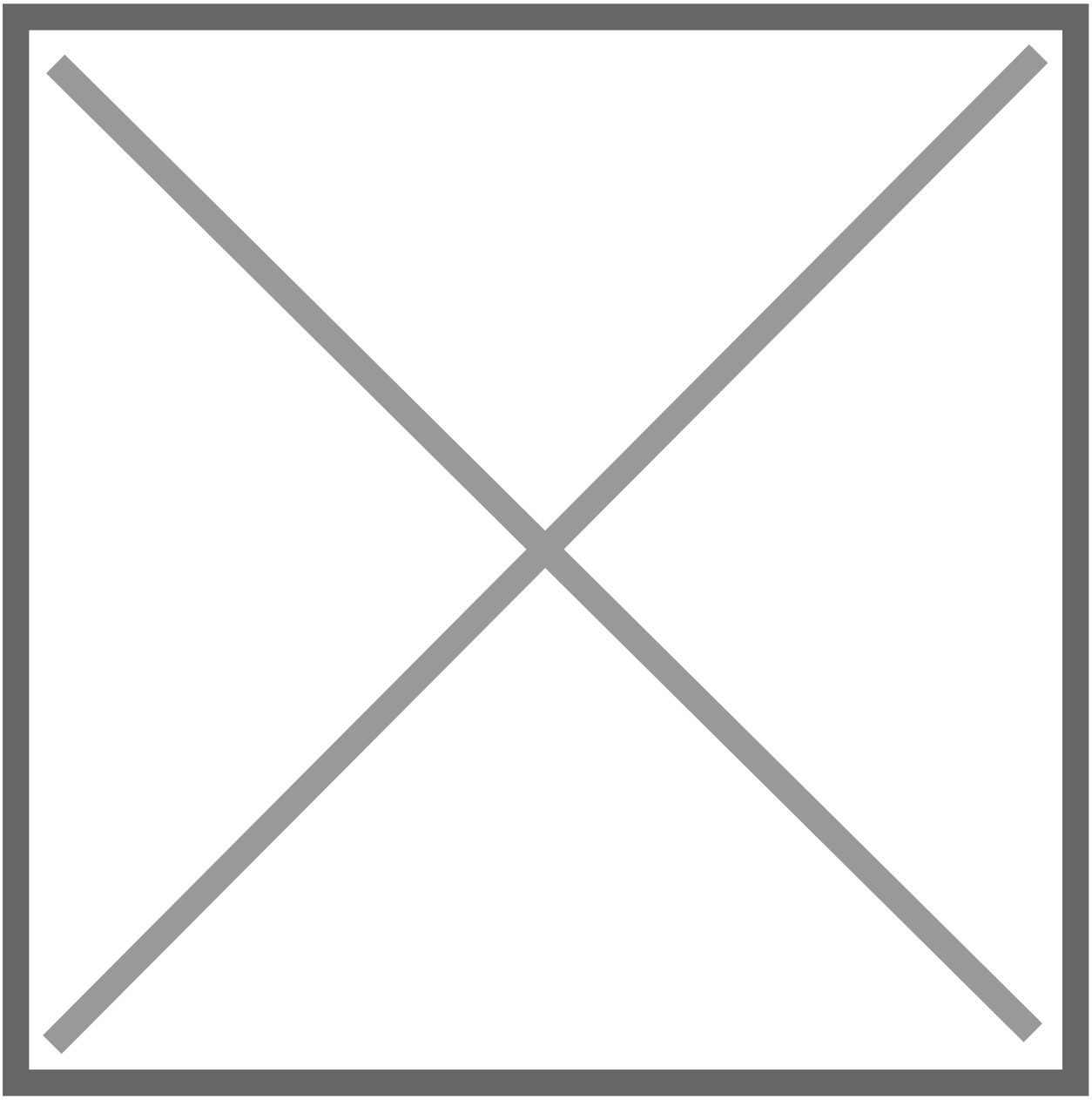
Composting is one of many ways to repurpose food wastes, and soil scientists can help evaluat

Composting is one of many ways to repurpose food wastes, and soil scientists can help evaluate the impacts of those composted wastes on the land. Photo by Tiffany Woods and courtesy of Flickr/Oregon State University.

Like any living thing, soil will function much better if it is healthy. Soil functions include supporting plant growth, transforming wastes, and regulating water. One common indicator of soil health is the amount of organic matter in the soil. Increasing and preserving soil organic matter has been the focus of a lot of virtual events this year that I've been fortunate to attend. SSSA helped sponsor the Sixth Annual Meeting of the Soil Health Institute, which provided insights into the exciting world of regenerative agriculture, carbon sequestration, and climate change mitigation. The ASA Sustainable Agronomy Conference was held over six weeks and cleverly incorporated virtual field tours, panel discussions, and CEUs for our practicing professionals (see a recap on p.

21 of this issue). It was great to see so many of our members attending and presenting at both of these events.

Another virtual event that SSSA helped sponsor was the National Academy of Engineering “Forum on Complex Food and Agricultural Systems: Engineering for Sustainability and Resilience.” The forum reviewed characteristics and challenges of existing food and agricultural systems and how the mostly linear systems could be transformed into circular and more resilient systems that change the way we use, recycle, and even regenerate our natural resources. Circular economics is a system that may help us deal more effectively with global challenges like climate change, biodiversity loss, waste, and pollution.



A simple diagram to contrast a linear economic system to a circular one. Illustration courtesy of Wikimedia Commons/Catherine Weetman.

Collaborating on Composting and Facilitating Data Sharing

In addition to crop production, soils also recycle nutrients and wastes, so I am pleased to announce that SSSA is collaborating with the U.S. Composting Council (USCC) to promote and participate in each other's programs and identify needs and issues regarding compost-related research. The USCC believes that "compost manufacturing

and compost utilization are central to creating healthy soils, clean air and water, a stable climate, and a sustainable society." The USDA estimates that 30–40% of the food supply in the U.S. is wasted, providing a huge opportunity to capture potentially lost nutrients and carbon that could be returned to the soil. Composting is one of many ways to repurpose food wastes, and soil scientists can help evaluate the impacts of those composted wastes on the land.

A lot of data is being generated to assess soil health and sustainable practices, not just in one region, but all over the world. Efforts that combine results from multiple studies in an effective metanalysis are going to be crucial to helping us address the impending productivity and environmental challenges, and these are only possible if we share data. If you're publishing in SSSA journals *(and I hope that you are!)*, we partner with the Dryad digital repository to store and make research data available to the scientific community, but there are a variety of data repositories available depending on your focus and where you publish.

I recently used the term "big data" and was reminded that the term sends the wrong message to scientists who are collecting data from a variety of projects but may not see themselves as part of a "big" project. All data is important whether it's part of a multistate, million-dollar project or one small, well-documented plot. Data sharing is an important and sometimes contentious subject both for privacy issues as well as the time and effort required to meaningfully curate datasets. It is needed though, and I look forward to learning more about how we can facilitate data sharing and metanalysis of those data to meet the challenges ahead. There is a lot going on in the Society, in science, and in the world these days, so stay healthy and connected, and let's continue to work together to improve the world for tomorrow.

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