The Institute for Genomic Biology at the University of Illinois at Urbana-Champaign (UIUC) is a state-of-the-art research facility established to advance life science research and stimulate bio-economic development in Illinois. Opening its doors in March 2007, this $75 million, 186,000-square-foot facility was built in an open-laboratory design to bring research faculty and support personnel from more than 30 academic departments together to solve complex research problems.

Harris Lewin, director of the Institute, addressed C-FAR members at the February Annual Meeting to provide an overview of the new research facility. Lewin shared how C-FAR had a significant influence on the establishment of the Institute. “C-FAR was instrumental in getting the funding for this important research facility,” said Lewin. “It was important to have the backing of external constituencies such as C-FAR in obtaining the necessary funding from the State of Illinois.”

The Institute explores three broad areas of research: systems biology, cellular and metabolic engineering, and genome technology. Research is focused on applications of genomic biology in addressing significant problems and opportunities in agriculture, medicine, and the environment.

C-FAR-funded research provided the groundwork for two research programs taking place at the Institute. SoyFACE (Soybean Free Air Concentration Enrichment), a groundbreaking $2.1 million C-FAR research initiative, launched and funded for seven years through the UIUC C-FAR Sentinel Program, is being continued as part of one of the Institute’s research themes called Genomic Ecology of Global Change. This forward-thinking research focuses on growing crops under production field conditions in an atmosphere that is anticipated for the middle of this century, namely one with higher levels of carbon dioxide and ozone. Investigators are working to discover the effects of atmospheric change on the agronomy and productivity of Midwestern crops as well as to find solutions that will lead to crops better adapted to this likely future.

CONTINUED ON PAGE 3
Greetings

Poised for the Future

I am deeply honored to be called upon by my fellow board members to serve as your next chairman. Like my predecessors, I embrace this opportunity and privilege with the greatest commitment. As I assume the chairmanship, my thoughts for the future can be captured through three P’s – people, programs, and proposals.

People – Indeed, people are our organization’s most valuable asset. Be it our members, our researchers, or our elected and appointed State officials, C-FAR is tremendously positioned by having such a strong and dedicated partnership guiding our future.

Our five working groups met this past March to review and prioritize proposals submitted to the External Competitive Grants Program. I witnessed the seriousness and commitment of our members in identifying the most necessary research for Illinois. Their efforts are second to none. It is a dynamic that adds infinite value to Illinois’ food and agricultural research.

Programs – Sound research programs are paramount to the long-term vibrancy of C-FAR. An effective research program addresses short, intermediate, and long-term research opportunities. C-FAR’s portfolio has been carefully developed to do so.

The engagement and interest by our membership this past winter in identifying new strategic research initiatives was exemplary. Such a program for longer-term research is clearly deemed to be a valued component of our research portfolio. In another example, 80 pre-proposals requesting $8.6 million were submitted to this year’s External Competitive Grants Program. Such a response is clearly indicative of the importance of this program.

Proposals – Engaged people and sound programs enable what we are ultimately about – attracting the best research proposals. The advancement of our industry cannot be achieved if high-quality proposals are not submitted. We continue to experience an increasing quality of proposals submitted to C-FAR’s research programs.

Proposals submitted to this year’s External Program were indeed of the highest quality. Such a set of proposals results from carefully nurturing research priorities, meaningfully engaging our members, and implementing sound programs. I applaud our state’s researchers for submitting such proposals.

While we will certainly continue to face challenges, I suggest we are soundly positioned for a bright future.

Nels Kasey
Chairman of the Board
Another innovative C-FAR research initiative also has close ties to the Institute. A five-year, $1.2 million C-FAR strategic research initiative (SRI) focused on the development of biomass energy crops provided the groundwork for the energy company BP to select UIUC to partner in its $500 million research program named the Energy Biosciences Institute. UIUC joins the University of California at Berkeley and Lawrence Berkeley National Laboratory in this large-scale initiative to explore how biocatalysis can be used to increase energy production and reduce the impact of energy consumption on the environment. “The Energy Biosciences Institute should be a very proud example of what C-FAR has accomplished,” said Lewin. “The initial research investments by C-FAR were absolutely instrumental in bringing BP to the campus. This is a great success story for C-FAR and a great success story for the State of Illinois.”

“With the financial means provided by the State of Illinois, and its leaders’ confidence in our research investments, we are absolutely delighted the founding of the Institute for Genomic Biology was aided by C-FAR’s efforts. This world-class research facility is a testament to our state’s research prowess,” said Chuck Cawley, C-FAR research vice chair.

FY09 External Program Proposals Identified for Funding

C-FAR’s five working groups met during February and March to review and identify for funding research proposals submitted to the FY09 External Competitive Grants Program. The External Program is funded annually at 15% of the C-FAR appropriation.

Eighty pre-proposals requesting over $8.6 million were submitted by researchers from across Illinois to this year’s program. The proposals identified potential research in areas including advancing bioenergy production technologies, enhancing food quality and human nutrition, developing food safety technologies, identifying new markets for Illinois’ agricultural products, improving crop and livestock production, strengthening rural communities, developing environmental protection strategies, and more. “We continue to realize the External Program is serving a critical need for relatively short-term and applied research needs,” said Jerry Hicks, research chair.

After the review and evaluation of pre-proposals by working group participants, principal investigators of the highest-ranked 33% of proposals were invited to submit a full proposal. Twenty-seven full proposals requesting over $3 million were received. “The number of full proposals invited was reduced this year to allow our working group participants the ability to more fully concentrate on their review, and in fairness to researchers, we did not want to invite an excessive number when the potential for being funded was relatively low. This decision will be revisited annually,” said Hicks.

Given the number of high-quality proposals submitted, difficult decisions had to be made regarding which proposals to fund. “I contend, on behalf of our working group, we reviewed what was likely the highest-quality set of proposals we have ever entertained,” said Molly Ann Godar, chair of the agricultural production systems working group. “With adequate resources, we would have likely funded every proposal submitted to us.”

“I have served on several research review panels at the regional and national levels, and the C-FAR proposals we reviewed were exceptionally qualified,” said Mohammad Gabadoost, expanding agricultural markets working group participant and associate professor of plant pathology at the University of Illinois at Urbana-Champaign.

Final funding decisions for this research program will be announced once the FY09 C-FAR appropriation from the State of Illinois is enacted.

Welcome to New C-FAR Members in 2008!

C-FAR welcomes several new members to date in 2008. We appreciate their commitment to and support of C-FAR, and look forward to their valuable input and engagement.

Organizational Members
Ogle County Farm Bureau          Pike County Farm Bureau
Scott County Farm Bureau

Affiliate Member
WIU Department of Biological Sciences

Individual Members
Vernon Argo, Jr.                John Herrmann
William Bailey                  Alfred Roca
Marla Behrends*                Brian Rolf
Larry Berger                   Gary Schnitkey*
Bruce Branham                  Glen Semple
John Caveny*                   Steven Stallman
Jim Charlesworth              Youfu Zhao

* Renewed from a year(s) prior to 2007
Q & A with Alan Puzey

Alan Puzey, after serving as the Chairman of C-FAR from 2002–2007, has acquired a unique perspective and understanding of the organization. First elected to the C-FAR Board of Directors in 2001, he is currently serving as Immediate Past Chair on the board, in an ex-officio capacity. He shares his candid thoughts on the organization in a recent interview.

Q: Why did you seek to serve in a leadership capacity for C-FAR?

I think it was a logical progression, once I got involved with C-FAR on a more detailed level. It seemed like a natural flow for me to want to get more involved and seek to be a bigger part of the organization. Part of it is just background and training, having gone through FFA, Farm Bureau’s Young Leader Program, and the Agricultural Leadership Program. I wanted to be more involved in C-FAR’s maturing. I think it was a wise choice for me, and hopefully for the C-FAR organization.

Q: What have you enjoyed most about serving on the C-FAR Board of Directors?

My greatest enjoyment comes from working with the people – from board members, staff, committee members, and other engaged members to the close relationships we have in Springfield with many of the folks in the Illinois Senate, House, and state administration. Without exception, the individuals who have served with me on the C-FAR Board of Directors are second to none in terms of quality, commitment, and ability. These relationships have provided me with a great deal of pride and enjoyment over the term I have served.

Q: What do you believe to be C-FAR’s greatest challenge?

Our greatest challenge remains acquiring adequate funding from the State of Illinois to support our research programs. We have the ability to invest these dollars and do great things with them, so the challenge is not using the dollars wisely, but getting them put into our structure. I believe we have proven our research programs are designed as a great way to do business. Until we secure a steady flow of funding, it’s going to be a challenge. Not necessarily a bad challenge, but a challenge.

Q: To what degree do you believe C-FAR is making a significant impact on Illinois food and agriculture?

Well, I think it’s huge. I don’t say that just because I’m engaged in C-FAR. I think the signs are everywhere. We can go back to the early days and see how C-FAR research has improved our state’s food and agricultural systems. A lot of people I talk to share how they often use the farmdoc website. It’s great to see how initiatives like that, which C-FAR provided the initial funding for, are changing the way we do business. Smaller research initiatives are probably as much of value in terms of impact as some of the large ones. A wonderful success story for us is how C-FAR research investments in bioenergy crops were instrumental in bringing hundreds of millions of dollars to Illinois from the energy company BP to establish an Energy Biosciences Institute at the University of Illinois at Urbana-Champaign. Whether it’s the smaller’s research investments making small impacts in multiple places or the larger investments making huge impacts, one can easily see benefits from C-FAR research across the state and nation. It’s a testament to our state that we are recognized at the national level as having a “good thing” going, if you will. Several states and a national effort have tried to model our organization because of the impacts we’ve had in Illinois.

Q: What “words of wisdom” would you offer other C-FAR members?

I think my words of wisdom would be for members to just get involved. Like any organization, you get out of it what you put into it. This organization is unique in the fact that what effort you put in can really yield rewarding amounts of satisfaction in terms of seeing results. Don’t think as a member, whether you are a member who comes to membership meetings, or a working group participant, or a board member, that your efforts are not that important, because they are very important. It’s a unique group, and the diversity and work ethic of members is unlike that of any other organization I’ve seen. I always have to remind myself these are volunteer members who commit their time, efforts, and expertise. The more people become involved, the more they will enjoy it and see the fruits of their labor. We are obviously at a turning point in time when agriculture is changing, and we need to support that in terms of research. It’s an effort well worth the time, and I encourage members to commit that time and try to move up through the ranks and seek those leadership opportunities. They will be greatly rewarded for it.

Did You Know?

C-FAR was founded in 1993 with a membership of 21 statewide food and agricultural organizations and 6 university-and research-based entities. In addition, a core group of dedicated people punctuated their personal support by being founding individual members; many of whom have been members every year since.
Research Delivers High-impact Returns for Illinois

A broad range of food and agricultural needs and opportunities crucial to Illinois are continually being addressed through C-FAR research. In just the past year, 26 research initiatives funded through C-FAR’s research programs reached completion. Several of the projects have matured into significant initiatives and are being continued through federal, private and/or other funding. Highlights of important outcomes resulting from these C-FAR research investments are highlighted below and will continue in the summer newsletter.

- An open-air laboratory was established to determine the effects of rising atmospheric carbon dioxide and surface ozone on Midwestern crops. Located at the University of Illinois at Urbana-Champaign, it is the world’s largest Free Air Concentration Enrichment (FACE) facility. Researchers are working to find solutions that will lead to crops better adapted to future atmospheric conditions. Over $9.5 million in additional funding or in-kind support has been received from the U.S. Department of Energy, National Science Foundation, U.S. Department of Agriculture, ADM, and others to continue this research.

- Corn ear rot is often associated with the accumulation of aflatoxins in infected kernels. Aflatoxins are highly carcinogenic food contaminants. Researchers are identifying specific markers to develop corn breeding programs aimed at reducing or eliminating aflatoxin B1.

- Soybean cyst nematode (SCN) is the most damaging pathogen of Illinois and U.S. soybeans. Researchers are making great strides in the genetic analysis of SCN, which will aid in the development of a rapid, inexpensive assay to screen soybean fields for the disease and assist in the development of SCN-resistant varieties.

- The synthesis of biodiesel from agricultural waste using a biocatalyst and ethanol is being investigated. Though yields must be increased and costs reduced before the process can become commercially viable, the use of biocatalysts holds promise as a method for converting low-quality waste grease into a substitute diesel fuel.

- Specialty vegetables such as cilantro, garlic, globe artichoke, and sweet potato appear to be ideal vegetable crops as they have few pest and disease problems. Optimal field cultural practices and marketing strategies are being determined to successfully produce these alternative vegetable crops in Illinois.

- Innovative methods have been developed for using processed swine manure and composted livestock and urban landscape waste as a soil amendment for row crop production. This research strives to improve urban and rural waste management and produce an environmentally friendly, value-added soil improvement product.

- Emissions of dust, odors, and gases from swine facilities continue to be major issues for the Illinois swine industry. A commercially available program to reduce emissions from swine facilities was evaluated. Researchers found the program to be effective at reducing odor and ammonia emissions, but found no associated economic gains from manure nutrient composition or animal performance to offset the cost of adopting this system.
• Yellow, short-season field peas were examined to determine whether the crop can partially replace corn and soybean meal in nursery pigs’ diets. Research has shown that inclusion of yellow field peas (at 20%) provided significant improvements in nursery pig growth performance. Additional research is being conducted to determine ideal milling and particle size.

• The MarketMaker website was created to connect Illinois producers, processors, retailers, consumers, and other food supply chain participants. The success of this program has led to a 20-state partnership collaborating in a national Market-Maker network. It is the nation’s most extensive collection of searchable food industry-related data.

• Type 2 diabetes is rapidly increasing in the U.S. and throughout the developed world. Diets with increased high-quality protein and reduced levels of high-glycemic carbohydrates have been shown to contribute to enhanced regulation of blood glucose and insulin when compared with more traditional diets containing high carbohydrates and low protein intakes.

• The Chicago metropolitan area is home to 46 companies whose primary business is confectionery manufacturing. These companies produce a wide range of products including gum, nonchocolate candies, and chocolates. A survey of U.S. confectionery manufacturers gathered pertinent information on this industry to share with Illinois confectionery manufacturers, trade associations, and other researchers.

• Illinois water quality research is providing the scientific basis for the development of nutrient standards for the state’s surface waters. While complex factors affect Illinois waters, this initiative has provided invaluable insights into the development of these standards and has created valuable partnerships among regulators, the private sector, and the research community.

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Get to Know a C-FAR Leader

In this issue, we are pleased to feature Chuck Cawley and Wally Furrow, who were recently elected to serve on the C-FAR Board of Directors.

Chuck Cawley

Chuck Cawley operates a 800-acre farm in Ogle County, growing corn, soybeans, and wheat. He graduated from the University of Illinois, receiving a B.S. in agricultural economics and a master’s degree in agronomy. He resides near Rochelle and has been farming for over 27 years.

Chuck is a C-FAR Individual member and a representative of the Illinois Farm Bureau (IFB). He was elected to the Illinois Farm Bureau board of directors in 2004 to represent District 2, which includes Carroll, JoDaviess, Ogle, Stephenson, and Winnebago counties. At the IFB, he serves on the Illinois Government Committee, the ACTIVATOR Executive Committee, and the COUNTRY Trust Bank board. He was a member of the IFB Japanese Market Study Tour in 2004. Chuck is actively engaged in the Ogle County Farm Bureau, having served as its president from 2001 to 2004.

Actively engaged in his community, Chuck is on the Planning Commission for Dement Township in Ogle County, serves as a Commissioner for the Kyte River Drainage District, and is a Rochelle Stormwater Advisory Committee member. He has also served on the Rochelle Lincoln Highway Heritage Festival Committee and Relay for Life Committee. With a talent for playing the trombone, Chuck participates in the Rochelle Municipal Band and Rock Valley Community Band.

“Being part of C-FAR is important to me because the research we fund opens windows to new possibilities and opportunities for production and processing for food, fiber and fuel. From expanding our state’s economy, improving our environment, to creating healthier lifestyles, what excites me is that what we do will improve people’s lives, not only in Illinois but throughout the world.”

Wally Furrow

Wally Furrow owns and manages Furrow Enterprises, which includes a corn and soybean operation and the 11-acre vineyard and winery on his family farm in El Paso. He is a C-FAR Individual member and is a representative of the Illinois Grape Growers and Vintners Association.

From 1993 to 2000, Wally was the State Director for the U.S. Department of Agriculture Rural Development in Illinois. A significant accomplishment of his tenure was the designation of the Southernmost Illinois Delta Empowerment Zone. He is a past president of the Illinois Grain and Feed Association, served on the National Grain Association and Illinois Fertilizer and Chemical Association boards, and is a member of Farmers Union. He has been a Commissioner of the Illinois Rural Bond Bank for 12 years. Wally is a member of the Woodford County Farm Bureau, and has served on several local school and church boards.

In Washington D.C., Wally was presented with the Secretary of Agriculture’s Honor Award for his outstanding service to rural Illinois. He is the first recipient of the Association of Illinois Electric Cooperative’s Rural Leadership Award. Wally and his wife Lorene have two children, Wayne and Lori, and seven grandchildren.

“C-FAR is important because food and agriculture is the largest industry in Illinois. Food is not only important, it is essential. Food and agricultural research is absolutely one of the most important issues that affect every person in the state. Funding for C-FAR should be a regularly funded item without question or exception.”
C-FAR Connection
Illinois Council on Food and Agricultural Research
1101 W. Peabody Dr.
Urbana, IL 61801

Address Service Requested

2008 CALENDAR

July 9  Board of Directors Meeting
September 10  Board of Directors Meeting
November 5  Board of Directors Meeting
November (TBD)  C-FAR Day at Western Illinois University (Macomb)

Please call the C-FAR office or check the calendar on the C-FAR website at www.ilcfar.org for further details.