If you missed ASA’s first Sustainable Agronomy Conference in Madison, WI at the end of June, you missed some great talks. Don’t worry though as we recorded all the sessions! Links for webinars will be promoted in the coming weeks.

The room at the conference center was packed with sustainability experts—both speakers and certified professionals (CCA, CPSS, etc.) attending for CEUs. As speakers discussed their research or findings from their practice, there were many “oohs” and “aahs” from the audience—just like watching the Fourth of July fireworks. Some new techniques were covered, and many best practices were reinforced. As Kirsten Workman, CCA-NR, Vermont, stated in her presentation, “Good agronomy IS conservation agronomy!”

The joy of participating in the conference was evident from both speakers and the attendees. Workman asked the audience, “Who gets texts of their clients’ nutrient management plans?” No one in the packed room of more than 250 registrants raised their hands. Then Workman put up a slide of soil bursting with earthworms—she’s received many texts of photos of soil like this one.
of healthy soil from her pleased client base.

Another attribute among the crowd: passion for conserving the environment while providing food for generations to come. Clay Mitchell and Deb Gangwish, both growers, showed examples of trials from their fields. “Having a full-time agronomist as part of our team is paramount to success,” Gangwish said. Her family farm is currently trialing till and no-till systems and is an industry partner for on-farm field trials. It’s this level of commitment to trialing new techniques that can keep agronomy sustainable. “We are always looking for ways to enhance efficiencies.”

Being Profitable and Sustainable

An entire session was devoted to the “Economics of Sustainable Agronomy,” and the theme entered to just about every talk. All of the issues that farmers might face—herbicide resistance, low soil quality, etc.—lead to reduced profits. Profits and environmental sustainability are inextricably linked.

Dave Muth, EFC Systems, said that losses due to not managing fields as “working capital” cost more than $1 billion a year in Iowa. “This is really an immense opportunity for us once we understand it,” he said. He creates profitability maps—enabled by today’s data-management systems—for his clients. In some cases, tile drains or other techniques can move unprofitable land into the black. However, he has also recommended moving parts of unprofitable farmland into a USDA program for pollinators. The sandy soil was perfect for this use. Implementing these changes moved the percentage of non-profitable acres from 25% before implementation to just 3% after.

Similar recommendations are made by Ryan Heiniger, Pheasants Forever, and a farmer himself. The group at Pheasants Forever is able to provide “technical assistance to achieve habitat goals,” he said. “We are leading a precision ag initiative by solving local problems with good data from the field level.” Heiniger reviewed case studies from implementation of management plans in the Midwest. For one South Dakota farmer, switching some of their acres into forage barley increased ROI by 16%. The land was adjacent to semi-permanent wetland and experiencing saline conditions and not profitable before this change. “We are able to use precision ag techniques to analyze profitability by acre. In this case, we saw a dramatic increase in ROI just by changing the crop planted in the area that already was low producing with the saline soil.”

Matt Liebman, Iowa State University, said that agronomic sustainability requires two things: (1) regeneration or replacement of key resources, and (2) reduction of pollution to levels that can be assimilated or detoxified. His area of expertise is weed management. He encourages the adoption of several weed management techniques to reduce herbicide use. In addition, attacking weeds at different growth stages is beneficial. “Ecologically based weed management doesn’t exclude the use of herbicides,” he noted, “but it does look at life stages. Spreading the burden of protection across multiple tactics reduces risk of failures and crop loss and better protects the environment.”

Soybean aphids and other pests were the topic of Matthew O’Neal’s talk. O’Neal also is with Iowa State University. Photos of fields devastated by soybean aphids drew a large response from the crowd. It was first identified in Wisconsin in 2000, and by 2003, 99% of Iowa’s counties were affected. “The aphids excrete a honeydew and can cause losses of 40%. Between 2001 and 2012, use of insecticides for soybean aphid quadrupled. And of course, with that, came an increase in resistance to the insecticides.

O’Neal, however, is hopeful. “Switching insecticides based on their mode of action, not their chemical formula,” can be a key to warding off resistance. Currently, there are 29 modes of actions—nerve and muscle, growth, respiration, mid-gut, etc. The Insecticide Resistance Action Committee (www.irac-online.org) has tips on rotations.

The use of cover crops as a sustainability tool was mentioned by several speakers. Shalamar Armstrong, Purdue University, reviewed his research on both fertilizer application timing and cover crops. The strongest findings from their sites is that cover crops have the most effect on reducing the nutrient load, regardless of the timing of fertilizer application. However, there were some benefits to spring application with regard to nutrient load.

The overall messages of speakers at the Sustainable Agronomy Conference were hopeful—we can produce agronomic products in environmentally and economically sound ways. Agronomists, growers, and industry partners must all be open to thinking outside the box and working as teams. “No one farmer, company, conservation group, or government entity can scale sustainability efforts on their own,” said Matt Carsten, Land O’Lakes. “We must work together to connect every link in the food supply chain from farm to fork.”

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Dig Deeper

Did you miss the conference? No worries! The talks were recorded and will be available for viewing in the coming weeks. Look for upcoming announcements with more details soon.

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