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NATIONAL REPORT SHOWS IMPROVEMENTS IN AGRICULTURE

The Field to Market Alliance came out with their National report on 10 main commodities that farmers grow in the United States. The report finds all 10 crops demonstrated improved environmental outcomes in nearly every indicator. The report in can be found at http://bit.ly/FTM16RT

Over the study period (1980–2015), the five main indicators of sustainability showed improved trends for U.S. corn for grain production. The most recent five-year period of 2011–2015 shows continuing improvements in resource impacts for less soil erosion compared to the 2001–2005 time period. For the Energy Use and Land Use indicators, the resource impact of corn production has held steady, while slight increases in the Greenhouse Gas Emissions and Irrigation Water Use indicators are observed in this most recent period.

Over the study period (1980–2011), U.S. soybean production increased substantially, by 120 percent, while planted area also increased, from 67 million acres to 82 million acres. At the same time, the key resources indicators for soybeans all demonstrated improvement. This reflects modest yield increases as well as widespread adoption of conservation tillage practices over this time period.

These improvements continue into the most recent period (2011–2015) for all indicators with the exception of irrigation water use, which was found to be at a similar resource use efficiency level as during the 1991–1995 period.

The not so good news is in a number of crops, according to both environmental and economic indicators, there is a clear trend toward a plateau, or flattening, of the long-term trend line over the past five to 10 years, presenting both a challenge and opportunity for technological innovation combined with expanded adoption of conservation practices.

Also, they assessed trends in soil carbon, which indicate a negative change between 1990 and 2007 on aggregate (more carbon was lost than gained) for commodity crop systems using data from national modeling studies conducted for government assessments. The exception is land that is in complex rotations, or perennial grass (hay or CRP land). When these are considered, the overall national trend is consistently positive (increasing carbon in soils).

I believe whether it is the meat or grain food industry, we are going to see continued offers to collect data to help document improvements over time. Precision farming has the potential to reduce inputs and increase profitability and farmers are gathering an increasing amount of data on their fields. Being able to house this data in an easy way and have the software integrate with other platforms is coming quickly. Farmers will control who can see and use that data. To view our bigdata team specialists at UNL, information about precision agriculture and upcoming meeting opportunities go to http://bigdata.unl.edu/precision-agriculture

Randy Pryor, Extension Educator
University of Nebraska-Lincoln Extension in Saline County · 306 West 3rd Street, Wilber, NE 68465
Phone (402) 821-2151 · Fax (402) 821-3398 · e-mail: randy.pryor@unl.edu