

Tour highlights environmental work of farmers, ACWA, ISA

Farmers showed off their tools during the Iowa Soybean Association's (ISA) first-ever Environmental Discovery Tour held Oct. 24, 2013.

Producers didn't wheel out a chest full of wrenches, screwdrivers and drills. Instead, tour goers got an up-close look at cover crops, a bioreactor, conservation tillage and other "tools" being used to improve the environment, water quality and soil health.

Nearly 50 politicians, reporters, city officials and others visited farms operated by ISA members Tim and Lana Smith, Eagle Grove; Arlo and Claudia Van Diest, Webster City and A.J. and Kellie Blair, Dayton. A panel discussion and question and answer session on environmental issues was held at Van Diest Supply, an agricultural supply company based near Webster City.

The goal of the daylong event was to provide influencers the opportunity to learn how farmers and agricultural interests support the Iowa Nutrient Reduction Strategy --- a science-based initiative to reduce nitrate and phosphorous loads in Iowa waterways by 45 percent from point and nonpoint sources.

Roger Wolf, ISA's director of Environmental Programs & Services (EPS), told participants that rural and urban stakeholders must work together to improve water quality, and failure isn't an option. He's convinced the state is moving in the right direction.

"Now we have a plan, a science assessment and we're doing events like this. Now we're seeing unprecedented alignment among ag groups," Wolf said. "We have much work to do. We intend to improve productivity and profitability in a way that conserves natural resources and water."

The tour was partly funded by the Soybean Checkoff. Sponsors included ISA, Agriculture's Clean Water Alliance, Agri Drain Corp. and Agrium, U.S.

The event provided ISA members the opportunity to show, not just tell, participants they are committed to conservation and water quality. Smith, whose farm was the first stop on the tour, pointed out cereal rye just starting to emerge in a recently-harvested soybean field.

Cover crops --- rye, field radishes, oats, field peas, etc. --- are seeded at the end of the growing season to extend biological activity between harvest and planting, suppress weeds, conserve nutrients and build organic matter. According to strategy documents, cover crops can reduce nitrate concentrations in water leaving farm fields by 28 to more than 40 percent.

"Over-wintering cover crops are the single, biggest thing to reduce nitrates in the water. But that is only one tool," Smith said.

He's also adopted strip tillage, installed a bioreactor, stopped applying nitrogen in the fall and embraces soil, stalk and water testing to apply only the nutrients necessary to optimize yields.

Strip tillage and a bioreactor were featured at the Arlo Van Diest farm. Van Diest said excessive soil erosion in the 1960s "made me sick." It turned him into a staunch conservationist.

Van Diest purchased his first strip tillage implement in 2001 and a second years later. This machine injects fertilizer below seeding depth in a narrow tilled strip leaving most of the residue in place to

prevent erosion. Considered a pioneer in this conservation practice, he often hosts field days to encourage other farmers to embrace strip tillage.

“We’ve always tried to be a steward of the land. It’s been good to us,” Van Diest said.

Keegan Kult, an environmental project manager on ISA’s EPS team, explained how bioreactors work on the Van Diest and Smith farms. Water from field drainage tiles flow into an underground trench filled with wood chips, a source of carbon to which microorganisms in the soil can colonize. The microorganisms, or bacteria, using the wood chips as a food source break down the nitrate through a denitrification process, and expel the nitrate as gas.

Bioreactors are capable of reducing the nitrate load of the water in the tile by 40 percent to 60 percent, according to ISA research, which is reflected in the strategy. Even though that amount of reduction wasn’t achieved this year due record precipitation this spring, Kult said other environmental practices used by farmers worked well.

Despite significant rain, Smith said he didn’t notice any soil erosion on his farm this spring. His water monitoring data showed significant nitrate reduction compared to past years and the receiving stream.

“That is the advantage of having a lot of tools in your tool box,” Kult said.

Stewardship is paramount on the Blair farm. The young couple explained how precision agriculture and manure management helps the environment.

Holding a portable computerized field monitor from his sprayer, A.J. said technology helps them apply only the right amount of nutrients or chemicals where needed. The Blairs also participate in ISA On-Farm Network nitrogen strip trials and manure replicated strip trial studies.

“I think there has been a lot of reduction in nitrogen use and better timing of application by farmers participating in this program,” A.J. said. “All this technology helps keep us from sending (nutrients) downstream.”

Tour participants liked what they saw and heard. Many said they hope the tour becomes an annual event.

Rep. Marti Anderson of House District 36 – the smallest in Iowa, covering 8.1 square miles in the Des Moines metro area of Beaverdale --- is a retired social worker with no agricultural background. She represents about 30,000 urban constituents.

Yet, Anderson knows her votes impact everyone statewide, including farmers. That’s why she attends as many ag-related events as possible.

“I bet nobody discovered more than me today,” Anderson said. “My big take-away was farmers are doing their best and there are a lot of tools in their tool box. And, farmers have learned to change if things aren’t working.”