

# Department of Crop Sciences---University of Illinois

## COLLEGE of AGRICULTURAL, CONSUMER AND ENVIRONMENTAL SCIENCES



### July 2007 Newsletter

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Lyle Paul - Agronomist  
David Lindgren - Farm Foreman  
14509 University Rd.

Shabbona, IL 60550

Phone/Fax 815/824-2029

e-mail [lylepaul@uiuc.edu](mailto:lylepaul@uiuc.edu)

<http://www.cropsci.uiuc.edu/research/rdc/dekalb>

#### 2007 Weather Data

	January	February	March	April	May	June
Air Temperature (F°)						
Monthly Average High	31.6	21.8	50.2	56.8	77.0	79.2
Monthly Average Low	18.6	6.9	32.9	35.0	51.1	57.1
Daily Average	25.4	14.8	41.5	46.0	64.5	68.1
Departure from Average (41 year)	+4.7	-11.0	+4.8	-3.3	+4.4	-1.9
Observed High (date)	48.5 ( 5)	45.6 (21)	75.9 (26)	84.2 (22)	89.1 (24)	90.5 (16)
Observed Low (date)	1.1 (31)	-14.1 ( 8)	12.2 ( 4)	19.3 ( 7)	39.5 (17)	44.1 ( 9)

#### 2007 Precipitation (Inches)

Month	Total	Departure from Average	Year Accumulation	Total Departure 126 Yr
January	0.88	-0.67	0.88	-0.67
February	1.00	- 0.44	1.88	-1.11
March	3.68	+1.25	5.56	+0.14
April	3.46	+0.26	9.02	+0.40
May	2.01	-1.95	11.03	-1.55
June	3.91	-0.24	14.94	-1.79

### Field Day – July 17, 2007 – 4:00–5:00 PM

The annual Agronomy Field Day at the University of Illinois Northern Illinois Agronomy Research Center will be held on Tuesday, July 17, with tours beginning at 4 pm. Tours will depart from the farmstead every 20 minutes from 4 pm to 5 pm and last a little over 2 hours. U of I Extension Specialists and will present information on corn population and nitrogen needs, fungicides and diseases on corn, field crop insects, and weed control. Presenters will include Dr. Carl Bradley, Dr. Michael Gray, Dr. Aaron Hager, Dr. Emerson Nafziger and Dawn Nordby. A pork chop meal will be available on site at the conclusion of the tour. There is no separate weed control tour date scheduled this year.

The U of I Northern Illinois Agronomy Research Center, located in DeKalb County, can be reached by going 1 mile east of Shabbona on Route 30, then 5 ½ miles north on University Road. Continuing education units for Certified Crop Advisers will be available for participants.

### Status of Research Center:

As you may be aware, a report on the Field Research System was made to the Provost of the University of Illinois last November. Following is **MY** condensed summary of the report with emphasis on the references to Crop Sciences' northern Illinois locations.

#### REVITALIZATION OF THE COLLEGE OF ACES SYSTEM OF FIELD RESEARCH AND EDUCATION CENTERS FOR THE 21<sup>ST</sup> CENTURY

##### Report of the University of Illinois, Urbana-Champaign Provost's Task Force

Public Committee Members:

Harry Alten (NRES)	Harvard
Steve Barwick (Crop Sci)	Growmark Bloomington
Philip Bradshaw (An Sci)	Griggsville
Stephen Cerney DVM (Vet Med)	Anna
Nancy Erickson (Crop Sci)	Altona
Jerry Hicks (Extension)	Agrivest Springfield
Richard Martin (Crop Sci)	Lincoln
Greg Oltman (NRES)	Union
Stephen Scates (An Sci)	Shawneetown
Edward McMillan (Chair)	Greenville

+ 9 Campus Administrators

Committee met, during the summer of 2006, 4 times, 2 in person & 2 by teleconference.

**Recommendations:**

A: Northwestern Illinois Research and Education Center: The Department of Crop Sciences should close the Monmouth and DeKalb (Shabbona) Crop Sciences Facilities and establish a new Northwestern Illinois Field Research and Education Center with good accessibility and linked to enhanced collaborations with other ACES units and other local and regional institutions.

Background: The major soil groups west of the Illinois River include the Tama-Muscatine- Sable association (4.6% of state land area) and, to some extent, the Fayette-Rozetta-Stronghurst association (6.3% of the state land area). The Northwestern Illinois Agricultural Research and Education Center was established in 1980 to represent this highly productive group of soils. There are 160 acres at this Center, 118 crop acres, and 85 acres suitable for research. The center has equipment storage, but office and laboratory space are inadequate, and there are no indoor meeting facilities at all. There is essentially no suitable space for group meetings, though a metal machine shed can be used when temperatures are moderate and it's not raining hard enough on the metal roof to disrupt hearing. The land area for research is inadequate.

The northern region of Illinois consists mostly of productive soils formed in loess—silty, wind-deposited parent material – over glacial outwash or glacial till. The soils north of Interstate 80 and west of Chicago-Joliet area are generally quite productive. The Northern Illinois Agronomy Research Center, established in 1948 near Shabbona in DeKalb County, represents these soils. Soil types are primarily in the Catlin-Drummer-Flanagan soil association, representing some 2.1 million acres or about 5.9% of the state's land area. There is a total of 160 acres, with net research plot area of 107 acres. The Center has inadequate buildings and the quality of space is generally poor, but unlike other Centers it does have a small meeting room.

The portion of northeastern Illinois included in this region has wide variation in soils, many of them subject to wetness. The largest of the soil associations of this area are quite productive Plano-Proctor-Worthen (5.2% of state's land area) and Varna-Elliott-Askhum (2.7% of state's land area), which tends to be wet. Until the mid 1980s (87), Crop Sciences operated a REC representative of these soils near Elwood.

**Source of funds:** A land trade of existing facilities at Monmouth and DeKalb will provide adequate funding to purchase the new farm that contains the physical facilities necessary for offices, machinery storage, meeting rooms, and laboratories. A recurring budget equivalent to 2007 dollars plus funds generated with crop sales and user fees will be needed.

**Size of facility:**

Land area- 480 acres

Office, laboratory, meeting facility – 6,000 square feet

Machinery storage and shop – 9000 square feet

Grain storage – 40,000 bushels

Pesticide Storage – 2,800 square feet

**Advantages:** Establishment of a modern facility that is well equipped and funded to allow research to be conducted with equipment and conditions similar to those used by area farmers. Easily accessible by clientele of the area, including producers, consultants, elementary and secondary students, and community college students and faculty. Improved efficiency of operations and reduced labor costs.

**Disadvantages:** Reduction of environments to evaluate products and practices. While the difference in average temperature between the proposed location and current facilities is small, the existing locations are 150 miles apart, and moving to a single location will lessen ability to monitor changes in pest infestations and to experience a range of weather conditions. Longer travel time of clientele of current Centers.

**Recommendation B:** The Department of Crop Sciences should continue to operate and expand the Orr Research and Education Center as part of the Crop Sciences system, and enhance collaborations with other ACES units and other local and regional institutions.

**Recommendation C:** The Department of Crop Sciences should close the Brownstown and Dixon Springs Crop Sciences Facilities and establish a new Southern Illinois FREC between Marion and Mt. Vernon. This new FREC should be linked with expanded interactions with other ACES units, Southern Illinois University, and other local and regional institutions. The plan must include a means for continuing some level of agronomic research at Dixon Springs Agricultural Center to support special geographically significant needs.

**Recommendation D:** The Department of Natural Resources and Environmental Sciences should expand the St. Charles FREC program opportunities in horticulture and environmental research, outreach, and academic education, and link these expanded FREC programs with enhanced collaborations with other ACES units and other local and regional institutions.

**Recommendation E:** The Department of Natural Resources and Environmental Sciences is encouraged to fully study the opportunities for expansion and revitalization of its programs at Dixon Springs Agricultural Center and to come forward with a new plan for NRES programs at DSAC once the ongoing economic study is completed. The plan

should be linked with expanded interactions with other ACES units, Southern Illinois University, and other local and regional institutions.

**Recommendation F:** The Department of Animal Sciences should not liquidate assets of animal programs at the Dixon Springs Agricultural Center or expand the Animal Sciences beef herd at the Orr Center.

**Recommendation G:** The animal programs at Dixon Springs Agricultural Center should be revitalized and consolidated by expanding the Animal Sciences beef herd, withdrawing or consolidating the College of Veterinary Medicine beef program into the Animal Sciences beef herd, expanding educational programs, renovating buildings, and withdrawing the College of Veterinary Medicine swine unit by the end of one year. The program should be linked with expanded interactions with other ACES units, Southern Illinois University, and other local and regional institutions. Realization of the overall recommendations generated by the Task Force will result in a revitalized, restructured FREC system in which:

1) The recommended five off-campus FREC sites will be strategically located to provide the most effective venue for demonstrating new practices and products to today's farmers and their advisors in the region, and relatively easily accessible to the stakeholders served.

2) The FRECs organized into a few key regional thrusts, will provide enhanced efficiency and a "critical mass" of effort within each region.

3) Implementation of the sustainability model for each FREC will provide facilities that have a) an adequate land base; b) buildings to meet the research needs; c) classroom facilities that contain state-of-the-art distance education equipment.

4) Implementation of the sustainability model for each FREC will provide adequate staff to allow each site to fully realize its potential for impacting Illinois agriculture through research, teaching and outreach.

5) Programs at each FREC will be linked with enhanced interactions with other ACES units and other local and regional institutions.

### **Present situations (as I know of them):**

Meetings have been held with Dean Easter (Dean of ACES) and interested people in the areas around each of the Research Centers. At this time there have been no immediate plans to make any major changes to follow up on the recommendations except that the Veterinary Medicine Swine herd at Dixon Springs is in the process of being discontinued.

A small group of 2-3 people from near each Research Center met in Springfield for further discussions with the Dean. After that, an even smaller group was suggested to meet and have further discussions. I do not know the status of that proposed group or if a meeting was held.

It appears that the decision on the eventual future of each of the Research Centers will depend on finding some additional new money from some source(s) to help pay the costs of Center operation.

At this time each of the Departments is responsible for the decision on how to fund the Center operations that they are involved with. The Departments being responsible for deciding the amount and source of funding to operate the centers has been the policy in effect for the past twenty or so years.

Putting more pressure on any funding decisions is a continuing reallocation of state funds from each Department to the College and /or the University in an amount roughly equal to 3-3.5% of their total state funds for each of the next 4 years. This means that each Department will have roughly 11% or so less state money at the end of the four year period. Since about 95% of the state money in the Crop Sciences Department is used for salaries, any reduction probably means fewer people unless other funds are found. The number of Faculty in the Crop Sciences Department has decreased from 38 in 1997 to 30 in 2006. Often in the past few years, as people have retired or left, they have not been replaced.

These are the factors involving the future of the Research Center as I know them or as I have interpreted them from what I have heard.

### **University sells land in DeKalb County:**

When sale bills appeared promoting the sale of the 880.9 acres of the Wright Trust Farms in DeKalb County, we got many calls and questions asking if this included the Research Field. The Research Center was left to the University by Senator and Mrs. Harry Wright in the 1940's as part of the 960 acres bequest. The rest of the land, aside from the Research Center, was crop share or livestock share leased for many years. In the past couple of years, the farms had been cash rented.

Last year, the Board of Trustees decided that the fiscally responsible thing to do was to sell these properties. The money would be used to endow a scholarship fund with annual student benefits equal to the money that had been generated from the farm rents in the past. The remaining money that was generated from the sale would be used to help pay for land that being purchased for the move of the South Farms Research Centers near campus. Any extra money from the sale could be used as seen fit. The farms were auctioned on June 7. All of the farms sold to adjoining or nearby farmers. The prices per acre ranged from \$7827 and \$8815 with an average of \$8384. I am not sure if there was any money left over from the sale above what was already committed to be spent as described.

### **Wheat yields:**

All of the University wheat variety trials have been harvested. The old adage of, "If you want to raise better wheat, move north", did not work so well this year. The best University variety trial yields this year were from Brownstown, which is near Vandalia,

<u>Location</u>	<u>Average Yield Ranges of yields</u>	
Belleville	66.3	51.6 - 80.5
Brownstown	78.3	53.6 - 94.5
Perry	75.3	54.8 - 95.1
Urbana	65.0	35.0 - 80.4
DeKalb	69.0	44.6 - 86.7

There were nearly 40 bushel ranges at all trial locations. At DeKalb, we had fairly strong differences due to the winter injury on some varieties. Other fields had winter injury and/or more severe injury from the Easter freeze. At Dixon Springs, the damage was perceived to be so severe that the trial was destroyed and replanted to another study.

A study of seed insecticide treatment was conducted using three or four varieties with and without Gaucho seed treatment. The average yield increase with Gaucho treated seed from three varieties in the southern region was 3.2 bushels/acre. The average yield increase with the Gaucho treated seed for the four varieties used in the northern region was 3.9 bushels/acre. The average change at DeKalb for the four varieties with the Gaucho treated seed compared to the same varieties without Gaucho seed treatment was a 3.4 bushel/ acre decrease.

The wheat variety trials at DeKalb showed quite a bit of barley yellow dwarf virus. This disease was spread by aphid feeding on the plants last fall. The aphids should have been controlled by the Gaucho seed treatment. I did not look at this study specifically to evaluate the level of the virus in the plots, but if the aphids were controlled, then the barley yellow dwarf virus was not a factor in these four varieties as much as some other factors.

Complete yield results from the wheat variety trials can be found at the web site:

<http://vt.cropsci.uiuc.edu/wheat.html>

University of Illinois  
Northern Illinois Agronomy Research Center  
14509 University Rd.  
Shabbona IL 60550