DIXON SPRINGS AGRICULTURAL CENTER

“Where nature and science meet.”

For more information, please visit us at:
http://research.aces.illinois.edu-centers/dixon_springs
HISTORY OF DIXON SPRINGS

The completed Administration Building had offices, laboratory, heating facilities, and restrooms in the end sections, and a large truck scale in the center section.

The stone used in constructing the Administration Building was taken from a waterway with a shallow soil covering on the Morse Farm.

These two houses were typical of many on farms in the area chosen for the Dixon Springs Station.
The Dixon Springs Agricultural Center (DSAC) is a giant outdoor laboratory and is one of the largest experiment stations of its kind east of the Mississippi River. Operated by the University of Illinois since 1934, the center is unique because large scale experiments relate directly to commercial agriculture.

The center was established in 1934 on about 5,100 acres of unglaciated Ozark Uplift land near Simpson in Pope County. It was operated until 1985 as a sub-station of the Illinois Agricultural Experiment station.
MISSION

DSAC will maintain its core value of being the place “where nature and science meet.” It is at this juncture that regional stakeholders --- farmers, producers, young retirees who want to engage in agriculture and/or value-added opportunities, commodity groups, educators, environmentalists, conservationists, artisans and agribusinesses will seek reliable information and quality education. They will also find new ideas to empower their concepts and enterprises in becoming more efficient and competitive. The Center will serve as a hub for economic development in the agricultural and value-added sector, fostering regional entrepreneurship in the form of small and medium start-up enterprises.
DSAC links the laboratories and classrooms of the University of Illinois at Urbana and the USDA with the farms in southern Illinois. Researchers at DSAC coordinate their programs to meet the needs of area farmers.

The University of Illinois conducts research and educational programs at Dixon Springs in the following areas:

- Animal Sciences
- Crop Sciences
- Natural Resources and Environmental Sciences
The Animal Sciences Department hosts numerous education programs at DSAC for students and beef producers. In addition to the yearly Field Day, it conducts short courses in grazing management and reproductive technologies.

The large number of animals at DSAC provides an opportunity for undergraduate interns, graduate students and professionals of the University’s College of Veterinary Medicine to gain valuable hands-on, experiential training.

Frank A. Ireland, Research Animal Scientist
The Animal Sciences Department also offers opportunities for training professionals, such as extension personnel, vocational agriculture instructors and veterinary technicians in the latest technologies.
Area Community colleges are also taking advantage of the teaching resources at DSAC. A recent grant was awarded by the USDA to Shawnee Community College (SCC) for developing an internship program to bring community college students to DSAC.
The Crop Sciences component is now made up of approximately 570 acres of land: 100 of which is University owned, 140 is leased private property (to accommodate the use of pesticides), with the remainder being operated under a Special Use Permit from the U.S. Forest Service.

Stephen A. Ebelhar, Ph.D., Agronomist & Superintendent of Crop Sciences Division
Agronomists in the Crop Sciences Department study precision agriculture, crops and soil management, soil fertility, crop production and pest management.

A major emphasis is on no-till and reduced tillage systems, a concept that was developed at DSAC in the late 1950’s by Professor George E. McKibben.
Agronomic crops currently being studied include corn, soybeans, wheat, canola, grain sorghum and bioenergy crops.
Horticultural Crops

Horticulturists in the Crop Sciences Department study fruit and vegetable crop production and pest management.

A major emphasis is on production system techniques that allow for season extension so Illinois producers can better meet the year round demand for locally grown fruits and vegetables.

Bronwyn Aly and Jeff Kindhart Senior Research Specialists, Horticulture
Horticultural crops currently being studied include apples, peaches, strawberries, blueberries, blackberries, tomatoes, peppers, lettuce, sweet corn and pumpkins.
Southern Illinois is primed to become a leading supplier of alternative bio-feedstock production. Its mild climate has proven highly favorable for growing perennial grasses such as Miscanthus, a hybrid grass that can grow thirteen feet tall, and switchgrass.

In the past two years, DSAC’s miscanthus plots have been expanded by five acres with plans for further expansion to come.
The Department of Natural Resources and Environmental Sciences staff conducts programs in system-based land stewardship.

Jim Kirkland, Forester & Interim Director, Illinois Forest Resource Center
The Forest Resource Center offers information and educational programs for landowners, natural resource professionals, teachers, students and the general public.
Stewardship Week

Besides agricultural research, DSAC hosts educational field days for students in Southern Illinois, such as Stewardship Week.

Since 1990 more than 55,000 students have participated in this annual week long event.
This event uses the DSAC facilities to provide elementary school students with issues and experiences related to natural resources.

Stewardship Week has had a positive impact on environmental awareness among local students and teachers as it reinforces the science curriculum.
ADDITIONAL ACTIVITIES AT DSAC

• Charrette

• Sustainable Living Expo

• Summer Intern Program
Reinventing the Dixon Springs Agricultural Center

Planning Charrette
August 2010
The purpose of the Charrette was to facilitate discussion between stakeholders of problems, future directions, issues and common objectives.

It was an intensive workshop, run over four days (August 5-8, 2010) by an inter-disciplinary team of experts (Some which include Charlotte Anderson, of C. Anderson Consulting and Dan Carmody, President of Detroit’s Eastern Market Corporation (EMC)), designed to help stakeholders synthesize and prioritize the values of the community and find attractive, realistic, economically sound and politically viable solutions.
SPECIFIC GOALS OF THE CHARRETTE

• Draw on the Knowledge, ideas and experiences of stakeholders and participants to define a vision and guiding principles that reflect the core values and mission of DSAC,

• Develop and translate recommendations into clear and persuasive working documents describing the potential future of DSAC,

• Generate a long-range sustainability plan that includes viable alternative solutions to the current land lease situation,

• Find innovative strategies to channel and broaden community support for DSAC,
• Develop Strategies to persuade the general public and the legislature of the relevance of DSAC,

• Establish new partnerships and strengthen existing ones,

• Identify opportunities to expand existing programs and/or develop new ones to promote growth, public usage and revenue generation,

• Identify sources of funding to implement recommendations,

• Make short-term recommendations to maintain enthusiasm and energy generated through the Charrette,

• Ensure that participants share a sense of ownership that will drive planning and implementation.

Dan Carmody
President of Detroit’s Eastern Market Corporation (EMC)

Charlotte Anderson
Principal, C. Anderson Consulting
“Times are hard. Unemployment is up, retirement accounts are down, and people are worried about their futures. It's an excellent time to offer a program to help people learn how to become more self-reliant. Raising your own, making your own, building your own—making ends meet in hard times.”

One of the major themes of the Sustainable Living Expo.

Dixon Springs Agricultural Center
October 8-9, 2010
Program Tracks — will include locally grown foods, energy, conservation, consumer and survival. Vendors will be on hand to showcase products and services related to sustainable living. Exhibitors will include organizations that provide information and support. Sponsorships and donations are being sought to cover the out-of-pocket costs.

Extended Workshops and Continuing Education Programs — focused loosely around the theme of Community Sustainability will be offered on Friday, October 8th. Advance registration will be required — fees will include lunch. Continuing education and/or college credit will be offered where possible. The public is expected to show up in force on Saturday, October 9th. Each program track will offer featured presentations and satellite learning stations manned by experts and regular people who are “walking the talk.” The Shawnee Energy Fest, normally held near Carbondale, will be a part of the Expo this year! A kid’s area will round out this family friendly event. Registration, either in advance or upon arrival at the event will be required for Saturday, but there is no admission fee. Area vendors will be on hand selling food and beverages.

Event Sponsors — It takes a lot of dedicated people and organizations to put on an event like we have planned! The Shawnee Resource Conservation & Development (RC&D) Area is coordinating the planning effort with the assistance of a steering committee and several working groups. To date, sponsors include Advanced Energy Solutions; Connect SI Foundation; John A. Logan College; North Central Region Sustainable Agriculture Research and Education Professional Development Program; Southeastern Illinois College; Southern Illinois Center for a Sustainable Future; Southern Illinois University; University of Illinois – College of ACES, Dixon Springs Agricultural Center, Environmental Change Institute, and Extension; USDA Natural Resources Conservation Service; USDA Forest Service; Your Professional Partners, and others. Donations in support of the event are tax-deductible.

Product and Service Vendors — will pre-register in advance, set-up on Friday morning, and have the added opportunity to attend a free workshop that afternoon focused on improved marketing and customer service. Vendor fees ($100/$125 with electricity) will cover Friday’s lunch, booth space, basic program, website listing, and a free afternoon workshop on marketing and customer service. Food vendor set-up for the main event will take place early on Saturday morning. Locally grown foods will be featured.
The Summer Intern Program provides undergraduate students an opportunity to gain hands-on (experiential) learning by working closely with project leaders located at DSAC and with UIUC faculty.
They learn about Southern Illinois through pre-arranged group activities (farm tours, local agribusinesses) in conjunction with DSAC project leaders, extension specialists and others.

- Expose students to how research is conducted from experimental design and layout to data collection, analysis and reporting; gain practical experience from working with campus/DSAC-based researchers.

- Builds student leadership and presentation skills.
In August of 2009, in conjunction with the annual meeting of the DSAC External Advisory Board, an “early state” study entitled “Reinventing the Dixon Springs Agricultural Center” was presented by the College of Agriculture, Consumer and Environmental Sciences (ACES) Associate Dean of Research, Dr. Jozef Kokini.

This study summarized two years of board discussion that focused on ways to make DSAC more self-sustaining and more responsive to the diverse and changing needs of southern Illinois’ next generation of ranchers, farmers and regional entrepreneurs.

The study also advanced to concept that DSAC would serve as a catalyst for economic development, fostering regional entrepreneurship in formation of small and medium sized start up companies.
Stephen A. Ebelhar, Ph.D.,
Agronomist & Superintendent of Crop Sciences Division

Dr. Ebelhar is an Agronomist with the Department of Crop Sciences and is the Superintendent of the Crop Sciences operation at Dixon Springs and Brownstown. He also serves as the Visiting Operations Coordinator for the Office of Research. Steve received his B.S. and M.S. in Agronomy from the University of Kentucky and his Ph.D. in Soil Science from North Carolina State University.

Since 1985, Dr. Ebelhar’s role has included being a Research and Extension Specialist in Soil Fertility and Crop Production in southern Illinois. Steve oversees some sixty plus research projects at DSAC and Brownstown. Over the past 10 years, he has obtained over $1M in research grants and over $100,000 in cash gifts to support his programs.

During this same period, Steve has published over 100 articles in refereed journals and proceedings. He has also given over 150 talks at field days, Agronomy days, and state, regional, national and international meetings to over 10,000 attendees.

In 2010, Steve was awarded the College of ACES Professional Staff Award for Sustained Excellence in Research.
Carl (Butch) Hart,
Research Specialist

Hart is originally from Shelbyville. He received his B.S. and M.S. from the University of Illinois. As a specialist in crop sciences, Hart assists Steve Ebelhar on research projects and gathering data. Current research projects not limited to the DSAC site include: precision agriculture such as active light sensors and variable rate technology, biofuel sources such as miscanthus, switchgrass, and sweet sorghum, new fertilizer products as well as the conventional products as they relate to the southern to Illinois soil and climate, different cover crop opportunities for the region, planting rates and timing.
Bronwyn Aly,
Senior Research Specialist, Horticulture

Aly received a B.A. from Southern Illinois University in 1998. Aly’s specialization at DSAC is the production of small fruits and vegetables and fruit trees.

Her current primary responsibilities are to plan and conduct horticulture research at DSAC including variety trials, pest management, and cultural practices with vegetable and small fruit and tree fruit crops. The research is conducted on-site as well as on selected growers’ farms.

Aly’s role also includes design, establishment, maintenance, collection, calculation, and analysis of data along with the management of the pick-your-own operation AT DSAC and supervision of one full time employee and two to four summer workers.
Jeff Kindhart,
Senior Research Specialist, Horticulture

Kindhart received a B.S. in Botany from Eastern Illinois University and an M.S. in Horticulture from the University of Illinois. His area of specialization is horticulture with a background in both food crop and ornamental horticulture. He has experience in teaching, extension and research and is currently conducting applied research and extension activities with fruit and vegetable crops at DSAC.

He has co-authored refereed journal article on topics such as: Weed Control in No-Tillage Zucchini Squash Production; Viruses Associated with Cucurbit Production in Southern Illinois; and Solanaceous weeds as possible sources of Cucumber mosaic virus in southern Illinois for aphid transmission in peppers.
Frank A. Ireland,
Research Animal Scientist

Ireland began working as a research animal scientist in the University of Illinois’ Department of Animal Sciences in 1990 after completing an M.S. degree at the University of Missouri-Columbia. At DSAC, he is responsible for conducting research, instructing students, and overseeing the day to day activities of the Animal Sciences program.

In 1990, the Animal Sciences beef research program consisted of conducting research with a staff of 10 full-time employees and approximately 150 head of crossbred cows on 2,500 acres of USFS land. Today, the Animal Sciences program at DSAC is one of the largest beef cattle research programs in the nation. It is also proclaimed to be the largest single site experimental herd east of the Mississippi River.

Ireland is involved in conducting numerous research projects of national and international scope each year. He also serves as a part-time instructor for Shawnee Community College agricultural laboratories and instructor of students from the University of Illinois Colleges of ACES and Veterinary Medicine as well as a guest lecturer for agriculture classes at SIU-Carbondale.