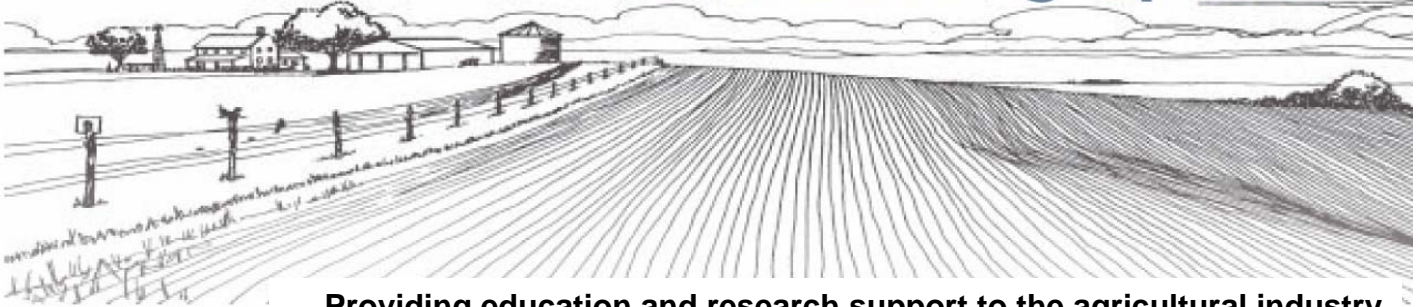


Extension Ag Update



Providing education and research support to the agricultural industry
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Are Your Farming Practices Sustainable?

Increasing prices for inputs as well as concerns about global warming are encouraging more producers to change the framework in which they view their farms and they are asking if their farming system is sustainable into the future. The Illinois Farm Sustainability Calculator is a spreadsheet-based model capable of quantifying and analyzing some of the most important measures of agricultural sustainability for any farm in the state of Illinois.

Users input data from their farm including soil information, the production area of each crop, nutrients added to the fields, tillage methods, the number and type of animals raised, livestock dietary requirements, energy sources used, building energy use, product hauling distances etc. The model takes these inputs, combines them with data concerning crop productivity, carbon sequestration and emissions, energy use for different types of tillage and buildings, alternative energy production, and many other subjects.

From these parameters, IFSC produces final balance sheets for animal feed production vs. consumption, energy production vs. consumption, carbon sequestration vs. carbon emission, and nitrate runoff. It also indicates how many people the farm can feed. In other words, IFSC allows its user to discover whether or not their current farm design is sustainable and test it against any number of hypothetical farm designs until a sustainable design is reached. Development of the IFSC was funded by the Dudley Smith Initiative. To begin your farms sustainability index, go to the website <https://www.ideals.illinois.edu/handle/2142/14015>, Click on "File" and download the "zip" file. Begin entering data for your farm. Chose a cold winter day and bring your cup of coffee because there is a lot of information to enter, but it is worth your time if you are interested in assessing different options to increase the long-term sustainability of your farm.

RESEARCH RESULTS

What Soil Microbes Can Tell About Farming Practices

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The first evaluation of alternative farming practices, based on changes in soil microbes, in the Texas High Plains has been done by an Agricultural Research Service (ARS) scientist. Soil microbiologist Veronica Acosta-Martinez has also done a similar analysis

for land in USDA's Conservation Reserve Program (CRP), a first nationally. Changes in microbes can give a relatively early indication as to whether an alternative practice is helping or hurting soil quality, which is important for plant productivity.

Acosta-Martinez, at the ARS Wind Erosion and Water Conservation Unit in Lubbock, Texas, has seen microbial communities respond within a few years to changes in land use or cropping systems, while it can take 10 years or more for changes to occur in other soil properties. Since 2006, she and Ted Zobeck, an ARS soil scientist at Lubbock, have been taking soil samples from many farms participating in the Texas Alliance for Water Conservation (TAWC). The Alliance is part of a broad study in the Ogallala Aquifer region on the effect of farming practices on soil and water conservation. The Alliance studies 3,954 acres of farmland as well as CRP grasslands.

Microbes—bacteria, fungi and protozoa—release enzymes that drive the important carbon, nitrogen, phosphorus and sulfur cycles in soil and help form organic matter. Acosta-Martinez found that CRP encouraged an increase in microbial diversity and activity, as did pastures and crop rotations. These changes are precursors to eventual increases in overall soil carbon content.

RESOURCES TO CONSIDER

Publications Plus –*University of Illinois Agricultural and Horticultural Publications*
Call 1-800-345-6087 or order on the web www.PublicationsPlus.uiuc.edu

It's a one-stop shop for a current catalog of research-based information (Mastercard and VISA accepted)

Cover Crop Innovators CD, Western Illinois University

This CD has profiles of more than 40 organic and conventional grain farmers in the Midwest region who are cover crop innovators.

For a copy contact Andy Clayton at (217) 322-2639 or AW-Clayton@wiu.edu, (309) 298-1172 or (217) 322-2639 or Western's School of Agriculture at (309) 298-1080. More information about WIU's Organic Agriculture Research program is available online at www.wiu.edu/aq/organicfarm.

Crop Rotation on Organic Farms - A Planning Manual

Charles Mohler

This new book focuses on the benefits of various crop rotations to improving soil quality and crop production. To order contact: NRAES, <http://www.nrase.org> or call (607) 255-7654.

INTERNET RESOURCES

Grain Drying, Handling, & Storage

<http://www.ag.ndsu.nodak.edu/abeng/postharvest.htm>

Dr. Kenneth J. Hellevang, North Dakota State University

Post-Harvest Handling of Crops

http://www.bbe.umn.edu/Post-Harvest_Handling_of_Crops

Dr. Bill Wilcke, University of Minnesota

Grain Storage Tips: Factors and Formulas for Crop Drying, Storage and Handling

<http://www.extension.umn.edu/distribution/cropsystems/M1080-FS.pdf>

Farmstead Energy Audit

<http://www.ag.ndsu.edu/pubs/ageng/structu/ae1366.pdf>

Selecting drift-reducing nozzles

<http://agbiopubs.sdstate.edu/articles/FS919.pdf>

Pest Management Videos on "YOU TUBE"

<http://tinyurl.com/pz9p82>.

The University of Wisconsin Integrated Pest and Crop Management program now has short videos on "White Mold in Soybeans," "Western Bean Cutworm: A Pest of Field and Sweet Corn," and, "Tomato Late blight in Wisconsin" on "You Tube". The videos can be found through the publication Wisconsin Crop Manager

Biomass Compare

<http://www.ag.ndsu.nodak.edu/abeng/biofuels.htm>

This tool evaluates biomass profitability. This online Excel spreadsheet compares the profitability of raising a new biomass crop with existing crops already on a producer's farm. The program is flexible enough to handle harvesting of biomass residues, such as straw and stovers, from existing crops, as well as establishing a new, dedicated crop of annuals and perennials strictly raised for biomass harvesting, such as switchgrass. The program calculates what prices the user would have to receive for traditional crops produced on their farm to be competitive.

Audio-Video Barn: Illinois agricultural history

(<http://avbarn.museum.state.il.us>),

Anyone with a computer can now see and hear the history of Illinois agriculture told by the people who lived it. This website features nearly 300 hours of interviews with more than 130 people involved with agriculture in Illinois over the past 129 years. The videos can be searched by topic, name, date, or geographic location.

EDUCATIONAL OPPORTUNITIES

University of Illinois Agriculture Events

New programs are being confirmed every day. Keep in touch with your Extension Office for programs addressing the topics that interest you and are offered in your County. To find your counties website go to: <http://web.extension.uiuc.edu/state/findoffice.html>

Statewide University of Illinois Extension Calendar Website

<http://web.extension.uiuc.edu/state/calendar.cfm>

To search for programs throughout the state, check out Extension's searchable calendar. Search by location, topic or date to find a program of you interest.

AG FACTS

U.S. farm operators have become more demographically diverse in the past 10 years.

- nearly 30 percent more women as principal farm operators
- Hispanic operators grew by 10 percent
- American Indian, Asian and Black farm operators also increased

Source: 2007 Census USDA National Agriculture Statistics Service (NASS)

About the Ag Update Newsletter

The Ag Update Newsletter is a bi-monthly newsletter providing education and research support to the agricultural industry. Current and past issues may be found at the following website <http://www.urbanext.uiuc.edu/agupdate/index.html>

Contact your county Extension office and request to be put on their agricultural mailing list to receive the local agricultural newsletter and notices about upcoming agricultural events near you. To find your counties location, phone and website go to:

<http://web.aces.uiuc.edu/ve/>

For further information about this newsletter, please contact:

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