

Community Assistantship Program

Initiatives: Linking Sustainable Agricultural and Natural Resources Opportunities in Southeast Minnesota with the University of Minnesota

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**Initiatives: Linking Sustainable
Agricultural and Natural Resources
Opportunities in Southeast Minnesota
with the University of Minnesota**

Conducted on behalf of
Experiment in Rural Cooperation

Prepared by
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CAP Report 015

CURA RESOURCE COLLECTION

**Center for Urban and Regional Affairs
University of Minnesota
330 Humphrey Center**

EXPERIMENT IN RURAL COOPERATION

Common Sense Research and Problem Solving

What is the Experiment in Rural Cooperation?

Beginning in 1997, the Minnesota Legislature appropriated funds to the University of Minnesota to promote sustainable development in agriculture and natural resources by establishing regional development partnerships in rural Minnesota. In the year 2000, five regional sustainable agricultural and natural resource partnerships are in place, linking rural community priorities and University of Minnesota of resources. Annually each partnership receives a \$200,000 appropriation through the State Legislature.

The Experiment in Rural Cooperation is the southeast Minnesota partnership. It encompasses the Mississippi River Blufflands and the Rochester Plateau – all or nearly all of Olmsted, Fillmore, Houston, Goodhue, Winona and Houston Counties and small portions of Mower, Fillmore, Dakota and Washington Counties.

The aim of the partnerships is to improve the responsiveness, breadth and effectiveness of relations between communities and their Land Grant University. Citizens, working in concert with University representatives, target the partnership priorities.

The development of community-based initiatives or projects supported through the Experiment in Rural Cooperation is the responsibility of both community and University interests. A partnership that creates a learning experience for the University while providing practical resources for the community-based initiatives is the ideal.

How to contact the Experiment in Rural Cooperation

Speak with any of the board members or project leaders, listed below, or contact its director:

Dick Broeker	
Experiment in Rural Cooperation	phone: 651 345 4336
RR 3, Box 1861	fax: 651 345 7551
Lake City, Minnesota 55041	email: dbroeker@rconnect.com

How has the Experiment evolved?

Rural areas of southeast Minnesota are experiencing dramatic changes resulting from large-scale shifts in America's economy and social character. New technologies, global trade, changing demographics, and land use pressures present very difficult challenges to sustaining rural life and enhancing rural vitality. Addressing these challenges proactively necessitates that the region's citizens work together in focused ways on new solutions.

The Experiment in Rural Cooperation is designed to facilitate this process by offering financial support and University connections to get behind worthy endeavors in agriculture, natural resources, tourism, and forestry. Specifically, the Experiment:

- ... encourages the joint – community and University - definition of opportunities and problems and solutions.
- ... provides opportunities for learning, research, and outreach to rural communities and citizens and University of Minnesota faculty and students.
- ... funds project partnerships that further sustainable development and that can make good use of University resources.

The key factor in making this process successful has been active citizen leadership. The partnerships' vision is grounded in the conviction that, through citizen leaders, the University of Minnesota can play an increasingly effective role in acting on community, economic and environmental opportunities.

What has happened so far?

In its first full year of operation, the Experiment's board of directors completed a region-wide asset mapping survey, identified 17 project partnerships based on the criteria established by citizen leaders and University representatives, and allocated approximately \$350,000 to underwrite project activities.

As the Experiment's work unfolds over time, the number of projects will change and the process will respond to those emerging opportunities identified by board members and/or forwarded for consideration by local interests.

The board of directors has dispensed with the conventional RFP (request for proposal) procedure for soliciting partnership projects. The decision was made to keep the process open, simple and responsive by using a straightforward "request for idea" form that can be submitted at any time throughout the year to one of the Experiment's four standing committees:

- Agriculture
- Natural Resources
- Community Development
- Tourism

Who is involved?

The Experiment is governed by the ethic of sustainability. The board of directors represents a broad cross-section of regional interests. Citizens or University faculty interested in serving on the board should call the Experiment's office for more information. The present board is:

Mel Baughman – University of Minnesota/College of Natural Resources

Mel is an Extension Specialist and Professor at the College of Natural Resources where he also serves as Associate Dean. His work focuses on educational and promotional materials for non-industrial private forestland owners.

Donna Christison – Plainview, Minnesota

Donna and her husband are hog farmers outside of Plainview. She has served in numerous community volunteer leadership positions as well as having co-chaired the Experiment's Animal Processing Task Force.

Carolyn Dingfelder - Rollingstone, Minnesota

Carolyn and her husband live on a farm where she operates a small business specializing in field ground perennials. She is involved with many youth and community-oriented activities such as the 4H and Master Gardener programs.

Mary Doerr – Kenyon, Minnesota

Mary owns and operates Dancing Winds Farm where she raises goats and operates a bed and breakfast as well as a grade A goat dairy and cheese plant. She is the president of the Cannon River Sustainable Farming Association.

Naomi Fruechte – Caledonia, Minnesota

Naomi is an Extension Educator for the University of Minnesota Extension Service in Houston County where she specializes in nutrition, food and health. She and her husband have a cow/calf beef farm outside of Caledonia.

Larry Gates – Kellogg, Minnesota

Larry works for the Department of Natural Resources in Rochester where he specializes in watershed management. He and his wife live on 160 acres in East Indian Creek where they do sheep, turkey and truck farming.

Judy Gilow - Winona, Minnesota

Judy is a Winona County Commissioner and active in many community initiatives such as the Feed Lot Task Force. She owns and operates a small business from the farm on which she and her husband live in rural Winona County.

Jeff Gorfine – Rochester, Minnesota

Jeff is a learner advocate for adult literacy programs in the Rochester Public Schools System. He has worked in pastoral mental health and corrections and continues to be actively engaged in neighborhood community organizing.

Dean Harrington – Plainview, Minnesota

Dean is the President/CEO of First National Bank in Plainview where he resides with his wife and children. He is a Rural America Arts Partnership board director, a civic activist, and an avid reader of fiction, literary criticism, poetry, and history.

Gary Holthaus – Red Wing, Minnesota

Gary is a writer, often on the topics of sustainability and culture, and a consultant to non-profit community organizations such as schools and institutes. He is the interim director at the Institute for Humanities in Salado, Texas.

David Klinski - Caledonia

David has a small dairy farm near Hokah where he lives with his family. He served on the local school board for eleven and a half years and in the army for two years. He's been recognized for his keen interest in the region's history.

Sue Lantz – Byron, Minnesota

Sue is an owner/operator of Garten Marketplatz, a 10-acre perennial plant farm and retail store southwest of Rochester that has developed a loyal region-wide customer base. She lives on a farm with her husband and three children.

Ralph Lentz – Lake City, Minnesota

Ralph is a retired agriculture teacher who raises grass fed beef cattle outside of Lake City. He is a recognized leader in the sustainable agriculture movement and has held numerous regional and statewide leadership positions.

Roger Moon - University of Minnesota/College of Agricultural, Food and Environmental Science

Roger is a Professor of Livestock Entomology at the University of Minnesota. His work, in the United States and abroad, includes population ecology and management of arthropods that bother livestock and people.

Toni Smith – Wabasha, Minnesota

Toni is an Extension Educator for the University of Minnesota Extension Service in Wabasha County. She specializes in community development and is recognized statewide for her work on rural tourism and strategic planning.

Ed Taylor – Lanesboro, Minnesota

Ed is a Fillmore County dairy farmer and works in partnership with his daughter and son-in-law. He has served as a Peace Corps volunteer, on the farm credit board of directors at AgStar, and on the Good Earth Village board.

John Torgrimson – Preston, Minnesota

John is the editor and publisher of the FILLMORE COUNTY JOURNAL. He resides with his wife and two children in rural Lanesboro. He has extensive international experience working overseas for a number of years.

Tim Wagar – Rochester, Minnesota

Tim is an Extension Educator for the University of Minnesota Southeast District Extension office where he specializes in the areas of crops and soils and, among other things, manages the River Friendly Farmer Program.

How Does the Process Work?

It's pretty simple. Anyone can apply ... a nonprofit corporation, a unit of government, a private business, a farmer, an unincorporated entrepreneur, a civic group, or a volunteer leader. The door is open year-round for new project partnership ideas.

1. Make sure the project partnership proposal meets the Experiment in Rural Cooperation's criteria:
 - Will the proposal take into account the principles of sustainability - including fostering regional diversity - as well as seeking balance among environmental, economic, and social quality of life priorities?
 - Does it focus on southeast Minnesota?
 - Does it focus on agriculture, natural resources (forests, soil, water, wildlife, wetlands, etc.), farming, forestry and/or tourism?
 - Does it involve research, outreach, and/or education?
 - Will it improve the local economy?
 - Does it build partnerships among local citizens, businesses, communities, organizations, or agencies and University of Minnesota faculty?
 - Are the appropriate people and organizations involved for this project to succeed?
 - Does it have a strong public purpose so the results of the project or program will be useful to others in southeast Minnesota?
 - Is the proposed project an economical use of public funds?

It helps to review those project partnerships already funded by the Experiment in Rural Cooperation. But, do not be limited by what is already underway. The board of directors is very much interested in new ideas. Projects to date have been funded from \$2,500 to \$65,000. Generally speaking, financial allocations from the Experiment are not intended to support ongoing budget needs.

2. If the proposed project partnership seems to fit the criteria, contact the Experiment's director or a board member to obtain a one-page "request for idea" form.
3. Fill out the form and send, fax, or email it to the Experiment's staff person.
4. Once received, the form will be copied and sent to the appropriate board committee (or more than one committee if this makes sense) for discussion. If there is board committee interest - based on the "request for ideas" form - in pursuing the project partnership, the project leader will be invited to discuss the idea at greater length.

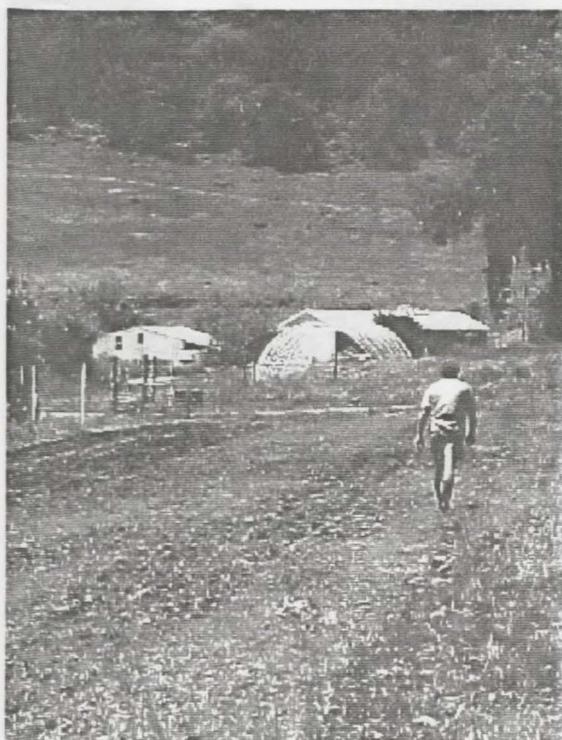
5. If the committee agrees that a partnership with the proposed project is worthwhile, it will work with the project leader to develop University linkages, settle on a budget and a schedule, and prepare a presentation to the Experiment in Rural Cooperation's board of directors.
6. If approved for funding by the board, a University of Minnesota partnership agreement will be drafted based on the project leader's interests, the board committee's interests, and University interests.
7. During the course of the project (most are funded for about a year), a board member or two - if the not the board committee - will stay involved at one level or another.
8. At the end of the funding period, the project leader submits a brief report on the outcome.

PROJECT PARTNERSHIP INITIATIVES

Experiment in Rural Cooperation

FEATHERSTONE FRUITS AND VEGETABLES GROUP

Rushford, Minnesota



Ten years ago organic food was considered a specialty item. Today, organic foods have become part of the American mainstream culture. Markets have experienced a 15-20% yearly growth rate for the past 5 years. According to USDA officials, the number of organic farmers is increasing 12% a year.

Featherstone Fruits and Vegetables is an organic farm located near Rushford, Minnesota in the rolling hills and farm fields of southeast Minnesota. The Featherstone farm is owned by Jack Hedin and Rhys Williams who have twenty-plus years of farming experience. They have been – in the long term – committed to organic farming and their current venture has been supplying produce to the Rochester, Winona, and La Crosse areas for years.

A variety of produce is grown at Featherstone including lettuce, tomatoes, cucumbers, and strawberries. Through experience, Hedin and Williams have learned successful ways of growing vigorous, productive crops that taste good and provide a natural, healthy food option for consumers.

One growing method under development at Featherstone is the use of large, portable greenhouses one of which is seen here with Williams in the foreground. The Experiment in Rural Cooperation is financially supporting the design and development of this greenhouse approach to enhance the sustainability of produce agriculture.

The objective of a portable greenhouse is to extend the growing season and expand the variety of crops that can be produced. Also, the growing of some plants that traditionally were not grown – or difficult to grow - in southeast Minnesota has been made possible because of greenhouse structures.

The portable greenhouse design and building technology are easy to learn. The construction materials are locally available and inexpensive. Moving the greenhouse structures from place to place is easily accomplished, making this greenhouse model ideal for smaller farms.

The University of Minnesota has supported this initiative through an interdisciplinary faculty group from the College of Agricultural, Environmental and Food Science. Faculty have provided technical expertise to support greenhouse development in southeast Minnesota and offered to be of assistance on organic production challenges.

Featherstone Fruits and Vegetables has been involved in the Southeast Minnesota Working Foods Group sponsored by the Experiment in Rural Cooperation. The Foods Working Group is collaborating with over two dozen University faculty members, from an array of departments and colleges, to develop an ongoing University/food projects partnership that would hard-link University resources with regional food opportunities.

SOUTHEAST MINNESOTA FOODS WORKING GROUP

Southeast Minnesota Region



Strengthening the economy in southeast Minnesota requires the focus and courage of community leaders' convictions in recognizing the region's unique attributes, one of them being food production. Farmers, businesses, citizens, investors and University of Minnesota resources, concentrating on common interests, can develop a strong economy that creates jobs and builds wealth locally.

The Southeast Minnesota Foods Working Group involves nearly a dozen food-related projects, businesses and farms working together on a regional food system. Faculty members from

the University of Minnesota have been exploring a long-term collaboration linking an array of University departments and colleges with southeast Minnesota food enterprises.

The Working Foods Group/University discussions are aimed at supporting a regional homegrown food system based on a southeast Minnesota food identify and food and farming ventures.

Central to the model are: building an environmentally-sound, sustainable regional-economy by revitalizing rural communities as pillars of a democratic society; growing and marketing of a wide-range of high quality foods; creating new food products; proposing new public policies; developing new production technologies; experimenting with new crops and processing techniques; and, inspiring local and visiting consumers while respecting the uniqueness of the beautiful – and ecologically fragile – Mississippi River Blufflands landscape with its diverse farms and orchards and agricultural practices, and small towns and villages.

Research, student internships and field projects, and case studies are evolving from this initiative. An example is the doctoral thesis research by a Department of Applied Economics student studying regional food supply chain issues. The goal is to quantify the movement of food – from production to point of sale – as a way of establishing a methodology by which small, regional producers utilizing sustainable agricultural practices can assess costs and constraints associated with specific supply chain opportunities.

In concert with a number of University representatives, conversations have taken place on the feasibility of a rural business development lab to cluster resources around targeted entrepreneurial food ventures. The lab could create a full-time point of access to encourage partnerships between the University and rural food businesses.

The Southeast Minnesota Foods Working Group has sponsored region-wide research to survey 400 residents. The purpose is to identify what values drive food purchase decisions and, then, to encourage food enterprises to respond to emerging consumer interests, such as in the case of Rebekah's Coffee House – pictured above – that specializes in a menu featuring tasty home-cooked meals using local food ingredients for the increasing number of consumers who have grown weary of no-name, fast food.

For more information: Jeff Gorfine/Foods Working Group 507 529 4523
A project supported by the Experiment in Rural Cooperation/651 345 4336

WIND ENERGY – RURAL COMMUNITY INDEPENDENCE

Lake City, Minnesota



Renewable energy resources are available locally as sustainable assets that many communities have yet to put to work. Not only are they better for the environment and the world's natural resource base, renewable energy sources make sense economically. Wind, solar, and biomass power are constantly replenishing themselves and do not diminish by use. Local sustainable resources keep energy dollars in the immediate economy, rather than the dollars flowing out to purchase energy made by fossil fuels from domestic or foreign sources.

With increasing governmental deregulation of electric utilities, rural communities are likely to suffer higher rates. Reconstruction of the industry will put rural Minnesota at a disadvantage as outstate communities compete for power with large metropolitan areas and high-volume industrial users.

If rural communities establish municipal utilities that are engineered to operate, at least partially, on renewable energy resources, then individual households and local industries will have less costly electric bills. Rural communities typically do not benefit from the upper end

of wage and incomes scales. They can best sustain themselves by holding down the cost of living scale in which energy expenses play no small role.

Sig Anderson, an engineer from Lake City and a member of CURE - Communities United for Responsible Energy, is directing a feasibility study for making use of wind energy in smaller communities to supplement conventional sources of energy generation. Anderson is working with citizens, local government, the University of Minnesota, and special interest groups to determine the best way to establish wind energy systems.

Wind energy proof of concept research needs to be completed in finding optimum locations, defining appropriate technologies, and designing workable management/staff models. Consumer education is also an important step given the somewhat mindless dependence characterizing the more typical relationship that the average consumer has with his or her utility.

If a rural community independence electric-energy model can be implemented, the local economy will be the beneficiary. Energy dollars will be kept in the community, jobs will be created, and a more environmentally-friendly way of obtaining electric power will conserve limited and increasingly expensive fossil fuels.

Anderson is working with the University of Minnesota's Institute of Technology on a feasibility study design and is seen above leading a site visit with a University faculty representative to the Buffalo Ridge wind energy development in southwest Minnesota. The Institute has asked the community group supporting the project (CURE) to assist in organizing a statewide University-sponsored wind energy conference involving leaders from rural Minnesota, University faculty, and major utilities.

APPLE CRISP COOPERATIVE

Southeast Minnesota Region



Southeast Minnesota is a countryside dotted with picturesque apple orchards, a development led nearly a century ago by the University of Minnesota. Partly due to the Mississippi River and partly due to landscape conditions created in the last glacial age, climate and soil conditions are unique to the area and ideal for robust apple crops.

Apple Crisp Cooperative was formed two years ago by seven independent apple growers, one of whom is Harry Hoch, pictured at left in his orchard near La Crescent. As individual businesses, Minnesota apple orchards are generally small,

producing modest volumes of product. Together the orchards are capable of providing sufficient critical mass to engage in a marketplace increasingly dominated by global, large-scale forces.

The Cooperative was established to develop markets for apples that are less than number one quality. Early research results identified a market for sliced Haralson apples – a prized Minnesota apple used in quality baking – in the food service industry associated with institutional customers such as hospitals, schools, and large bakeries.

Thus far, the Cooperative has developed a flash-frozen sliced apple product and has the capacity to process approximately 20,000 pounds annually on a test basis. Half of the sliced apple production for this past year has been sold to a large retail operation. Apple puree is another Cooperative product. 10,000 pounds of apple puree are currently being used by a processor for Minnesota apple ice cream. The Apple Crisp Cooperative is considering the production of a Minnesota applesauce. Similar to the frozen apple product, growers will first research and identify a market for the product. If the research results are positive, the Cooperative will explore the feasibility of building a processing plant for the applesauce.

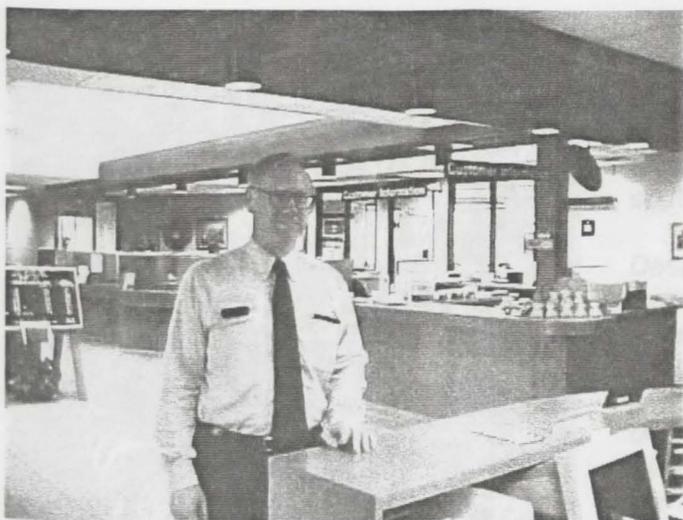
The value-added strategy undertaken by the Cooperative provides an excellent opportunity for Minnesota apple producers to compete in a tough marketplace dominated by commodity pricing. The challenge is to create the opportunity to pursue value-added ventures given the heavy demands placed on orchard owners in managing their production operations. Attracting capital to sustain the value-added business will not happen unless market research suggests a positive outcome.

A University of Minnesota Carlson School of Management graduate marketing class has completed a promotions/product placement study under the guidance of a professor of marketing and logistics management. The students, organized into field teams, responded to a series of market and promotions issues drafted by the Cooperative. Apple Crisp Cooperative is also involved in the Southeast Minnesota Working Foods Group in building a long-term collaboration with University interests.

For more information: Harry Hoch/Apple Crisp Cooperative 507 643 6329
A project supported by the Experiment in Rural Cooperation/651 345 4336

SUSTAINABLE FINANCING FOR RURAL MINNESOTA

Southeast Minnesota Region



The national economy has been thriving in recent years. Unfortunately, rural communities have often been left behind as corporate consolidations continue at an accelerating rate and as business activity has drifted to larger centers of commerce.

To sustain Minnesota's rural communities economically, the rural citizenry should be able to invest in local businesses and in regional natural resources and agriculture-related enterprises. Currently, it is difficult - if not impossible - for the rural citizen to put her or his money where her or his heart is when it comes to investing in the private sector.

The Sustainable Financing Project for Rural Minnesota is a task force project chaired by Dean Harrington (above), president of the First National Bank of Plainview and Experiment in Rural Cooperation board director, to address the possibility of establishing new mechanisms that allow investors from rural Minnesota to target their investments locally. The goal is to generate more equity capital - raised locally - that would be available for locally based investments. Many rural businesses suffer from an over-dependence on credit capital. In the absence of patient equity capital, it is challenging for these enterprises to expand or stay in business.

The Task Force has accomplished myriad in-depth feasibility interviews. Seasoned investors, bankers and economic development specialists were asked questions on the present status of rural investments and what they view as opportunities for local investment in local businesses.

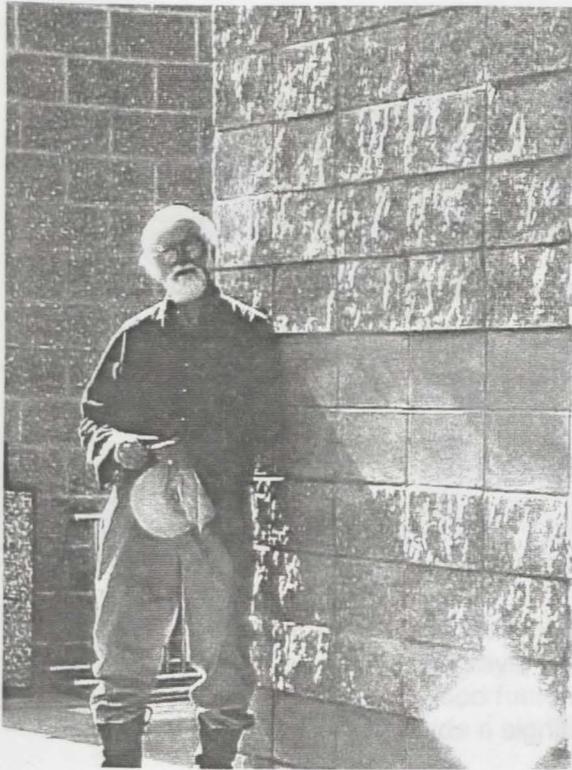
The Task Force undertook research on equity-investment practices elsewhere in North America having relevance to rural regions. The intent is to learn what does not work as well as what works. For example, the availability of out-of-region venture capital is of little importance in many rural areas where high-tech companies are few and far between and, more importantly, where the goal is to generate wealth within the community and to support local, patient long-term ownership in the cause of sustaining a vital homegrown economy.

Several policy or model possibilities have emerged that Minnesota could adopt to increase rural investments. Models are being developed on a multi-stage basis that include a variety of options for rural communities. The next phase is to begin addressing model development options and model implementation strategies.

The project was launched by a steering group comprised of citizen leaders, U. of M. Extension educators, and faculty members (Law School, Humphrey Institute, Carlson School of Management, College of Agricultural, Food and Environmental Sciences, etc.). Initially staffed through the University's Minnesota Institute for Sustainable Agriculture, the background research was completed by a Conservation Biology graduate student recruited through the University's Community Assistantship Program.

ROOT RIVER MARKET

Houston, Minnesota *Region*



Located on the beautiful Root River in southeast Minnesota is a small town called Houston. Houston has been surrounded by – and economically benefited from – the fertile agricultural land and the rich natural resources of southeast Minnesota.

Despite the region's array of food producers, availability of local products has been limited; only large grocery stores carrying national brands have serviced the citizenry. Over the years, notwithstanding a growing area population, all five of Houston's main street grocery stores have closed. These local marketplaces served as communal gathering spots and sustained a sense of community. Their absence created a social hole.

Through the Houston Arts Resource Council, citizens began gathering in 1998 for roundtable discussions to brainstorm possibilities for a cooperative market. The Root River Market – scheduled to open in the fall of 2000 – is the result.

The Root River Market is located in Houston's historic commercial district in an old grocery store building. A key component of the market is a much-needed pharmacy. The store's pharmacy is of great importance to the community. Prior to the Market pharmacy, the closest place to fill prescription orders was many miles away in another town.

A full time manager is in charge of the market's daily operations while an executive board of eight members directs strategic planning and major events for the co-op. The store is managed as a traditional grocery store. A priority will be fresh produce and products from area farmers and suppliers. Conventional products will be ordered at bulk rate to meet customer needs.

The project leader – Peter Denzer, in the above photo outside of the new market – has been active in the Southeast Minnesota Foods Working Group, sponsored through the University of Minnesota's Experiment in Rural Cooperation. He has participated in faculty discussions on a long-term collaboration between the University and regional food ventures and is taking a lead role in organizing a University workshop to be held in southeast Minnesota later this year.

As a retail food operation, the Root River Market has the promise of connecting area producers with area consumers. The Market emphasizes collaboration in providing an efficient way to sell and obtain food products, some locally produced. After months of efforts by a large group of volunteers, the new market will soon help to sustain the local economy in a way that better maintains the small town way of life. In fact, the community literally owns the Market with 350 citizens having purchased cooperative shares in the venture.

For more information: Peter Denzer/Houston Arts Resource Council/507 896 2568

A project supported by the Experiment in Rural Cooperation/651 345 4336

WASTE WOOD FUELS STUDY

Southeast Minnesota Region



Biomass power is a renewable resource in plentiful supply in southeast Minnesota. Low quality waste wood works well as a heating fuel for outdoor chunk wood furnaces. Wood slabs from sawmills, old pallets, tree waste from logging operations, and city tree refuse are excellent sources of biomass power to produce heat and keep costs low. Now, waste wood is viewed as a problem entailing disposal costs. Making this wood a sustainable natural resources asset would serve multiple purposes.

Phil Vieth, a forest products development specialist from the

Minnesota Department of Natural Resources, has led the effort to undertake a waste wood use feasibility study. "As a society," he says, "we are underestimating the value that wood fuel provides to our economy. Not only does wood fuel provide a renewable resource for heating purposes, but it also can save individual households a significant amount of money on fuel bills."

An effective technology to burn wood as fuel is an outdoor hot-water furnace. Installation costs are relatively high, but the payback is short-term given the availability and low cost of wood fuel. Presently in southeast Minnesota, 80,000-100,000 cords of wood are used annually for wood fuel. This works out as a \$4-5 million savings compared to the equivalent cost for gas heating. More households using wood fuels would generate considerable aggregate savings and hold down the cost of living in rural areas during a period when natural and propane gas prices are skyrocketing.

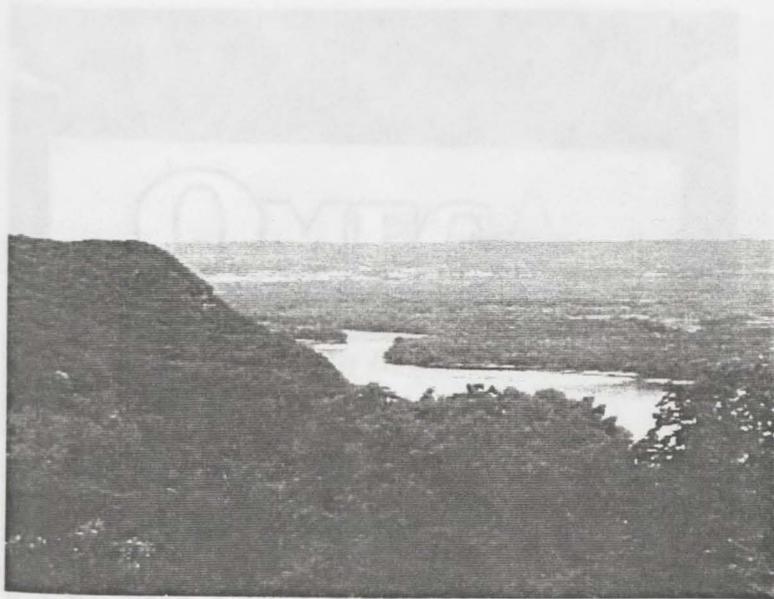
Local businesses, such as furnace distributors and wood harvesters, would benefit from an increased use in fuel woods and this would feed into a local economic multiplier effect. The highest ongoing cost-factor with the use of wood fuel for home heating is the transportation expense to move the wood to individual households. This activity would be performed by local entrepreneurs and further contribute to the region's economic base. "The benefits of using wood fuels with a proven technology are obvious," Vieth observes. "What we need to do next is find out the incentives people need before switching over to wood."

Through the University of Minnesota, research is focusing on the economic variables in burning wood fuel in hot water boiling systems. In consultation with the initiative's advisory committee, a faculty member from the Department of Forest Resources in the College of Natural Resources and two graduate students are undertaking the study.

Using the research results, homeowners, contractors and heating/plumbing businesses can be educated about the economics of wood heating and the advantages of a biomass system over conventional fossil fuels technology. In the process, waste wood disposal issues can be addressed in environmentally sensitive ways.

APPLE BLOSSOM DRIVE STUDY

Winona - La Crescent, Minnesota



Along the Mississippi River - between Winona and La Crescent - a narrow winding road known as Apple Blossom Drive captures some of the most spectacular scenery in the United States. As seen on the left, Apple Blossom Drive is a special place for scenic overlooks and to experience magnificent vistas of the Mississippi River as it meanders through miles and miles of rolling river bluffs.

Along the Drive, travelers and tourists can spot the many apple orchards that gave Apple Blossom Drive its name. But, the number of these orchards has been falling over

the years as development interests have purchased the bluff top property. Farm land and apple orchards are being replaced by housing and commercial buildings seeking to take advantage of the prime development acreage. Some citizens are fighting the destruction of this beautiful area and the loss of historically productive agricultural land that, at the same time, drives up adjacent land values that will make farming in the area nearly impossible from an economic perspective.

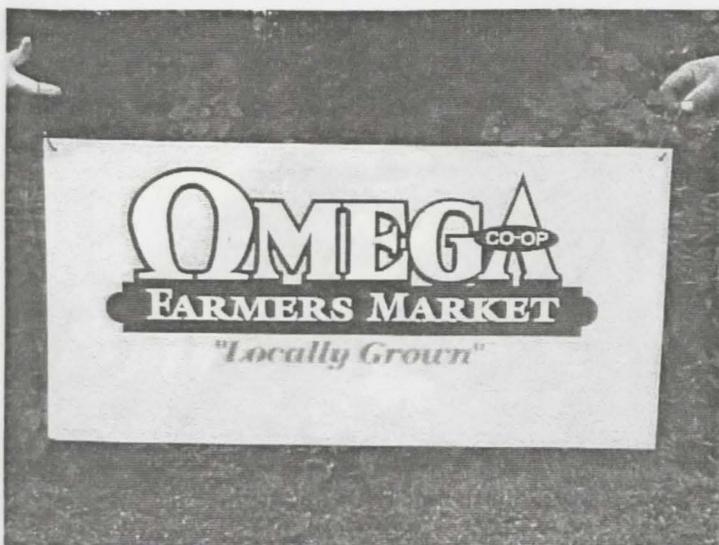
Others believe that what is happening is inevitable and, in many ways, is valuable in helping to build the region's tax and economic base. The development of bluff line property is a controversial issue that now involves frequently raised voices of many different people and organizations with often conflicting opinions about the best way of sustaining this area's social, economic and agricultural base.

At the request of local interests in the Winona and La Crescent communities, Patrick Nunnally, a program director at the University of Minnesota Center for Urban and Regional Affairs, became involved with researching bluff top development along Apple Blossom Drive. Nunnally and his University team promote conservation development approaches that seek to balance environmental and development agendas. Conservation development is a strategy that respects natural landscapes by setting priorities before the development commences. For example, apple orchards, scenic overlooks, and river bluff lands would be protected within the context of the growth that characteristically is attracted into such beautiful areas.

Nunnally's team is analyzing changes in land prices, housing prices, and farming investments. By knowing the shifts in land values, those involved will get a better handle on the economics associated with changes along Apple Blossom Drive. In late 2000, a University of Minnesota graduate student's research will focus on agricultural land values over time and set the stage for land use decisions that must be addressed by local governmental units. In the absence of informed decisions, the raging debate will continue without yielding sustaining resolutions.

OMEGA COOPERATIVE CH FAIMS

Pine Island, Minnesota



The structure of the food industry is rapidly changing. Producers and retailers are consolidating into large corporations located in central commercial hubs far from the fields of rural America.

In southeast Minnesota, small producers are experiencing the negative effects of these changes. They have little control over what is happening on the national level and, by in large, only react to changes. Solutions typically have been short-term and focused on small pieces of the system rather than the big picture.

In Pine Island, a group of producers is working at the front end of planning a better community-based food strategy for their area. Local leadership is developing a regional food system that is sustainable and community driven.

The OMEGA Cooperative was established two years ago to bring local solutions to changes in the food industry. Focusing attention on Rochester and the surrounding area, its aim is to develop a local food system that supports the specific values, wants, and needs of food producers and consumers in the region.

To be successful, a regional food system must fulfill as many community needs as possible. Knowing what local consumers want from a food system is central to the Cooperative's success. It is also the most challenging information to obtain.

"Defining the average southeast Minnesota meal – fresh, fast, baked, frozen, or micro waved – is hard to do," states Abraham Algadi, a member of the OMEGA Cooperative. "Researching current market needs and wants is the first step to determining if a local food approach is feasible." Surveys, interviews, and focus groups are the tools OMEGA is using to research the best way to implement its program.

One finding from research to date is an accelerating consumer trend reflected in an emphasis on healthy, good tasting foods. This has led OMEGA to believe that there is a place for a local food enterprise constructed on natural, wholesome, and homegrown principles. Providing such foods to the region is the goal of value-based approach that OMEGA is working to establish.

The Cooperative has a student intern from the University of Minnesota's Carlson School of Management (through the Community Assistantship Program). Omega is in the process of collecting its research data through a local marketing research firm. Omega's leaders have been active in the Southeast Minnesota Foods Working Group exploring a way to design a long-term collaborative effort to join University and local food interests.

For more information: Rod Sommerfield/Omega Cooperative 507 365 8103

A project supported by the Experiment in Rural Cooperation/ 651 345 4663

BADGERSETT RESEARCH FARMS

Canton, Minnesota



To most people, the term "woody agriculture" is an unfamiliar concept. Woody agriculture refers to the growing of domesticated woody perennial crops such as in the accompanying image of a hazelnut plant on Badgersett Research Farm. The nuts can be harvested annually as a staple commercial food product.

Domesticated plants and trees characteristic of woody agriculture differ from wild plants through years of selective breeding. The breeding work has resulted in dependable plants with consistent, high volume production.

Phil Rutter, owner and chief researcher at Badgersett Research Farm, began the first plantings on his woody agriculture farm over 20 years ago. Badgersett's 160-acres are utilized in the growing of hazelnuts and chestnuts for purposes of commercial food production, biomass, and direct sale to market. Through research and experimentation, Rutter has developed successful crops of hybrid hazelnuts and chestnuts.

Unlike conventional row crops, the hazelnut and chestnut plants are planted only once. They offer many attributes to support sustainable agriculture. Seeds are harvested annually and wood is harvested every 5-10 years as biomass fuel. Within one year of harvesting the wood, the plants will regenerate from the roots, once again producing seeds. Because the soil is tilled only once, there is little erosion and less work energy involved – a positive when considering the southeast Minnesota hilly and rolling terrain that often creates serious erosion problems with row cropping. The woody plants are also drought resistant as well as flood tolerant. They capture three times more solar energy than annual plants and this directly effects the amount of seed and wood produced.

From a business perspective, a market for raw nuts is already established. Most nut production of hazels and chestnuts occurs outside of the United States, with the nation reliant on imported nuts. The oil from hazels - its oil can be used much like soybean oil - is a secondary market opportunity. Chestnuts are carbohydrate-based similar to flour or maize and provide an excellent food source. In its own fashion, hazelnuts are a luxury food. The supply from wild trees has never come close to satisfying market demand.

The Badgersett initiative has utilized a University of Minnesota graduate research assistant from the Department of Applied Economics and is launching its business plan development through a past associate of the University's Center for Integrated Natural Resources and Agricultural Management and the coordinator of the University's Community Assistantship Program. The next stage for this enterprise is to design a business plan driven by the commercialization opportunity.

For more information: Phil Rutter/Badgersett Research Farm 507 743 8570
A project supported by the Experiment in Rural Cooperation/651 345 4336

COMMUNITY DESIGN CENTER: Hiawatha's Pantry Lanesboro, Minnesota/Region-Wide



Money flowing in and out of southeast Minnesota establishes economic patterns that either help or hurt the region's economic well-being. Rural areas tend to import considerably more products/services than they export. As a result, more money flows out than flows in.

Food purchasing patterns in southeast Minnesota suggest that outside business interests benefit at the expense of the local economy. This upside-down import/export equation is a detriment to establishing a regional food system in the fertile Hiawatha Valley countryside - seen to the left -

that historically has been known for its considerable food-producing qualities. Southeast Minnesota would benefit from a system that is more sustainable by re-diverting food expenditures into local communities and then reaping benefits from the resulting economic multiplier factor.

The Community Design Center of Minnesota, under the leadership of Nancy Bratrud and Ruth Murphy, is undertaking a study through its Hiawatha's Pantry project to determine how much money is spent on food in southeast Minnesota and where the food dollars are traveling within the region and outside of the region. The study will analyze available data on individuals, businesses, and institutions to measure the flow of purchase dollars. By identifying the products purchased in local markets and the flow of food purchasing dollars, growers and farmers will be better able to judge what products are in demand and identify opportunities to sustain smaller producers.

"If the total value of all food purchases in the region is known, producers can begin to determine the feasibility of entering into specific areas of food production, processing, and marketing," notes Bratrud. One challenge in building a regional food system is to develop a methodology for food producers that provides consumers with sought-after food products that represent a target for retaining food purchasing dollars in the region.

Bratrud and Murphy are convinced an alternate model can counter the present centralized food system that draws wealth and resources out of the region and undercuts production opportunities for area farmers, producers and processors. If the producers in the region collaborate to organize food production and link directly into consumer interests, the regional economy will be diversified and opportunities for healthy growth will increase.

The project leaders have been active participants in the Southeast Minnesota Foods Working Group. Bratrud has been instrumental in shaping a University of Minnesota research project examining supply chain food movement from producers within the region to point-of-sale options inside and outside of southeast Minnesota. A student research associate has been placed with the Hiawatha's Pantry project through the University's Institute for Social, Economic & Ecological Sustainability.

COUNTRY HERITAGE ADVENTURES

Southeast Minnesota Region



Tourism combined with a farm/agricultural experience – or agri-tourism as it has become known - has been growing in popularity throughout the United States and, more specifically, in Minnesota with its rich and highly-textured rural heritage. Farm tours, bed and breakfasts, farmers markets, and other tourism enterprises can help to diversify local farm operations and strengthen the region's homegrown economy in an ever-changing world dominated by non-local influences.

With more accessible tourism choices in the countryside, visitors are increasingly drawn to rural communities. There, they spend time and money on local goods and services and, in the process, develop a better understanding of rural issues and an appreciation of sustainable practices that can enhance resources in the countryside.

Through agri-tourism, farmers can generate additional on-farm income and take advantage of urban-rural connections for purposes of direct marketing food or farm products. Bringing the marketplace onto the farm can be an important alternative to small producers who do not have the financial wherewithal for expensive direct marketing strategies.

Country Heritage Adventures is a non-profit, agri-tourism organization that manages a fifteen farm tour package in Dodge, Goodhue, Olmsted and Wabasha counties. Included in the tour are farms featuring dairy herds, emu, buffalo, goats, llamas, perennials, antiques, and more. By marketing and advertising together, the individual farms save money, reach a wider audience, and offer a clustered array of tourism options for interested customers.

Mary Doerr, a Country Heritage Adventures member and an Experiment in Rural Cooperation board director, is pictured above feeding the goats at her Dancing Winds Farm. She invites tourists, markets a top quality goat cheese produced in her grade A goat dairy and cheese plant, and offers bed and breakfast accommodations for overnight guests. This is one example of how a specialty food farm operation can diversify its business base in creative and sustainable ways to stay small and remain profitable.

Outside organizations are important to the Country Heritage Adventures strategy. Area businesses can purchase participating memberships and in return receive membership recognition. Farm families who wish to be part of the tour structure buy yearly memberships.

Two University of Minnesota graduate students, a Carlson School of Management faculty member and the University Extension Service's Tourism Center have worked on a marketing/promotion strategy under the leadership of a U. of M. Extension Service educator (and Experiment in Rural Cooperation board member) from the region. The goal over the next year is to focus the marketing efforts to test how successful agri-tourism can be in southeast Minnesota.

For more information: Jackie Welti/Country Heritage Adventures 507 534 2866

A project supported by the Experiment in Rural Cooperation/651 345 4336

LAND STEWARDSHIP PROJECT: Food Choices

Southeast Minnesota Region



Many consumers are demanding sustainably-grown products produced in ways that are economically viable, ecologically sound, and socially responsible. In recent years, the fastest growing market segment in the grocery business has been organic and natural foods and foods produced in a healthful, friendly fashion. Traditional farmers and new specialty growers in southeast Minnesota are looking to tap into this rapidly developing market.

The Land Stewardship Project office in Lewiston, Minnesota promotes sustainable farming in rural communities and emphasizes the marketing of fresh area foods such as those featured by Dennis Rabe, in the accompanying photograph, at his swine farm near Lake City. Dennis and wife, Sue, have a sustainable farming operation and market their high-quality pork products directly to the public in southeast Minnesota.

The Land Stewardship Project has undertaken a special initiative called Food Choices. Food Choices is a long-term effort that involves producers, processors, distributors, institutions, retailers, and consumers. By inter-linking the different interests in the food chain,

Food Choices is helping to create a regional food system. The establishment of a regional food system will create an invaluable piece of infrastructure providing new economic opportunities for farmers, growers, and processors.

One goal of Food Choices is to develop a verification system for foods grown through sustainable practices. Consumers currently have difficulty in knowing the conditions under which food is grown, raised, or produced. Food Choices is helping to set standards for sustainably raised meats that will encourage consumers to make food choices that fit with their priorities. Once the standards have been tested and refined, inspectors will offer seals of approval to farms that meet product-specific, environmental and social guidelines.

A second activity of Food Choices is assisting a new cooperative of swine producers. The cooperative is characterized by valued-added and sustainable production and is working to implement a business plan. One priority of the plan is marketing. Innovative ways to promote, order, process, store, and deliver products from the cooperative are being discussed. Again, this effort is central to establishing a regional food network that localizes food chain links and supports a homegrown economy that brings new opportunities to farming in the region.

The Land Stewardship Project has been central to the faculty discussions of the Southeast Minnesota Foods Working Group's proposed university collaboration. A variety of University faculty has been called upon for individual consultations on the Food Choices Project. Land Stewardship has had a history of involving University of Minnesota resources in field days, marketing training, farm policy and organizational development work.

For more information: Richard Ness/Land Stewardship Project 507 523 3366

A project supported by the Experiment in Rural Cooperation/651 345 4336

PARIDISE PRARRIE PRODUCTS

Plainview, Minnesota



A thriving economy begins first with entrepreneurs. They, as it is said, are the yeast of the economy that spur business growth and economic development. Rural communities in southeast Minnesota – to maintain and nurture their vitality and sustain their local economies – must support entrepreneurs who build local businesses. They are essential to the mix required of a vigorous homegrown economy.

When businesses use locally available resources and create wealth that stays in the community,

they generate jobs and sustainable options necessary for smaller communities and rural regions to survive in today's global economy.

Paradise Prairie Products is a Plainview-based business start-up that plans to work with in-area producers and processors to develop upscale consumer products defined qualitatively by locally-produced foods and ingredients. Owned and operated by Ken and Millie Flies, Paradise Prairie Products will produce food products that represent Plainview, the community they are produced in. Sweet corn - a well-known crop of area farmers - will be a prime food product for the Paradise Prairie line. Millie, with Ken, is pictured here whipping up a batch of corn chowder in the commercial kitchen of their restaurant, Tavern on the Green.

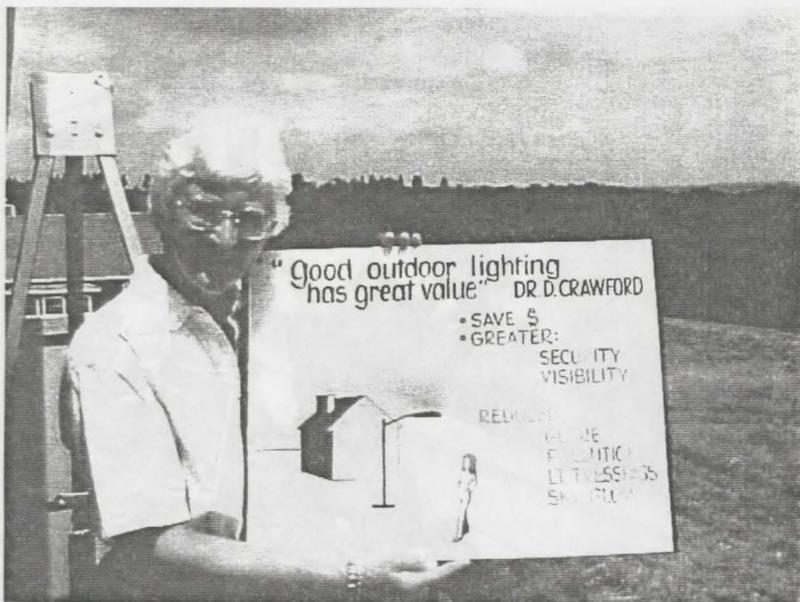
This food start-up venture will be launched using University marketing research and development resources. Paradise Prairie has been an active participant in the Southeast Minnesota Foods Working Group and is playing a lead role in hosting the upcoming University of Minnesota symposium scheduled for Plainview later this summer.

The venture began when Millie Flies began searching for ways to sell her famous corn chowder. The chowder is made with sweet corn grown in southeast Minnesota, spices from a nearby spice factory, and other wholesome food ingredients from the region. The marketing of this product centers on promoting the image of Plainview and its rich history in agriculture. The community-based business approach underlies Paradise Prairie's development strategy. Plainview has been undergoing an arts and culture renaissance. The Flies's have been active in revitalizing the community's heritage as a way to sustain its future.

The Flies's have test-marketed their corn product using the fully equipped and spacious Tavern on the Green kitchen. They welcome other chefs into the kitchen to experiment with new products that could one-day carry the Paradise Prairie label. Working with area chefs; using locally grown foods and spices; marketing the history and culture of Plainview; and distinguishing a unique product-line brand in a crowded marketplace are the type of activities that will build a rural homegrown economy.

For more information: Ken and Millie Flies/Paradise Prairie Products 507 534 3746
A project supported by the Experiment in Rural Cooperation/651 345 4336

DOWN LIGHTING OPERATIVE GREENHOUSE Southeast Minnesota Region



Increasing concerns about outdoor lighting are surfacing at community forums and local government meetings across the nation. Questions are being raised about the cost, safety and environmental friendliness of conventional lights typically used in public places. Down lighting is an alternative lighting technology employing cut-off caps to shield the light's source and focus the light beam.

Tine Thevenin, a rural Lake City resident, has been an advocate for down lighting and is the volunteer project director. Her work involves researching down

lighting options and promoting the use of down lighting as a better, more cost-effective way to light the out-of-doors.

"Standard lighting, unlike down lighting, wastes a lot of energy and money; it throws 50% of the light up into the sky rather than down on the subject," notes Thevenin. As a natural resource issue, conventional lighting squanders the extra fossil fuels needed to generate the electricity to power the lights and obliterates the nighttime sky from the wasted light unnecessarily directed upwards.

Thevenin references studies - available through the International Down-lighting Association - showing that down lighting, compared to standard lighting, uses less energy and reduces operating expense. She notes that, "Within four years communities can pay for changeover costs and begin to save money on their electric bills."

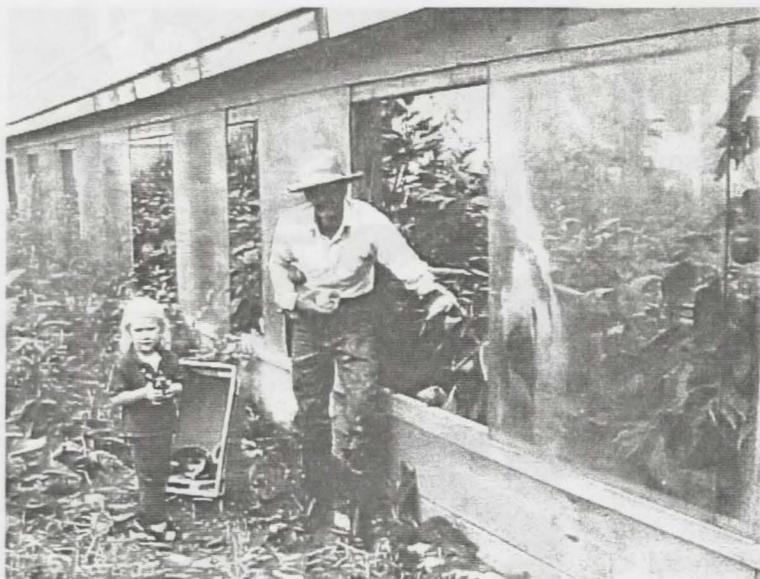
In addition to high cost, standard lighting is a pollutant to the dark night sky. Rural Minnesota, in Thevenin's words, has been known as "a place where people can see one of the greatest shows on earth - a star-studded sky." But as towns and businesses have expanded the use of standard high-power lighting, star-studded skies began to disappear. To sustain the skies for generations to come, individuals and communities need to work together at using more efficient lighting methodologies. Down lighting is one energy-conserving, sustainable solution for rural communities.

A core strategy of this initiative is to educate the public on the issue by talking with community leaders. Thevenin has spoken at informational sessions involving utility companies, city planners, business and civic associations, and farm owners. She is encouraging cities to rewrite outdoor lighting ordinances.

Work is beginning on a possible three-community comparative cost/energy conversion model with the research to be undertaken by a University of Minnesota Carlson School of Management student supervised by an assistant professor of operations and management sciences. Discussions have also taken place with University of Minnesota facilities staff in reviewing campus lighting standards.

FULL CIRCLE COOPERATIVE GREENHOUSE

Oak Center, Minnesota



Weather conditions in Minnesota are not always predictable. A late winter frost can destroy a newly planted field, endless drought can devastate a summer's crop, and heavy rain can flood out hopes for a harvest. Having to face nature's obstacles is a certainty for the farmer and, for produce farmers in southeast Minnesota, the outcome can spell the difference between failure and success.

Full Circle Cooperative is a group of organic fruit, vegetable, herb, and poultry farmers who are committed to sustainable agricultural practices. For over 20 years, members of the

Cooperative have maximized the use of solar power, wind energy and wood fuel to help extend the growing season and protect crops from harmful elements.

The Cooperative sells organically grown fruits, vegetables, herbs, and poultry at the General Store in Oak Center and direct markets its products into the Twin Cities, Rochester, and Lake City areas. Products from Full Circle are in high demand. A major challenge for the Full Circle Cooperative has been to develop sufficient infrastructure to support its production, marketing, and delivery operations.

One method Full Circle is using to help meet fresh produce demands is a renewable energy greenhouse facility. Steven Schwen – pictured above with his son by the greenhouse, is Full Circle's principal organizer. He has been developing and experimenting with greenhouse technology for several years. Making full use of solar energy is the goal of his latest project. Greenhouses, designed at the appropriate scale, can offer significant advantages to growers willing to make the investment in time and money required to build them.

"A typical greenhouse would require considerable amounts of non-renewable energy," says Schwen. "Most greenhouses waste their daytime solar energy by venting out hot air during the day while the ground stays cold." Schwen took on the challenge of overcoming these obstacles, appreciating the value that a well-engineered greenhouse could bring to his farm.

Schwen has designed and built a new greenhouse that runs on renewable sources. To make full use of renewable resources, the design employs air pumps that channel air into large growing beds on the ground. The growing beds warm the soil and make conditions more suitable for plant growth. His model greenhouse is a case study of what can be accomplished relatively inexpensively and is a working example for others in southeast Minnesota.

A University of Minnesota interdisciplinary faculty team has provided technical expertise on greenhouse design and offered to put on a greenhouse design workshop in the region. Full Circle has been participating in the Southeast Minnesota Foods Working Group developing a long-term University/community collaborative process. Also, Schwen has hosted classes from the College of Agricultural, Food and Environmental Sciences.

For more information: Steven Schwen/Full Circle Cooperative 507 753-2080
A project supported by the Experiment in Rural Cooperation/651 345 4336

ANIMAL PROCESSING STUDY TASK FORCE Southeast Minnesota Region



The number of animal livestock farms in southeast Minnesota has been decreasing in recent years. A major reason has been troublesome marketplace economics. Farmers, in need of economically viable alternatives, have changed over to corn and soybean crops to avoid the dramatic market downturns. Unfortunately, the shift from livestock farming to row cropping can be destructive to the land with annual tilling that can create erosion and cause the loss of valuable soil nutrients.

There is another reason livestock farms are on the decrease. As established livestock farmers grow older, the younger generation has avoided getting trapped in low-paying or dead-end situations and, thus, steered clear of animal agriculture. Also, much of Minnesota's livestock is shipped out of state for processing. This generates increased costs, draws wealth out of the region, and creates logistical problems for farmers.

This reality led to an examination of whether the Experiment in Rural Cooperation should promote additional animal processing facilities in the region. An Animal Processing Study Task Force was formed to address the issues. Co-chairing the Task Force were Donna Christison – pictured above at the swine farm she and her husband manage outside of Plainview – and Ralph Lentz who has a grass-fed beef farm near Lake City.

This reality led to an examination of whether the Experiment in Rural Cooperation should promote

The Task Force held numerous meetings to interview representatives of local processing facilities and other animal processing operations including the proposed farmer-owned facility under development in Dawson, Minnesota.

After considerable discussion, the Task Force advised against a further feasibility study on the expansion of processing facilities in the region. Rather, it recommended that the Experiment's board focus on ways to practically support traditional livestock farmers in southeast Minnesota as well as supporting niche or part-time specialty farming that requires adequate in-area processing and cold storage plants. In the Task Force's judgement, the root of the problem is not processing capacity. It is the fundamentals underlying traditional farming.

The Task Force was assisted by a faculty member from University's Department of Animal Science as well as a state official from the Minnesota Department of Agriculture. The initiative yielded a possible future collaboration through a University submitted grant for a 3-year project titled "Institutional Innovation in Livestock Value Chains" to identify options within the hog production sector.

Based in part on the work of the Animal Processing Task Force, the Experiment in Rural Cooperation established a permanent Agriculture Committee to, among other things, concentrate on policy, operations and production issues relevant to livestock farming.