



Major grant continues Value Chains project

The Value Chain Partnerships for a Sustainable Agriculture (VCPSA) project has received a \$500,000 grant from the Henry A. Wallace Center at Winrock International to assist Iowa farmer-based businesses over the next three years. The Leopold Center will continue to provide leadership for VCPSA's new phase, which will continue through 2009.

VCPSA began in 2002 with a goal to build new supply networks for farmer-led food and fiber enterprises that follow sustainable practices. The project has supported working groups to address challenges and markets for niche pork, the bioeconomy and natural fibers, regional

foods and organic flax.

Other VCPSA core partners are Practical Farmers of Iowa (PFI), Iowa State University Extension and the ISU Colleges of Agriculture and Business, with the Leopold Center and ISU providing matching resources. VCPSA is among four market-based change projects nationwide selected by the Wallace Center for funding.

The third phase follows a performance-based business approach that uses various indicators such as jobs, sales and profits to measure progress. Goals are to work with at least 10 farmer-based

WALLACE GRANT (continued on page 2)

Stockpiling shows potential: Alternative can maximize productivity in developing heifers

By MALCOLM ROBERTSON Program Specialist

Using stockpiled forage for winter grazing is a proven practice in many operations to reduce the amount of stored feed for maintaining mature cows over winter. However, less is known about how the system works for young pregnant cows, which have higher nutrient requirements, lower feed intake, and less winter grazing experience.

To learn more about heifers and grazing, the Leopold Center funded a two-year study by Iowa State University animal scientist Jim Russell. The larger project looked at the sustainability and productivity of forage-based production systems for developing heifers.

Winter grazing of grass and/or legume forages that have been allowed to grow during late summer and fall has become an effective management strategy, espe-

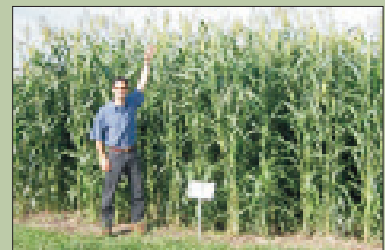
cially in southern Iowa. This approach eliminates harvesting and storage overhead, as well as allowing producers time to focus on other areas of the operation.

Research has shown that extending grazing into fall and winter months, rather than feeding cattle harvested forages, can lower winter production costs even during years of above-average snowfall. Livestock in these systems become accustomed to winter conditions and graze through comparatively deep snow to get access to the high-quality forage.

Properly managed stockpiled forage alone has sufficient nutritive value to be fed as the sole energy and protein source

STOCKPILING (continued on page 6)

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LEOPOLD CENTER

LEOPOLD LETTER MISSION

The mission of the Leopold Letter is to inform diverse audiences about Leopold Center programs and activities; to encourage increased interest in and use of sustainable farming practices and market opportunities for sustainable products; and to stimulate public discussion about sustainable agriculture in Iowa and the nation.

Leopold Letter ISSN 1065-2116

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The Leopold Center for Sustainable Agriculture seeks to identify and reduce adverse socioeconomic and environmental impacts of farming practices, develop profitable farming systems that conserve natural resources, and create educational programs with the ISU Extension Service. It was founded by the 1987 Iowa Groundwater Protection Act. The *Leopold Letter* is available free from the Leopold Center at 209 Curtiss Hall, Iowa State University, Ames, Iowa 50011-1050; (515) 294-3711.



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THIRD PHASE HAS NEW VALUE CHAIN INSTITUTE

WALLACE GRANT (continued from page 1)

businesses, 200 farmers and two Iowa communities over a three-year period.

“We learned a lot in the first two phases of this project about helping businesses that participate in value chains that are characterized by trust, cooperation, transparency and risk-sharing,” said Rich Pirog, who leads the Leopold Center’s Marketing and Food Systems Initiative and is the VCPSA project director. “This new phase will help us better measure success as we deliver benefits to farmer-based businesses, communities and the landscape.”

Other project goals are to launch a self-sustaining Value Chain Institute and to help two of the four working groups become financially self-sufficient.

Winrock International works with people in the United States and around the world to increase economic opportunity, sustain natural resources and protect the environment. The organization targets work in three areas: Empowerment and Civic Engagement; Enterprise and Agriculture; and Environment: Forestry, Energy and Ecosystem Services.

The Henry A. Wallace Center has been a key organization in fostering a more sustainable food and agricultural system in the United States since 1983. As a part of Winrock International, headquartered in Little Rock, Arkansas, the Center continues to provide leadership in program design and implementation, policy analysis, research, and technical assistance to further the development of sustainable and equitable agriculture and food systems. Winrock’s global staff of more than 600 members in 65 countries works to increase

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Project accomplishments:
www.valuechains.org/news/VCPSA_0806.pdf

More on VCPSA web site:
www.valuechains.org

long-term productivity, equity, and responsible resource management to benefit the poor and disadvantaged.

VCPSA accomplishments

During the project’s first four years, working groups:

- assisted more than 20 Iowa food and fiber businesses and involved more than 25 Iowa-based agencies, farmer groups and nonprofit organizations;
- awarded 46 grants exceeding \$265,000 for research and development projects;
- generated more than \$818,000 in grants from the USDA and other sources for niche pork markets;
- generated more than \$319,000 in grants for bioeconomy research and market development;
- engaged the SYSCO Corporation, the largest food service distributor in North America, in characterizing the optimal business conditions under which farmer networks can sell to larger volume buyers;
- involved 10 ISU College of Business faculty members in niche agricultural marketing issues;
- secured a \$400,000 National Research Initiative research grant to address production costs and herd-health issues for farmers raising hogs for niche pork markets; and
- leveraged more than \$2 million in cash and in-kind resources from all sources.

News & Notes

The Iowa Board of Regents in September approved a proposal from Iowa State University to create a Midwest Grape and Wine Industry Institute. The Iowa Grape and Wine Commission (under the Iowa Department of Agriculture and Land Stewardship) is the largest funder of the institute in its first three years. Other revenue comes from ISU Extension, the Leopold Center (through a three-year grant that supports work of the extension enologist) and a private three-year gift.

Leopold Center Interim Director Jerry DeWitt and Center initiative leaders Jeri Neal and Rich Pirog shared Leopold Center resources with Iowa high school and community college ag instructors who attended training sessions hosted by the Iowa Department of Education. Among the resources is a lesson adapted from three case studies of grass-based producers who market directly to consumers. The materials are available on the Leopold Center web site: www.leopold.iastate.edu/resources/classroom/classroom.htm.



q&a

A conversation with interim director Jerry DeWitt



Q. What role should the Leopold Center play in Iowa's renewable energy debate?

The incredible explosion of the renewable energy era in rural America is certainly upon us. We see its evidence across the Iowa landscape, dotted with wind turbines, ethanol plants and other energy production facilities. These activities hold both promise and potential peril for Iowa and the landscape we hold dear – our water, soils and air. The challenge at the Leopold Center is to position our resources, both financial and educational, so that we can be efficient, focused and timely in our efforts.

Q. What starting points do you see in discussing renewable energy issues?

First, we need to ensure that the right questions and all viewpoints are on the table for discussion as Iowa moves forward in this rapidly developing arena. We need to make sure that our past successes are balanced with future promises and foreseeable risks as investments in renewable energy – whether in production, research or cropping systems – are made in our communities.

We need to think in terms of systems and connections. What do these investments mean for our natural resources? How could our landscape change with an increasing demand for corn to produce ethanol? Will we see more land and fragile soils returned to corn production? How do we better manage the amount of nitrogen needed for this level of production and its continued threat to our water resources?

These questions are not confined only to our natural resource base. What about the impacts that ripple across the livestock industry as more corn is used for fuel rather than animal feed? Distillers grains, a co-product of ethanol production, can be fed in the cattle industry, but what will be the impact on the pork and poultry industries, which cannot use these co-products? How will neighbors both near and far

from plants adapt to these challenges? How will communities respond?

We need to know what investments in the bioeconomy truly mean for a community. Dave Swenson, a regional farm economy analyst at Iowa State, has provided an early glimpse at this picture. Work funded by the Value Chain Partnerships project (see page 8) offers realistic data and suggests topics that can help frame a community dialogue as new opportunities arise.

I think the Leopold Center's challenge is to help explain the issues and ensure that a complete range of questions is asked, then debated thoughtfully. Are such questions and debates happening now? I do not think we are at that point yet, but we need to move in that direction.

And I think we need more than just talk. A USDA spokesman recently stated that the impending demand for corn etha-

nol production may call for 10 million additional acres of corn. How can that much extra corn be grown "sustainably"? From where I sit, I'd like more of a substantive discussion on that question.

Q. What's on your agenda related to these topics?

In the future, I hope to encourage a greater recognition and commitment to energy conservation in Iowa agriculture. Leopold Center efforts in this arena can be both direct and indirect. One encouraging project with Leopold Center support is directed by Matt Liebman in the ISU Department of Agronomy. He has found that a four-year rotation with corn-soybean-triticale-alfalfa not only competed well economically when compared to a traditional corn-soybean rotation, but very significant reductions were achieved in nitrogen reduction and herbicide inputs. This is an example of what needs to be done.

The Leopold Center has a responsibility to help articulate the issues and ensure that different voices are raised at the table now. The Leopold Center will provide the data, dialogue and opportunity that allow us to be known for what we are for, and not what we are against.



A worker loads bales of switchgrass at the co-burning facility for the Alliant Energy power plant near Ottumwa.

Photo by Jerry DeWitt

Project studies next generation of biorenewables

The Leopold Center's Ecology Initiative is supporting an Iowa State University research project poised to play an important part in developing the next generation of biorenewables. These products will use a wide range of crops in addition to corn to produce cellulosic feedstocks.

The project looks at double cropping systems and alternative crops to produce biomass feedstock more efficiently and with more beneficial effects on the environment than conventional corn-soybean or continuous corn systems. When combined with advanced biomass conversion technologies, the new systems could offer great promise, says Matt Liebman, a professor of agronomy and a lead investigator for the project.

"We're at a very important point in Iowa's agricultural history," Liebman said at a November 7 biorenewables town meeting hosted by the ISU College of Agriculture.

"The conversion of biomass into ethanol presents important opportunities to increase the volume of biofuels produced and increase the energetic efficiency of doing that, while improving protection of soil and water resources," he added.

Also involved in the project are Robert Anex, associate professor of Agricultural and Biosystems Engineering; Ken Moore, professor of agronomy; and Andrew Heggenstaller, a Ph.D. student in

agronomy and biorenewable resources and technology. The project also was highlighted during the Biobased Industry Outlook Conference at ISU in August.

One of the cropping systems involves planting the cool-season crop, triticale (a highly productive cross of rye and wheat), followed by a warm-season crop of corn, sorghum-sudangrass or crotalaria (a subtropical legume). Preliminary results from the first growing season show production of 9 to 10 tons of biomass per acre, compared to 7.4 tons biomass/acre under the conventional corn system.

"Triticale looks like a superior plant to work with in terms of producing winter cover, preventing nutrient loss and producing a large amount of harvestable biomass," Liebman said. (The Leopold Center has been a major supporter of the triticale research at ISU.)



Matt Liebman shows sorghum X sudangrass, part of a double-crop system for biomass production. The photo was taken August 31.

www.leopold.iastate.edu

Listen to presentation:
www.ag.iastate.edu/news/brtownmtg.html

Read project summary:
www.leopold.iastate.edu/research/eco_files/biomass_0806.pdf

The team also is studying how to use native perennial grasses such as switchgrass, Indiangrass, big bluestem and eastern gamagrass for biomass production. Various management practices are being evaluated and samples collected to compare biomass production, carbon storage and nutrient use efficiency. Investigators also are interested in evaluating how nutrients can be recovered from biorefineries as grass biomass is processed, and how those nutrients can be recycled to the fields where the perennial grasses grow.

Liebman said the perennials are important because of their inherent advantages over annual crops.

"Perennials build and conserve soil, capture and store carbon, hold and filter water very effectively and they provide some wildlife habitat," he said. "They also are very good at cycling nutrients."

The project is supported by a special two-year grant from the Center's Ecology Initiative, with funds from the National Science Foundation, ISU Plant Sciences Institute, University of Iowa Center for Global and Regional Environmental Research, Monsanto, and the ISU departments of Agronomy and Agricultural and Biosystems Engineering.

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Read the report:
www.leopold.iastate.edu/research/policy_files/USDA_101006.pdf

producers as well as beginning farmers and ranchers. The report also points out that all four programs were generally lacking in projects that would help beginning farmers and ranchers. "Given the demographics of agriculture in America – with only 70,000 farmers and ranchers under the age of 35 as opposed to 350,000 just 25 years ago – the inability of major USDA research and grant programs to address the topic of beginning farmers and ranchers is disappointing," Leval said.

Few dollars go to research for midsize farms

Small and midsize farms are missing out on the largest share of federal research dollars, according to results of a study funded by the Leopold Center Policy Initiative.

The study, entitled "The Impact and Benefits of USDA Research and Grant Programs to Enhance Midsize Farm Profitability and Rural Community Success," was conducted by the Center for Rural Affairs (CRA) based in Lyons, Nebraska. The Center for Rural Affairs issued a report of the study results at news briefings October 10-11 in Washington, D.C.

The study finds USDA research and grant programs lacking in either benefit or relevance to small and midsize farmers and ranchers or beginning farmers and

ranchers. The study analyzed four mainstay USDA research and rural development grant programs: the Value-Added Producer Grant program (VAPG), Rural Business and Enterprise Grant program (RBEG), National Research Initiative (NRI) and Initiative for Future Agriculture and Food Systems (IFAFS).

"Our analysis revealed that, in total, of nearly \$500 million dedicated to these four programs, only 5 percent went to projects determined to be beneficial to small and midsize farmers and ranchers or beginning farmers and ranchers," said Kim Leval from the Center for Rural Affairs.

Among the four programs analyzed, the report identified VAPG and IFAFS as offering the most benefits to small and midsize

Future

TOWARD A SUSTAINABLE



Managing with less energy

A low-energy policy allows for a wide choice of lifestyles and cultures. If, on the other hand, a society opts for high energy consumption, its social relations must be dictated by technocracy and will be equally degrading whether labeled capitalist or socialist. — Ivan Illich

Energy is on everyone's mind and most of our attention is focused on developing alternative energy supplies to replace fossil fuels. This evolution in our thinking is driven by several factors: the recognition that the era of "easy oil" is over; our uneasiness about the political instability in the Middle East where most of the remaining oil reserves exist; and, of course, short-term investment opportunities in alternative energy development.

But three critical elements often are overlooked. First, all sources of alternative energy are much less energy efficient than our previous sources of oil and natural gas. Second, future energy use must produce far less greenhouse gases if we want to avoid major climate changes. And third, energy conservation and a more energy-conscious lifestyle must be part of our future. These are important factors that need to be integrated into energy policy if we want a sustainable future.

Energy efficiency ratios are seldom given full consideration in how we calculate our energy future. In media reports, alternative energy issues usually are framed in terms of switching to "renewable" energy and "weaning ourselves from Mideast oil." The implication is that we simply need to change from oil and natural gas to ethanol, or use nuclear, solar or wind energy and life can go on pretty much as usual. Nothing could be farther from the truth.

Days of cheap energy are gone

Peak Oil author Richard Heinberg, and Marty Bender who worked in this area at the Land Institute, point out that the days of "cheap energy" are over. In the 1940s when oil and natural gas reached peak discovery levels in the United States, we were getting 100 kilocalories of energy for every kilocalorie expended to extract the oil and natural gas. By the 1970s when we hit peak oil production, the efficiency ratio had dropped to 23 to 1. Today the

efficiency ratio is somewhere between 8 and 11 to 1.

This drop in energy efficiency is largely responsible for short-term investments in alternative supplies. To mine the oil sands of Alberta, Canada, energy can be extracted at a ratio of 8 to 1, which makes economic sense compared to other energy sources. However, an industrial economy driven by cheap energy – and this would include modern agriculture – will likely undergo significant changes in the future.

It cannot be 'business-as-usual'

A second consideration that must be an essential part of any energy policy is the need to dramatically reduce greenhouse gases. The economic and environmental cost of continuing this "business-as-usual" approach will soon be felt throughout the world. As the polar ice caps melt, sea levels will rise, putting major land masses (now occupied by humans) under water. More unstable climates and more severe weather events will make it increasingly difficult to maintain highly specialized monoculture cropping systems. The loss of biodiversity stemming from these severe weather alterations will reduce the resilience of local ecosystems, making it more difficult, if not impossible, for these systems to be self-regulating and self-renewing.

These emerging energy costs – both economic and ecological – will require that we fundamentally rethink our human economies and the consumptive lifestyles we seem to have taken for granted.

Perhaps one of the greatest fears that makes us reluctant to consider the kind of low-energy lifestyle essential to a sustainable future is that we have been indoctrinated to believe that consuming less energy inevitably means a lower quality of life. Several decades ago theologian and philosopher Ivan Illich suggested that a low-energy lifestyle, in fact, would result in a richer lifestyle because of the need for more human and social capital.

Illich argued that societies that opted for a low-energy lifestyle encouraged more diversity and culture, stimulating the development of more supportive communities, which would increase the quality of life. On the other hand, societies that opted for a high-energy lifestyle would inevitably lose individual freedoms due to the concentration of power in a technocracy that produced the needed energy. He argued that tools developed for "conviviality" would consequently produce a higher quality of life than tools developed for high energy consumption.

Today as we already witness the erosion of our rights and democratic freedoms, and see struggles intensify over rising energy costs, we might want to take a fresh look at Illich's proposal.



Kirschenmann in a hayfield at his North Dakota farm.

Photo by Connie Falk

STUDY SHOWS PREGNANT HEIFERS CAN DO WELL ON STOCKPILED FORAGES

STOCKPILING (continued from page 1)

in rations for mature cows. However, nutritional supplements may be necessary if excessive snow or ice limits forage availability or quality relative to the nutritional requirements of the cattle. This grazing and supplemental feeding strategy focuses on reducing input costs associated with winter feeding by allowing cattle to harvest most of their own feed. Nutritional quality of the diet is maintained by using supplemental rations as needed, or when weather conditions prevent grazing.

Two-year comparison

In the ISU study, Russell compared second-calf heifers under two winter production systems at the ISU Beef Nutrition Farm near Ames. One group grazed stockpiled forages in pastures, and the other group was confined to dry lots and fed tall fescue-red clover with a corn gluten feed supplement. For the cattle on pasture, Russell used two stocking rates and two levels of corn gluten feed supplementation.

The study included 24 Angus-Simmental two-year-old heifers, each pregnant with their second calf, divided by weight and body condition score (BCS). Beginning in October, this group was allowed to strip-graze for 147 days at two different stocking rates: 0.48 or 0.34 cows per acre. Eight similar second-calf heifers were placed in two dry lots and fed tall fescue-red clover hay. The grazed animals were fed corn gluten supplement to maintain a mean BCS of either 5.0 (on a 9-point scale) for the high supplementation level, or 4.33 for the low supplementation level, and when weather prevented grazing.

The bottom line

The first year of the grazing trial (2003-04) had above-normal snowfall. The pregnant two-year-old cows consumed on average 16 pounds (low supplementation) or 279 pounds (high supplementation) of corn gluten feed per cow with no additional hay. Depending on stocking rates, this equaled \$0.12 to \$0.45 savings per cow per day when compared to cows in the dry lots that were fed hay (5,642 total pounds dry matter per cow) and a corn gluten feed supplement (5 total pounds dry matter per cow).

Why consider stockpiled forage?

More than three-fourths of all beef operations in the United States have less than 50 animals. To remain viable, these small operations must consider all of their costs and maintain a minimal capital investment.

Feed accounts for more than half of the total costs of a cow-calf operation, with winter feed costs being the single largest expense. Although some costs may be reduced, none has as great an impact on herd profitability as feed costs.

The use of hay as a feed source during winter is associated not only with high machinery and storage costs, but also requires time and labor for harvesting and feeding. Therefore, using stockpiled forage for winter grazing makes an ideal focal point for producers to become more efficient and potentially reduce production costs.

Analysis of cow-calf production under two forage systems

Stocking rate	Forage system				Dry Lot
	High		Low		
Supplement rate	High	Low	High	Low	
Description					
Pastures per system	4		4		
Acres per pasture	6.25		8.75		
Stocking rate	0.48		0.34		
Targeted BCS*	5		5		5
Year 1					
Corn gluten feed total (ave, lb)	189	19	279	16	5
Hay total (dry matter, lb)	0	0	0	0	5,642
BCS*	5	4.33	5	4.33	
Year 2					
Corn gluten feed total (ave, lb)	210	20	286	20	134
Hay total (dry matter, lb)	0	0	0	0	4,747
BCS*	5	4.33	5	4.33	
Daily production costs per cow (\$)***					
Year 1	0.96	0.92	1.30	1.25	1.37
Year 2	0.87	0.83	1.19	1.12	1.32

* Body Condition Score

** Costs included pasture rent (\$60/acre), pasture maintenance, dry lot yardage, hay fed (\$50/ton), and corn gluten supplements.

Snowfall was below normal the second year of the trial (2004-05). Over the same grazing period, the pregnant two-year-old cows consumed on average 20 pounds (low supplementation) or 286 pounds (high supplementation) of corn gluten feed per cow with no additional hay. Depending on stocking rates, this equaled \$0.13 to \$0.49 savings per cow per day when compared to cows kept in dry lots and fed hay (4,747 total pounds dry matter per cow) and a corn gluten feed supplement (134 total pounds dry matter per cow).

Forage for thought

Increased productivity of grazing livestock systems has the potential to encourage farmers to view their resources, especially their land, in a different light. A land's productivity can be measured by more than its use for row crops; land can be productive by creating a sustainable livestock production system. One of the goals of this project was to improve the economic sustainability of Iowa's livestock sector. This can be achieved by increasing the use of in-field forages during winter months, improving the productivity of pregnant two-year old cows, reducing input costs and improving land utilization.

Russell's results are tangible evidence that winter grazing of stockpiled forage is an effective management strategy to reduce winter maintenance costs for pregnant two-year old cows while maintaining adequate body condition, even in winters with above-average snowfall. He also has indicated that there may be other ways to trim costs further by increasing stocking rates and compensate with more supplemental corn gluten feed.

Here's another way to look at it: Winter grazing of stockpiled forage is one way that Iowa beef producers can add value to previously "idle" land during winter months.



Young cows graze at the ISU Beef Nutrition Farm near Ames.

More about stockpiled forage

Management strategies for using stockpiled forage vary by region, type of stock and available technology. In Iowa, considerable information exists on use of stockpiled forage in the summer, but less is known for its use over the winter season.

Any grass or legume species can be used for stockpiling. Tall fescue is useful because of its fall growth; it also maintains quality when exposed to adverse weather. Other choices include smooth brome grass and orchardgrass with legumes such as red clover (which can be established by frost-seeding in late winter) and berseem clover (for its late summer growth).

For maximum yield and nutritive value, forage must be stockpiled approximately 70 days before grazing. Research at the McNay Farm showed that longer periods of stockpiling result in increased forage yields but much lower nutritional quality. The research suggests an early August forage harvest by grazing or mowing before initiating stockpiling.

The effect of snow on grazing of stockpiled forages is not as great as might be expected. Cows can graze through up to 16 inches of snow but even a little ice can effectively halt this activity. Winter precipitation can physically limit grazing as well as reduce the nutritional value of the forage.

For more information about winter feed management, check the ISU Extension publication on *Stockpiled forages*, SP-42.

 www.leopold.iastate.edu

A summary of Russell's project:
www.leopold.iastate.edu/research/grants/completed_grants.htm#2006

Extension publication,
Stockpiled forages:
www.extension.iastate.edu/Publications/SP42.pdf

Local ownership boosts ethanol plant benefits on local economies

Research on the impacts of ethanol plants is something of a moving target, given the rapid developments in the industry in recent months. However, BioEconomy Working Group coordinator Jill Euken said it's been very helpful to have results from a recent study funded by the Value Chain Partnerships for a Sustainable Agriculture (VCPSA) project led by the Leopold Center.

The study, "Determining the Regional Economic Values of Ethanol Production in Iowa Considering Different Levels of Local Investment," was conducted by Dave Swenson, an associate scientist and lecturer in economics and community and regional planning at Iowa State. Euken and Swenson presented results of the study at the Leopold Center's Marketing and Food Systems Workshop Nov. 6.

"What happens when a county board of supervisors has an industrial site that would make a good place for an ethanol plant? Who do they give the option to develop the project?" asked Euken, who is an industrial specialist in bio-based products for ISU Extension. "The findings of this study send a clear message to decision

makers: ownership matters."

The study showed that with no local ownership, a 50-million gallon/year ethanol plant would either create directly or otherwise stimulate a total of 133 jobs in the regional economy. For every 25 percent increase in local ownership of the plant, 29 more jobs would be created.

"What that means is that we have local owners receiving dividends and they're turning around and spending some portions of those dividends back in the local economy," Swenson explained. "They're buying consumer goods, and also doing some business spending. Any dollar that leaves our community has a hard time coming back, but a dollar that stays in our community has a multiplier effect."

Swenson joined with Liesl Eathington, assistant scientist and staff researcher in economics, to conduct the study. He also used ethanol plant costs and returns data from ISU Extension professor of economics Robert Jolly.

The researchers created a modeling system that considered the job growth potential to a rural area of Iowa for an ethanol plant producing 50 million gallons per

year, given different levels of local ownership or investment. The model is based on a three-county area, and did not include the impact on returns to farmers for corn, or other factors.

Currently, Iowa has 56 ethanol plants being planned or operating, and 11 others are located just across state lines. Euken said development of new technologies to make fuel and fluctuating oil prices have added to the uncertainty in the ethanol industry.

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Read the full report
on the Value Chains web site:
www.valuechains.org/bewg/Documents/eth_full0706.pdf

A conversation with the Rosmanns, 2006 Spencer Award winners

Ron and Maria Vakulskas Rosmann, along with their sons David, Daniel and Mark, have been honored as recipients of the 2006 Spencer Award for Sustainable Agriculture. The award, now in its fifth year, recognizes farmers, researchers and educators who have made a significant contribution toward the stability of family farms in Iowa. The Rosmanns received the award November 20 at the Iowa Organic Conference in Ames.

The Rosmanns farm 600 acres, all certified organic, near Harlan in Shelby County. They grow corn, soybeans, oats, rye, barley, hay, popcorn and flax. They rotationally graze a 90-head Red Angus cow herd and raise 50 sows in a deep-bedded, farrow-to-finish operation. They also maintain 40 acres of permanent headlands, grass waterways, terraces, buffer strips, as well as a 2.5-acre woodland planted in 1993.

Leopold Letter editor Laura Miller visited the Rosmann farm in early September. Below is part of the conversation, most of which took place around their kitchen table over a bowl of homemade soup. Ron had taken a short break between unloading a batch of organic soybean meal for the pigs and getting the season's last cutting of hay baled before an approaching rainstorm. Maria also provided a quick tour of the farm in the family pick-up truck.

What is a sustainable agriculture?

MARIA: It is a system that sustains the soil, water, air and people – all of our natural resources as well as the farm families and the communities where they live.

RON: I see it as economic sustainability as well as environmental sustainability. You care about yourself, your neighbors and everything around you and know where you fit in. It's more than sustainability over your lifetime but well into the future.

What makes your farm different than your neighbors' farms?

RON: We have a diversified system that includes crops as well as livestock, and much of what we grow goes for human consumption – soy milk and tofu, flax oil capsules, grits, white corn tortilla chips. We also market some of our corn to a cooperative that is one of only a few suppliers for organic vodka, made by a distillery in Kentucky.

MARIA: We market our beef and pork to Organic Valley, under the Organic Prairie label. And we sell meat with our own label, Rosmann Family Farms, from the farm and at Wheatsfield Grocery in Ames and the three Campbell's Nutrition Centers in Des Moines.

RON: We could market all our meat through Organic Valley, but we wanted to add some value and service our own customers. I always enjoyed getting to know our customers at field days, and there's a feeling of self-worth when you hear people say your product is wonderful.

MARIA: We feel we are contributing to people's good eating habits.



Ron and Maria Rosmann with their sons, Mark (standing), and (kneeling left to right), David and Daniel.

Photo by Carrie Branovan, Organic Valley Cooperative

RON: We have very much a closed system here. The only things we buy are breeding boars and bulls, minerals and hog starter premix. Everything else comes from the farm or is recycled through the farm.

You've been certified organic since 1994, and are surrounded by conventional growers. What is that like?

RON: Actually, I quit using pesticides in 1983 but didn't become certified until 1994 because there were limited markets for organic.

Why did you quit?

RON: I felt they weren't all that effective and I never liked mixing herbicides. I also was concerned about our own health.

What are other challenges you have experienced?

MARIA: You need to know how to market your organic products. There is a tremendous learning curve.

RON: Organic agriculture is labor-intensive, but I like to call it management intensive because the labor is secondary. You need to know what job to do next and when you need to do it. I'm pleased because I've seen all our boys learn the same skills, making decisions and knowing what needs to be done. Conventional farmers don't need to make as many decisions – either Roundup™ does that for them or the people they hire to do custom work. Of course, many conventional farmers also work off the farm doing that custom work for others because they can't afford not to.

You felt strongly that your sons be included in this award. How have you involved them in the operation?

RON: Our sons are as much a part of this farm as we are.

MARIA: They were always involved in 4-H and for many years worked side-by-side with their dad.

RON: Even so, when they were in high school we encouraged them to get a job off the farm so they knew what it was like to work for someone other than their dad.

MARIA: And we always said there would be a place for them here if farming was their career choice. (Daniel, 23, joined the operation this year; his brother, Mark, also has expressed an interest in farming.)

RON: I'm very concerned about the next generation of farmers: Where will they come from? Each farmer needs to think about

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Read more of the conversation
and see more photos:
[www.leopold.iastate.edu/
/pubs/nwl/2006/2006-3-leoletter/
rosmann.htm](http://www.leopold.iastate.edu/pubs/nwl/2006/2006-3-leoletter/rosmann.htm)

CONVERSATION (continued on next page)

FAMILY LIFE IMPORTANT TO ROSMANNS

CONVERSATION (continued from page 8)

how they plan to keep their operation going and I don't see enough of that being done.

What other things make your farm unique?

MARIA: You can pick out our farm when you fly over it. It is the narrow strips that we use for various crops and the diversity of the crops.

RON: We have tried to promote positive change in agriculture. This is a business, and like anything else, an entrepreneurial business that's trying to make it.

What would you like to see agriculture look like in 20 years?

MARIA: I'd like to see sustainable agriculture be more of the norm than the exception, I'd like to see broader acceptance of those methods, rather than just a fascination with them.

RON: Sustainable agriculture gets people thinking outside of their boxes, and asking themselves: Can I make a living at what I enjoy doing? It would be wonderful if farmers had more control over their livelihoods than they do now.

About the Rosmann family

Ron Rosmann is a founding board member of Practical Farmers of Iowa and is a former president and board member of the California-based Organic Farming Research Foundation. He also is a member of the Shelby County Extension Council and the Leopold Center's Grassland Agriculture advisory committee, and serves as treasurer of the newly organized Iowa Organic Association.

Maria Vakulskas Rosmann operates the family's private label, direct market organic meat business.

David Rosmann, 25, is a rural organizer for Iowa Citizens for Community Improvement in Des Moines. Daniel Rosmann, 23, who recently received an ISU degree in agronomy, has joined the family operation. Mark Rosmann, 20, is a junior at ISU majoring in agronomy and history.

Both Ron and Maria Rosmann have been active in agricultural policy circles, testifying five times before the U.S. House and Senate Agriculture committees, most recently in August for hearings on the 2007 Farm Bill.

Workshop explores grazing as a land management tool for prairies

By **INGER LAMB** Iowa Prairie Network

The thought of grazing a prairie, especially a remnant prairie (historic vegetation on land that has never been plowed), makes many people flinch at a mental picture of over-grazed pastures with exposed soil and eroding waterways. However, like many things, the dose makes the poison, or the medicine, and it seems that a small dose of grazing can be good medicine for a natural area.

More and more natural land managers are embracing the idea that carefully monitored grazing is a good and natural thing. After all, stampeding buffalo herds and enormous animals such as moose and elk were common in the Midwest before European settlement. It's reasonable to assume these animals were an important part of the ecology of the land, and certainly they altered the vegetation where they lived. Somehow, large herbivores not only roamed and grazed on Iowa's prairies and savannas without destroying them, they were an important part of the web.

For the last few years I've been fascinated by the management technique that Scott Moats uses at Broken Kettle Grasslands, a native prairie north of Sioux City that encompasses more than 5,000 acres,

most of which are owned and managed by the Nature Conservancy. Selected local beef producers are allowed to bring in their animals to graze, but must agree to remove them promptly when asked to do so. Moats knows what he wants the landscape to look like, and he gauges the degree of grazing to match that concept. Encroaching invasive plants are removed (especially useful in areas that are not well suited for prescribed fire), and the producers are happy with the growth of their animals.

Last spring it seemed I was hearing more stories and received more questions about grazing native plants and natural areas. I approached Brian Peterson, the grassland specialist for the Iowa Natural Resources Conservation Service, to see if he thought there was sufficient interest to organize a one-day conference on this topic. With Brian's support and a grant from the Leopold Center, 80 people gathered in Ames on August 10 to hear a slate of speakers offer their perspectives on grazing native plants.

I found a few common threads, especially with respect to grazing for animal production. It's easy to graze too hard. Several people in attendance have native species in their pastures, a practice that is

fairly unusual in Iowa. Those who are successful have learned that tallgrass prairie species cannot be grazed as short as the more commonly used non-native forages; even resilient prairie plants struggle if repeatedly cropped too short. In other words, plants that would be 4 to 8 feet at maturity are definitely stressed if repeatedly grazed to heights that inherently shorter non-native pasture species can tolerate. However, done carefully, both the grazing animals and the native plants prosper.

Another theme arose: the use of grazing as a tool for land management. Moats provided an excellent summary of his experience at Broken Kettle. Iowa State's David Engle reviewed the range of concepts behind "patch-burn grazing" (the topic of another research project funded by the Leopold Center).

One of my favorite presentations was by Julie Wheelock, who summarized her study on the use of goats and temporary fencing to remove unwanted vegetation in the Loess Hills (coordinated through Agren, Inc., of Carroll). She found that goats did, indeed, clean things up quite well, although they unfortunately did not have a taste for red cedar.

Wheelock hopes to someday offer temporary goat grazing for hire, and I've heard others are considering the same. I keep wondering if goats might have a taste for garlic mustard. Just think, if dairy goats were used, the feta cheese might already be garlic flavored!

Reprinted with permission from the Fall 2006 issue of the Prairie Network News published by the Iowa Prairie Network, www.iowaprairienetwork.org/.

EDITOR'S NOTE: Inger Lamb is a project co-investigator with ISU Extension forage specialist Stephen Barnhart in a grant from the Leopold Center Ecology Initiative. They are exploring the use of native prairie species in mixed forage pastures.

Two people join Leopold Center staff

Growing up on a small, diversified farm in northeast Nebraska gave Beth Larabee her first introduction to sustainable agriculture. As the new program assistant at the Leopold Center, Larabee hopes she'll be able to help farmers who follow sustainable practices reap some of the financial rewards.

Larabee will work with the Value Chain Partnerships for a Sustainable Agriculture program and the Center's Marketing and Food Systems Initiative. Projects in both areas focus on the need for developing viable niche markets for Iowa farmers who raise sustainably grown food, fiber and other products. She replaces Andrew Hug, who left the Center in August to work with the Henry A. Wallace Chair for Sustainable Agriculture at Iowa State University.

"It all comes down to economics; farmers need to be profitable, no matter what kind of practices they follow," said Larabee, who spent the past two years as research associate for the Iowa Learning Farm project. She worked with 31 farmer-participants throughout Iowa, taking samples of soil and biomass, checking infiltration rates and recording their observations that were part of the on-farm research conducted in the ISU Department of Agronomy.

"I spent a lot of time talking to farmers about changing their tillage or adding a green manure crop," she explained. "These were all good ideas, but farmers need to know how to make a living while they are making these changes. Having a viable market for crops and products that are

raised under different conditions is very, very important."

Larabee's parents farmed 600 acres near Royal, Nebraska in what she describes as a "semi-subsistence" operation. They grew corn and soybeans, also hay, a rye-vetch crop, navy beans for human consumption, and cucumbers (destined to become Gedney pickles) and had a prairie seed production enterprise. She said they also raised hogs, dairy, beef cattle and "about anything that had feathers." Produce from a fruit orchard and large garden rounded out the family's diet.

"Sustainable agriculture was part of my culture growing up but that wasn't what they called it," she said. "They were just looking for alternatives when they couldn't afford the conventional methods."

Larabee's mother, who is one-quarter Lakota Sioux, remains involved with the operation, which is managed by a son and son-in-law. They still grow corn, hay and prairie seed, raise cattle and horses, and market land leases for hunters.

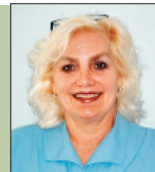
Larabee has an undergraduate degree in agronomy and a master's degree in soil science, both from ISU. For her graduate research project, she measured changes over 30 years in 17 prairie potholes in north central Iowa. The soil, known as a histosol, is very productive but fragile once the area is tilled and drained.

"Two of the potholes had disappeared completely, one that covered 70 acres in Boone County," she said. "We've lost so much of our soil in such a short amount of time. We're not looking at "if" our farming

Meet Beth Larabee,
new marketing
program assistant



New secretary
Blue Maas greets
Center visitors



practices will change, but "when," that is, if we want to survive as a species."

Larabee lives in Ames with her husband, Randy, who is an engineer for ISU Facilities, Planning and Management. They have two daughters, both ISU students, and a son-in-law.

New secretary joins Leopold Center

When you visit or call the Leopold Center, the first person you'll meet is another new staff member, Blue Maas.

Maas joined the staff in late September following the retirement of long-time ISU secretary Sherry Johnson. Her duties include answering the telephone, fielding inquiries and requests for publications, providing secretarial support for the interim director and distinguished fellow, making arrangements for meetings, and helping staff with various mailings and other projects. She also manages the Center's extensive database.

Maas brings 15 years of ISU secretarial experience to the Leopold Center, as well as a passion for local foods and human rights. She has worked for the computer science, economics and forestry departments as well as ISU's graduate college and environmental health and safety offices.

Maas grew up on a family farm near Williamsburg, Iowa, but has lived in Ames most of her adult life. Her family raised crops, cattle and hogs, and her mother tended a large vegetable garden.

"Working at the Leopold Center I most enjoy the connection with my rural roots," she said. "I'm saddened by the loss of so many family farms but I'm ecstatic to be where I think I can make a difference."

Her unusual first name is actually a nickname from her father, with whom she shares a December 22 birthday, which often falls on the winter solstice. "My father was a nature lover, and it was a day like many others that time of year with blue sky and awful ice, so the name stuck."

Maas lives in Ames. She has three adult sons and three young grandchildren.

Center launches new e-newsletter

People interested in the Leopold Center have a new way to stay in touch: a monthly e-newsletter. *Notes from the Leopold Center*, a short newsletter that will be distributed only by e-mail, was launched in October. The e-newsletter is designed to provide a snapshot of what's been happening at the Leopold Center over the previous month. The e-newsletter also will feature links to information on the Center's web site.

"This e-newsletter does not replace our quarterly newsletter. This is just another way to provide information in a timely manner," said Laura Miller, who edits both publications. "You'll still be able to read longer features, columns and commentary only in our quarterly newsletter, *The Leopold Letter*."

Sign up for the e-newsletter on-line at:
www.leopold.iastate.edu/forms/mailling.htm.

Each issue of *Notes from the Leopold Center* is available on-line at:
www.leopold.iastate.edu/pubs/notes/notes.htm.

November workshop highlights Center's marketing, food projects

Information can be transmitted electronically, via the printed word, by photographs and other images; but when shared from one person to another, information becomes communication.

The Leopold Center Marketing and Food Systems Initiative's second annual workshop on November 6 was filled with communication. Nearly 200 people participated in the day's events that featured reports on more than 30 marketing projects and a locally sourced meal at the Gateway Center in Ames.

"The Marketing and Food Systems Initiative has been about finding market solu-

tions for Iowa farmers and businesses," said initiative leader Rich Pirog. "We've had 55 projects over five years, and our workshops have created a learning community that stimulates even more new ideas and projects."

Presentations focused on everything from exploring the use of empty convenience stores as a community site for processing vegetables to using computerized models to determine the most profitable mix of enterprises in an operation. One project investigated the stories behind unique Iowa-based products such as mettwurst (a type of sausage), kringla and

sorghum molasses. Another project included a survey to determine the economic impact of visitors to Iowa wineries.

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Read abstracts, materials from each presentation:
www.leopold.iastate.edu/research/marketing_files/workshop06/index.htm

New web-based tool targets Gulf Dead Zone

A new web-based map and data base of the Mississippi River highlights work by organizations and individuals to address practices contributing to formation of the Dead Zone in the Gulf of Mexico.

Every summer this area in the Gulf becomes void of life due to severely depleted levels of oxygen in the water, a state known as hypoxia. The condition kills every oxygen-dependent sea creature within its zone. In 2005, the Dead Zone was slightly smaller than the state of Connecticut. The Dead Zone is caused by excess nitrogen and phosphorus that is washed into the Gulf from the Mississippi River.

RiverMap.org is an online database and interactive mapping system that was launched in October. The Leopold Center is a project partner with the Institute for Agriculture and Trade Policy, Mississippi River Basin Alliance, the Green Lands Blue Waters project, and the Sustainability Institute.

More than 40 organizations and government entities have contributed to RiverMap thus far, providing information on their efforts to address hypoxia. Organizations contribute by completing a survey on the web site, which catalogues the information into the database and makes it available on-line.

"The good news is that there are many organizations up and down the Mississippi River working on nutrient management and hypoxia. But with a 2,300-mile

river and a basin that touches 31 states, it is difficult to measure the impact of these efforts, as well as coordinate information and work," said Jeri Neal, who leads the Leopold Center's Ecology Initiative and has been working on the RiverMap project.

Goals of the project are to:

- Promote individual efforts to address hypoxia throughout the Basin,
- Educate and inform the public and potential partners about hypoxia,
- Create new partnerships to reduce the size of the hypoxic zone in the Gulf,
- Help shape more effective public policy, and
- Spark conversations and collaborations that will help focus attention and resources on areas that hold the greatest promise for the greatest impact.

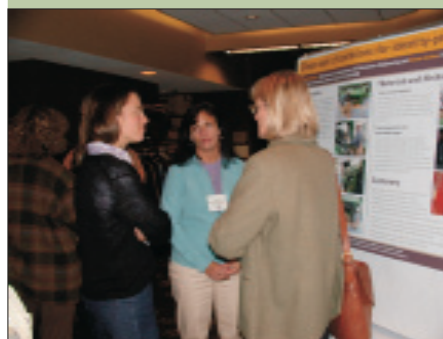
Organizations involved in efforts to address hypoxia in the Gulf of Mexico are encouraged to add their information to RiverMap by filling out the survey form at www.rivermap.org.

Future plans for the web site include the addition of examples of farmers throughout the basin who have adopted best management, perennial cropping and other practices to improve water quality and watershed health. The project, which began two years ago, is supported by grants from the W.K. Kellogg Foundation, Bush Foundation and McKnight Foundation.

For more information, contact Neal at (515) 294-5610, or wink@iastate.edu.



Views from the workshop



TOP: Skip Walter presents initial results from his study of farmer transaction costs.

MIDDLE: Participants get copies of Leopold Center reports.

BOTTOM: Hannah Lewis (left) talks to participants at the poster sessions about her research on goat meat and immigrant groups.



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Highlight Events

Center co-hosts two workshops at PFI winter conference

The Leopold Center will co-sponsor Friday afternoon workshops on forage management and food distribution systems as part of the Practical Farmers of Iowa annual winter conference in January.

- “Growing High Quality Forage: Risk Management for Volatile Weather,” presented by Terry Gompert, holistic management trainer and Nebraska Extension educator. The workshop will be moderated by Jerry DeWitt, Interim Leopold Center Director, with experiences offered by Iowa producers Tom German, Steve Reinart, Torray Wilson and Leo Benjamin; and
- “Creating New Iowa Food Distribution Systems,” presented by Gary Huber of PFI and Rich Pirog from the Leopold Center.

Both workshops will be offered on Friday, January 12, 12:30-4 p.m. at the Airport Holiday Inn of Des Moines. The conference theme is “Paths to Prosperity” and will continue on Saturday with concurrent sessions and an all-Iowa noon meal.

Cost for the Friday session is \$20 for PFI members and \$35 for nonmembers (discounts offered for registrations post-marked by December 20).

More information is available on the Practical Farmers of Iowa web site: www.practicalfarmers.org.

Using distiller's grains



Leopold Center administrative specialist Karen Jacobson (left) registers one of the nearly 200 people who attended the Marketing and Food Systems Initiative workshop on November 6. More details on the workshop appear on page 11 and on the Center's web site.