

the Practical Farmer

Practical Farmers of Iowa Newsletter

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Summer 1994

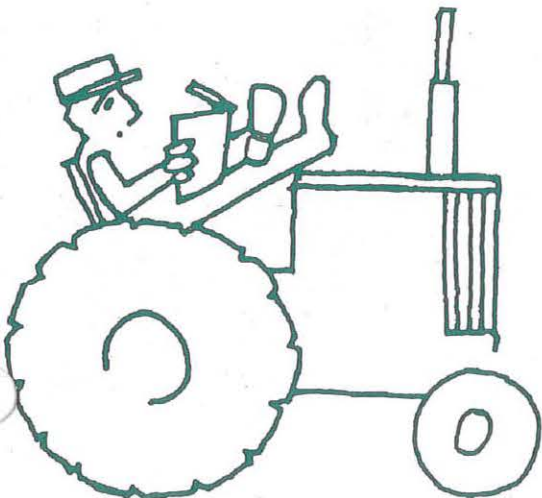
REALITY CHECK

Vic Madsen, Audubon

Profit is a six letter word that is often hard for us to talk about. Our midwestern rural ethic allows us to complain and point fingers when prices are low, but we don't say much when the money is good. Therefore, with this summer's crash in the cattle business, the big swings in the grains, and the probability of a 1995 hog bust, I can write about money.

I believe no farm is more competitive or durable than a sustainable type farm. I also believe, as I will explain, that no farm is more vertically integrated than a sustainable farm. The problem is that I don't know anyone who has developed a truly sustainable farm. Many of our cooperators and members and friends are doing some parts well but I'm not sure anyone has tied all the pieces together.

You may not agree that sustainable farms are more vertically integrated, but disagreement is good if we can stimulate thinking. A conventional farm that is trying to be more sustainable must first discard the agri-business mindset of purchasing solutions and of relying on stand-alone enterprises. A sustainable farm is like a person's body with the various parts



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doing their own thing but each organ dependent on the others. A conventional farm is like a person on life support in intensive care.

The farm I am seeing as a goal has several enterprises that are crafted to mesh in a symbiotic relationship. We would see something like (you can add to this I'm sure) gates made from lumber cut from the grove keeping in cattle or sheep grazing oats stubble whose straw is stored to bed hogs this winter and whose grain will feed the calves or lambs or pigs and also supply seed for next year. The ruminants will, after corn harvest, glean the fields, haul their own manure and eliminate volunteer corn and the need for Poast™ or Scepter™. The cover crop under the oats provides stockpiled forage for winter grazing as well as a part of the nitrogen for next year's corn crop. The straw soaked with manure and hauled back to the field after grazing provides another part of the fertility. Toss in the soybeans and alfalfa and the interrelationships expand dramatically.

The farm I am seeing as a goal has several enterprises that are crafted to mesh in a symbiotic relationship.

If the animals are born on the farm, the grain grown there, the feed ground there, and a little direct marketing occurs, we have almost complete vertical integration. Probably the only things purchased were a little salt and mineral and a few medications plus some diesel fuel.

Now the reality check. Many of us started too late. Old mistakes and old purchases of iron and concrete have us locked into a non-flexible management style. The narrow margins that we will have to live with will make it difficult for many farmers to meet cash flow needs.

So as we look at those cash flow needs we will have to ask ourselves if we really needed to purchase that input. Many times I have purchased things because agri-business makes it so easy and so much fun to buy them. We need to try to think how we can either eliminate that expense or generate the input on the farm.

I am reminded of a story I read some time ago about one of the small church colleges in northern Iowa. The founders didn't have much money, but

they were sharp enough to pick a wooded site with limestone under it. The first buildings literally rose from the ground as they were built from lumber milled on the site and stone quarried on the property. We can use the same mental attitude as we develop our farms.

Another reality check. Each of the enterprises needs good performance for the sustainable farm as well as the conventional farm. Having diversity is self defeating if each segment is not well managed.

Ultimate reality. My farm management style was completely conventional ten years ago. The transition to sustainability is much slower than I like, but we are making changes. In a way, we are like the scientist trying to develop a perpetual motion machine. We know we will never quite make it but enjoy the challenge of seeing how close we can get. 🐾

WELL-BEING OF WOMEN IN SUSTAINABLE AGRICULTURE

Regina Striegel, What Cheer

A year and half ago, I began formally working on my master's equivalency project in the Counseling Psychology Ph.D. program at the University of Iowa. The reason I chose to do research in the area of sustainable agriculture is because my husband

Continued on next page.



OUT AND ABOUT, SUMMER 1994



Let me see! Larry Harris released weevils to attack musk thistle at the June 24 field day.



Dave Lubben, Monticello, explains to Laura Krause, PFI director for northeast Iowa, how he protects young trees from cattle. The Lubben field day is Aug. 31.



What's this? The PFI display at the Farm Progress Hay Expo drew both the merely curious and people interested in grazing information.



Deep banding made a big difference in corn tasseling date on the Harlan and Sharon Grau farm, Newell. The Grau field day takes place Sept. 6.

and I have been living and working for 25 years on a farm in Keokuk County, Iowa. The whole Striegel family, consisting of my husband and his six brothers, are very aware of the importance of farming practices that make a positive contribution to the environment and to the future of farming. In addition, as a psychologist who will be practicing in the rural community, one of my concerns is the psychological well being of my friends and neighbors who are farming. As we in farming well know, the last few years have been frustrating to say the least, and we all know good honest farmers who are no longer farming because of situations beyond their control.

Last fall I contacted the Practical Farmers to ask for permission to use your membership list. After obtaining permission from the board, I began telephoning women all over Iowa. I talked to 93 women and 75 agreed to participate in the study. I received a total of 53 replies, so the results are based on this group. Ages ranged from 25 to 67 years of age, with 44 of the 53 being married. Number of children ranged from 0 to 8. There was a wide range in educational level, from less than a high school education to college graduates and some with graduate training. Number of hours spent at farm work varied, with the sustainable farm

Continued on page 8.

SHARED VISIONS



farming for better communities

The *Shared Visions* section of this newsletter includes a series of questions and answers about *Shared Visions*, descriptions of recently funded projects of two groups involved in *Shared Visions*, and a report on the dedication of the Neely-Kinyon Research Farm, near Greenfield.

QUESTIONS AND ANSWERS ABOUT SHARED VISIONS

What is the purpose of *Shared Visions*?

The purpose of *Shared Visions* is to develop community-based groups that will provide the support and teamwork needed for the acceptance and use of farming systems that are financially and environmentally sustainable.

How can *Shared Visions* help my community?

Shared Visions can enhance the ability of farm families and communities to sustain themselves by helping groups bring their ideas into focus and make and implement plans to achieve the types of farming systems and communities they desire.

How does *Shared Visions* work?

Groups must apply. Groups complete *Group Request to Participate* forms and group members complete *Individual Request to Participate* forms. Forms are reviewed by the *Shared Visions* Advisory Council, and the PFI board selects the groups. Further information may be sought before selections are made.

If selected, groups create a "shared vision" of the components of desirable farming systems for their communities. Groups then develop one or more projects aimed at helping achieve their vision. Groups submit project plans to the PFI board. Groups with approved plans are awarded small grants and receive technical assistance to help implement plans. Groups are linked through annual conferences, site visits with other groups, and a newsletter.



What should groups look like?

Groups should strive for diverse membership. Groups should include women and men who are both farmers and non-farmers. Groups need not be large. They can begin with a core of five to seven interested people, perhaps expanding to ten to twenty.

What are the expectations of group members?

- work as part of a team and assume leadership responsibilities as needed
- be open to the ideas of others and flexible about their own
- attend meetings and undertake needed activities between meetings
- share experiences with other communities during annual site visits and conferences

Will participants attend a lot of meetings?

The number will depend on the diversity of the group and the complexity of the issue they address. The group involved in *Shared Visions* from Davis County met four times to develop a project plan, while the group from the Grundy and Hardin County area met seven times.

What kinds of projects might groups pursue?

The possibilities are many. The group from the Grundy and Hardin County area is developing a community-based beginning farmer initiative. The AG 2020 group in Poweshiek County is focusing on options for CRP land. The Davis County group is trying to increase livestock numbers.

Projects could range from developing networks of small or moderate-sized hog producers to pursuing value-added processing to examining options for managing nitrogen use for corn. The desire is to support projects that create a supportive climate

in the community for farming systems that are:

- resource-efficient
- maintain productivity & profitability
- protect the environment & personal health
- support rural communities
- provide increased opportunities

What about a group that has a project in mind? Will it fit?

The process is as important as the project, which means individuals or groups seeking funds for a predetermined project may not be a good match.

What resources are available to support a group?

- funds for supplies, travel, advertising, and local assistants
- small grants to implement approved projects
- a community groups coordinator to help during planning sessions
- a farming systems coordinator to help during project implementation
- a project director to help with financial aspects of groups' involvement

What is the time frame?

A second set of groups will be selected for involvement in the fall of 1994, and a third set will be selected in the fall of 1995. Selected groups will develop project plans during the winter to submit for approval. The time frame for implementing approved plans will vary by project. Groups can be involved until funding for *Shared Visions* ends in 1997.

How do I get started?

Call Gary Huber or Rick Exner and ask for an application packet (see back cover of the newsletter for the phone number). This packet contains the information needed to get started. ☺



GROUP PROJECT APPLICATIONS APPROVED BY PFI BOARD

(Editors' note: The process for approving project applications of groups involved in *Shared Visions* includes recommendations to the PFI board by the *Shared Visions* Advisory Council. In June the Council recommended the approval of project applications from the Poweshiek County AG2020 group and the group from the Grundy and Hardin County area. In early July the PFI board accepted the Council's recommendations. The following articles describe each project of these projects.)

AG2020 CRP Project

The approval of the AG2020 group's project application provides \$1,200 to support a survey of CRP landowners in the Poweshiek County area. The survey is viewed as a first step in preparing to help these CRP landowners use this land in ways that are environmentally sound and financially sustainable.

The survey has been designed, tested, and sent to over 500 CRP landowners. The response rate as of mid-July was over 60 percent. The results will help the group determine the presence and condition of buildings, water, and fences, as well as reveal the intentions of CRP landowners, including their willingness to talk with beginning farmers.

Poweshiek County is ninth among Iowa counties in the amount of land in the CRP. Of its 46,646 CRP acres, close to half is slated to be released for some other use in 1997.

The information gained from the survey will help AG2020 members develop options for owners of CRP land as it becomes available for other uses. Of particular interest are opportunities for grazing and options for establishing new farm families in the area.

The group would like to eventually build a program in which CRP landowners, new and current farmers, and town and business people work to further the sustainable use of this land. Additional funding from *Shared Visions* will be available to the group for the next phase of this project.

The group's effort fits well with the objectives of *Shared Visions*. Gene Smith, an Advisory Council member who is president of the Sloan State Bank, noted about the application, "I liked it. They've got something coming at them in a year or two, and they are getting ready."

Beginning Farmer Initiative for Grundy and Hardin Counties

The group involved in *Shared Visions* from the Grundy and Hardin County area has focused on the problem of an aging farm population and the lack of successors.

The purpose of their project is to determine the steps a community can take to help people start farming. The project's approval provides the group with nearly \$3,500 to begin developing their community-based beginning farmer project.

Four project components are planned. One is a "Program Outline." This outline will describe (1) expectations of the parties involved, (2) procedures to identify and match prospective farmers with owners of land, (3) training and resources available to develop the required skills in beginners, and (4) oversight processes and communication requirements to insure smooth progress of matches.

The group will next develop a "Program Guidebook" that will document farming practices that can be used to help insure the success of beginning farmers, such as intensive grazing management and using manure for fertility requirements. Other information to be included in the guidebook examples of alternative leasing arrangements, descriptions of creative approaches to acquir-



ing the use of equipment, and listings of resources available both within the community and elsewhere.

The group's project plans include a "Pilot Operation" that will match a prospective farmer with a landowner to test the program in a real-life situation. The prospective farmer will prepare a multi-year business plan that will include, among other things, anticipated cash-flows and projected borrowing needs. Documentation of the experience will allow for necessary adjustments in the program.

The fourth component of the project is a "Community Awareness Campaign" aimed at gaining the support of people in the area's business community. This component is important to achieving the group's ultimate goal, which is to establish a local program of opportunities and supports for beginning farmers that will become a normal part of the area's economic and social vitality. 🍀

GREENFIELD GROUP LAUNCHES NEELY-KINYON RESEARCH FARM

As described in the last issue of this newsletter, a group of farmers and business people in the Greenfield area has come together to establish the Neely-Kinyon Research Farm, a gift from Wayne



Dedication ceremonies took place against the backdrop of rolling Adair County land.



Margaret and Wayne Neely (right) chat with neighbors at the field day dedication.

and Margaret Neely to the Wallace Foundation for Rural Research and Development. The farm was dedicated June 27 at a field day attended by several hundred. Speakers at the ceremonies included David Topel, dean of ISU's college of Agriculture, and Jerry DeWitt, former director of Extension agricultural programs. Hay rack tours of the farm visited demonstrations of grazing, pasture interseeding, forage stockpiling, narrow strip intercropping, and nitrogen management for corn.

The farm, which became a Century Farm in 1978, was the boyhood home of Wayne Neely. He spent his adult working life teaching sociology at Hood College, in Maryland. During this time, the farm was managed by Keith and Myrtle Kinyon, and the Neelys have graciously included the Kinyon name in the farm title. During his career out of Iowa, Wayne Neely maintained active interest in the Greenfield community and the farm, particularly the herd of registered shorthorn cattle. It was out of this interest and concern that the Neelys donated the farm to the Wallace Foundation in 1993. The Greenfield community has come together to make the farm a reality, and those involved see it as a tool for agricultural development in Adair County. 🍀



Striegel, continued from page 3.

women averaging 15.5 hours per week and the more conventional women averaging 6.2 hours per week.

The goal of the research that the PFI women so graciously participated in was to establish whether or not Iowa farm women are satisfied with their lives and to become better acquainted with those aspects of their lives that make them meaningful and fulfilling. Another goal was to separate the women into two groups based on prevalence of sustainable practices. After doing this I wanted to find out if there were differences between the two groups on life satisfaction and depression.

The results of this study indicate that farm women as a whole lead very satisfying lives. No difference was found between sustainable farm women and conventional farm women. As one would expect there were multiple reasons for this satisfaction. A few major ones indicated by many women were the importance of family and their part in supporting their children and husbands; being able to raise their children in the wholesome rural environment; volunteer work; church work and spiritual life; working outside and participating with their husbands in the farm work; and good neighbors.

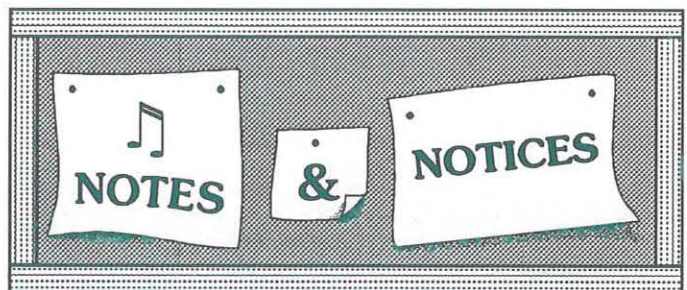
Another area of interest for me was the incidence of depression among these two groups of women. It would seem possible, with the farm crisis still dragging on and the flooding of 1993 a very real threat to harvest and financial solvency, that depression could be a very real problem. What this study showed was that farm women are not depressed. Sustainable farm women as a whole did have a greater number of symptoms of depression than the conventional farm women but neither group was clinically depressed. A possible reason for one group having more symptoms could be that sustainable farm women spend more hours both in off-farm employment and on-farm work. This could leave less time for pleasurable activities with family and less time to refuel themselves.

The results of this study indicate that farm women as a whole lead very satisfying lives.

I was excited by the results and believe they indicate that farm women have become resilient through learning to face many difficult factors in their lives. A researcher in this area believes that in order to become resilient there are several factors necessary. These factors include: protective factors such as close personal relationships and development of self esteem along with a range of opportunities; also, ability of the person to appraise the stressful situation, process the experience and attach meaning. These factors enable that person to incorporate the experience into their belief system and establish patterns that lead to success in solving future problems.

It is important to note that this research used a specific group of farm women (PFI members) that were aware of sustainable farming practices. These results may not transfer to all farm women in Iowa. It is still noteworthy that this group is psychologically healthy, goal oriented, and very satisfied with their lives.

I wish to thank you once again for making my project an enjoyable experience and being so gracious to me. 🐦



♪ Lubben Named to Leopold Board

David Lubben, a PFI cooperator from Monticello, has been named to the Advisory Board of the Leopold Center for Sustainable Agriculture. He and three other new ex officio members will increase farmer representation on the board. The other new board members were selected from the Iowa Farm Bureau, the Farmers Union, and the

Iowa Agribusiness Association. The 17 member board sets overall policies and direction of research for the Center. It meets about six times a year. Congratulations to Dave for agreeing to represent us!

♪ **Sustainable Agriculture Library**

Harold Wright maintains a personal library on sustainable agriculture of over 75 books plus books, newsletters, journals, and magazines. You may have seen some of his references on display at PFI meetings. They are available for loan to organizations doing on-farm research, for annual meetings, workshops, seminars, and other gatherings. Contact Harold at 1718 Clark Ave., Ames, IA 50010, (515) 232-3361.

♪ **Pasture Walks in Dubuque and Delaware Counties**

Tony Harvey, Extension Dairy/Beef Livestock Field Specialist in northeast Iowa, sent us information about pasture walks scheduled for August and September. Pasture walks are an informal exchange of ideas while walking a pasture. Each will have a different focus.

August 23

Summer Pasture Management; Pat Freiburger, RR 2, Delhi

September 6

Converting to Pasture and Streambank Stabilization; Bob and Paul Mueller, 13189 Hammerand Rd., Sherrill

September 20

Late Season Management and Preparing for Winter; Larry Thier, 13938 Hickory Valley Rd., Farley

These walks were organized with the help of Mike Freiburger, Bloody Run Creek Watershed project coordinator. There is no cost. For more information, contact the Dubuque County Extension office at (319) 583-6496.

♪ . . . **And a Walk in Wisconsin**

1:00-3:00 pm, September 15

Herd Health for Seasonal Pasture-Based Dairying. Tom and Sally McMahan farm, RR 1, Box 124, Muscoda, Wisconsin (just east of McGregor, Iowa).

Dr. Greg Brickner will discuss his results from the first year of study of herd health among pastured dairy cattle. Brickner is studying reproduction, heifer rearing, forage management, ration balancing, disease and body condition.

From Hwy. 14, take Hwy. 171 through the town of Boaz. 1½ miles past Boaz, turn right on Creek Road. This is the only farm on Creek Road. For more information contact: Greg Brickner, (608) 647-6837. (Courtesy of Wisconsin Dept. of Agriculture, through Sustainable Agriculture Program grants.)

♪ **August 30 Twilight Tour of Stream Buffer Strip**

A research project in northern Story County is examining how to establish and maintain multi-species stream buffer strips. A twilight tour of the buffer strip created by this project will be held on the evening of August 30. To attend, be at the VF Factory Outlet Mall off I-35 at the Story City exit at 6:15 p.m. People will carpool four miles east on County Road E15 to the Ron Risdal farm.

The Leopold Center for Sustainable Agriculture sponsored this research project. The tour is a joint effort of ISU Extension and the Soil Conservation Service in Story, Hamilton, Franklin, and Hardin Counties. For more information call the ISU Extension office in one of these counties.

♪ **September 8-10 - Rural Church: Cultivating a Promising Future**

The 1994 National Catholic Rural Life Gathering will be in Des Moines on September 8-10. Various presentations, such as "The Rural Church: The Soul of the Rural Community," will be given. Also, Rev. Norm White of Dubuque and Rev. John Cain of Sioux City will be recognized. For more

information, call the National Catholic Rural Life Conference at (515) 270-2634.

♪ Job Announcements

I) A job announcement was recently received from our neighbors to the west for a half-time position as western Nebraska organizer for the Nebraska Sustainable Agriculture Society. The closing date for applications is September 1. For more information, call Wyatt Fraas at (402) 254-2289.

II) Program Associate/Education Coordinator, North Central Sustainable Agriculture Training Program

The associate will: participate in planning with regional project leaders; organize and conduct regional and state workshops and other tours and training sessions; access and evaluate a wide range of teaching materials; prepare learning materials. Qualifications: M.S. degree or educational equivalent; prior classroom or extension experience with adult audiences; knowledge of sustainable agriculture principles and practices; on-farm experience desirable; non-profit experience desirable. Salary based on experience, benefits from University of Nebraska. Contact Dr. Chuck Francis, (402) 472-1581.

III) Iowa State University Extension to Communities will soon be seeking an Extension Program Specialist for Leadership and Organizational/Community Development. This position serves the Practical Farmers of Iowa *Shared Visions* project. Tasks include: working with local groups to solicit participation of individuals and organizations in the project; developing strategies and plans of action among local community groups to further integrated farming systems and sustainable agriculture; and organizing and using local advisory committees. Qualifications include a successful record of working with diverse community groups and an M.S. degree or B.S. with equivalent competence in rural sociology, community development, or closely related area. Contact the interim Director of Extension to Communities, Dr. Steven Padgitt, at (515) 294-1122.

♪ Hartwig Named Interim ISU Extension Agriculture Director

Nolan Hartwig, ISU Extension veterinarian, has been named interim director of ISU Extension to Agriculture effective July 1. Hartwig succeeds Jerry DeWitt, who is now an extension specialist for sustainable agriculture.

Hartwig was professor in charge of veterinary extension. He has been with ISU Extension for 11 years. Before that he served nine years as faculty member and extension veterinarian for The Ohio State University. He has also been a supervisor with the US Department of Agriculture's Meat and Poultry Inspection Program.

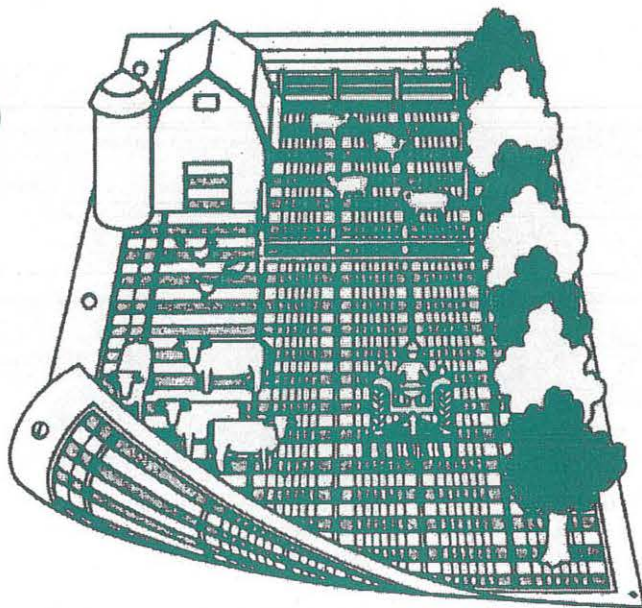
Soon after assuming the interim director position, Dr. Hartwig wrote the following in a message to ISU agriculture Extension staff and department heads. "I am a strong believer in extension programs that stress economic development, and are sensitive to the environment and social issues. Agriculture must be competitive and profitable, but it also must be sustainable in the broad sense of the word." 🐾

PROFITS OF NARROW STRIP INTERCROPPING: 1993

Don Davidson, Grundy Center

I'm sure that 1993 was a year we'd all like to forget. However, it gave us an opportunity to see how well sustainable farming systems perform under adverse conditions. In 1992, six PFI research cooperators initiated narrow strip intercropping (NSI) demonstrations on their farms in a two-year study supported by the Leopold Center for Sustainable Agriculture. These cooperators analyzed the cost, returns, and profits of this system through the use of the Iowa State University Crop Enterprise Record system. The results showed that in a very good year crops in strips produced higher profits (\$47 per acre) than crop in block fields (\$32 per acre).

Then came 1993: floods, hail, incessant rain, late planting, missed cultivations – a brutal year for crop producers. The same six cooperators contin-



For two years in a row, the three crops in strips have been more profitable than the three crops in block fields.

Figure 1, corn yields were very low, bean yields were below average, and oat yields were pretty much nonexistent. Fortunately, corn and bean prices had recovered by harvest time, taking some of the sting out of the depressing yields.

As in 1992, corn yields in strips were higher than corn yields in blocks (88.7 bushels per acre versus 77.8 bushels), contributing to the higher income in strips. Corn production costs were slightly higher in strips than in blocks (\$240.67 vs. \$235.61), but this small difference was more than offset by the difference in gross income (\$272.90 vs. \$240.38). I think it's amazing that cooperators were able to make any profits at these yield levels.

Soybeans were the bright stars for the 1993 crop year. In spite of the mediocre yields (32.8 bushels per acre for strips and 30.9 bushels for blocks), gross income remained high and costs remained low, to produce profits that were much higher than average (\$101.72 and \$91.92). How was this achieved when the bean yields were so low? For one thing, good yields at the Mugge and Olson farms made for higher gross incomes and profits. Tom and Irene Frantzen had a June hail-

ued the NSI demonstrations in 1993 and analyzed the costs, returns, and profits of the farming system in a disastrous production year. Surprisingly, NSI still managed to produce a higher profit per acre (\$15.15) than in blocks of separate crops (\$2.36). Unfortunately profits were 1/3 of those achieved in 1992.

Table 1 is a summary of the crop enterprise records from 1993. Four cooperators compared three crops in strips to the same three crops in block fields (corn, beans, and small grains). Two cooperators, Alert and Thompson, compared the three crops in strips to the conventional corn/soybean rotation in block fields. As you can see in

Table 1. Narrow Strip Intercropping Costs and Profit, 1993

	Strips (Three Crops)				Blocks (Three Crops)			
	Corn	Beans	Oats	Average	Corn	Beans	Oats	Average
Profits	\$32.23	\$101.72	(\$88.51)	\$15.15	\$4.77	\$91.92	(\$89.61)	\$2.36
Total Cost	\$240.67	\$179.38	\$161.85	\$193.97	\$235.61	\$177.87	\$162.47	\$191.98
Gross Income	\$272.90	\$281.10	\$73.34	\$209.11	\$240.38	\$269.79	\$72.85	\$194.34
Yield	88.7	32.8	6.5		78.6	30.9	5.8	
	Strips (Three Crops)				Blocks (Two Crops)			
	Corn	Beans	Oats	Average	Corn	Beans		Average
Profits	\$43.23	\$52.10	(\$34.53)	\$20.27	(\$37.07)	(\$17.35)		(\$27.21)
Total Cost	\$244.07	\$200.53	\$162.45	\$202.35	\$273.56	\$224.32		\$248.94
Gross Income	\$287.30	\$252.63	\$127.93	\$222.62	\$236.49	\$206.98		\$221.74
Yield	\$108.40	\$38.20	\$18.70		\$89.40	\$31.20		

PFI 1992-1993 Strip Intercropping Strip and Block Yields by Field

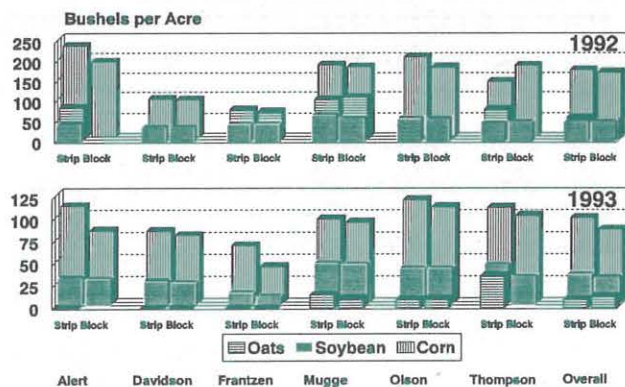


Figure 1.

out of their beans; however, they had a good hail insurance policy which compensated them well for their crop loss. Crop insurance payments are considered to be a part of the gross crop value at harvest. When the numbers are averaged out, the result is higher soybean income and profits.

Oats? Well, as you all know, oats had a terrible year in 1993. At two of the four three-crop sites, the oats weren't even harvested, while the other two sites harvested extremely low yields. Unfortunately, zero crop means negative profits. Every demonstration site lost money on oats, since land and machinery costs had to be paid regardless of yield. However, when the negative oats profits are averaged in with the positive profits of corn and soybeans, the overall picture is positive.

A different picture emerges from the Thompson and Alert sites, where the three-crop intercrop system was compared to the conventional corn-soybean rotation. Here the three crops in strips were a full \$47 per acre more profitable than the conventional rotation. These two sites had higher costs for corn and soybeans in block fields and substantially lower yields. The crop yields in strips at these sites were higher than at the four other NSI demonstration sites. It is interesting to note that the oats in strips lost less money than the corn in block fields!

What conclusions can be drawn from enterprise records of NSI? For two years in a row, the three crops in strips have been more profitable than the three crops in block fields. And the profitability of



Paul Mugge, Sutherland, introduced grain amaranth into the strips this year as an additional cash crop. The Mugges' field day is set for Aug. 26.

three crops in strips have been equal to or better than the conventional corn-bean rotation. Corn yields for both 1992 and 1993 have averaged higher in strips than in block fields – but not really *much* higher. Some people may find that frustrating. Corn yields in 1992 were 14 bushels higher in strips compared to blocks. In 1993 corn yields were 13 bushels higher. That's an average 12.5% increase. Some sites (Fig. 1) seem to have consistent, big increases in corn yield (15% or more), while others seem to show much smaller yield increases (10% or less). Cover crops (I know!) reduced corn yields in some cases. Also, there was some indication from the 1993 data that corn strips with a north-south orientation benefited more from increased sunlight than did east-west strips.

Soybeans seem to be producing better in strips than previous research had indicated. Are they also benefitting from more sunlight? My guess is that soybeans might be enjoying the relative "windlessness" in strips. I'm sure they are benefitting from the longer crop rotation in the strip systems.

The oats portion of this crop trilogy has been a disappointment. So far, all they have been good for is increasing light penetration for the corn strip, providing a place to grow some nitrogen for the corn, and breaking up soybean disease cycles. These are all very good reasons to grow oats, but, in the long run, are they enough? I feel oats profitability must be much better than it has been the last two years before this cropping system will be adopted by more farmers. It's good to see that in a

disaster year this system still produced a profit, but how many farm families could make a living on the \$15 per acre profit generated in 1993, or even the \$47 per acre profit generated in 1992?

What is in store for 1994? Some cooperators are looking at alternative small grains in place of disease-intolerant oats as a way of increasing profits. Others are seeking to use the oats for greenchop or postharvest livestock forage, considerably increasing the value of the strip. Some cooperators are interested in raising high-value crops in strips, for example, food-grade, pesticide-free soybeans. We'll harvest the results and let you know how things turn out! 🐾



Two families of Wilsons, left to right: Caleb, Carla, Jacob, Levi, David, Becky, Colin, April, Jaron, Lorna, Dan, Faye, and Robbin.

PFI PROFILES: DAN AND LORNA WILSON, COLIN AND CARLA WILSON

Rick Exner

I pull into Dan and Lorna Wilson's driveway at fifteen minutes before noon, late again. Dan's brother Colin welcomes me, saying I'm right on time. Dan and Colin, with their wives Lorna and Carla, farm together in O'Brien County, in northwest Iowa. They are new cooperators, and I am delivering a PFI sign in preparation for their field day, August 26.

People begin pouring out of the house and piling onto a van and a pickup. Dan is here by now, explaining that they're going over to the Quaker Meeting House for a community dinner. Soon we are heading down the road, discussing the art of coordinating 14 people and a farm. Dan indicates that serious thought has been given to a CB radio, but for now mental telepathy works fairly well. At a crossroads Carla and some more kids pull up, and she and Colin have a quick conference in the road before she heads off to join us later.

In the basement of the meeting house a line of youngsters and adults moves slowly from sloppy joes to desserts and into seats, all the while catching up on the latest. The dinners are a spin-off of the

weekly quilting group, I learn. My napkin does double duty as a notepad, as Dan reels off the ages of his children: Robbin, 17; April, 14; Torray, 12; Faye, 8; and Jaron, 4. Just now most of them are preoccupied with the chickens, sheep, hogs, and fine arts projects they are taking to the county fair. I add this to information gained from Colin in the pickup: David, 16; Becky, 14; Levi, 11; Caleb and Jacob, 9. Also in 4-H, they are each studying at least one musical instrument, apparently following the example of Carla, who plays several.

Hogs are the mainstay here. "We farm . . . for the feed and the diversity," they say, "but this is our love!"

Before the meal is over I've met Dan and Colin's parents, Ernest and Beth. Ernest started farming with his brothers in the 1940's. After returning from ISU, Dan began farming with his dad in 1972. Colin joined them three years later, after studying at ISU and a small, liberal arts college in Wilmington, Ohio. Their cousins Doyle and Lowell Wilson, PFI members from Primghar, are another "brother team" in farming.

After the meal there's just time for a snapshot of the two families before everyone scatters. Dan and Colin doubtless have other things to do, but they take the time to show me around their two farmsteads. Hogs are the mainstay here. "We farm (740 acres of crops) for the feed and the diversity," they say, "but this is our love!"

They raise purebred boars and gilts on Colin and Carla's place and produce feeders and finished hogs at Dan and Lorna's. They have used a cross of Poland and Chester White, but they proudly point to their first Tamworth sow, which they hope to use for the mothering ability of the breed and its adaptability to outside conditions. They feel they can acquire these traits while maintaining favorable carcass characteristics. A local slaughter plant is using sonograms to measure muscle, so they will be able to track their progress.

Colin leads us into a small confinement unit they bought in 1993 for \$20,000 – eight nursery pens and two lactating pens. It's nearly empty now, although they will bring in fall-farrowed piglets later. "This is a case," says Dan, "where we bought into the world's advertising. The vet said we'd love it. Friends said we'd love it. Well, we don't love it." Concerns include the working environment, stress-related pig behaviors, and disease. Next door is a 14-stall farrowing barn. They have built some of their own pens here, which are easier to clean and to catch pigs in, they say.

Now it's over to Dan and Lorna's to see the production operation. It's a small village of A-frames, carrying 120 liters and 100 gestating sows on 17 acres of orchardgrass/alfalfa. Some of these A-frames, I'm told, were purchased 28 years ago for \$35 each. One recent modification to increase the houses' longevity is the iron cross-brace at the entrance. More recently, the Wilsons were featured in *New Farm Magazine*, and the plans for their A-frame hog house have been among the items most requested at the magazine.

"People think they'll put hogs out on pasture and forget them," says Dan. "To make the system work, you have to provide ample straw bedding when it's needed, open and close A-frame doors about twice a day, watch the stocking density, and rotate to new pasture when appropriate." The kids are important in the day-to-day management tasks.

The Wilsons calculate their breakeven cost, including living expense, at \$32 per cwt. Participants in the Iowa Farm Business Association, they



Dan points out bedding boards, which are removed when they no longer keep piglets in the A-frames.

know that their return on feed cost is "at the top of the chart," and their return to labor is in the top one-third of producers. This statistic bears on the argument that pasture farrowing is too labor intensive.

The hog pastures are presently part of a three-year crop rotation. Because they think weed pressure is building, Colin and Dan are considering including an extra year of hay in the rotation. We tour a field where part of the soybeans were ridge-tilled and part were planted with an air seeder and drill units on a field cultivator. The solid-seeded beans will have to yield an extra five bushels to pay for the higher seeding rate, but they were tried here because the crops weren't ridged in 1993.

They have even adapted ridge tillage to fields with terraces that their dad built. More than once in our conversation, Dan and Colin credit their father's example. "He was willing to be a little different, he was a perfectionist, and he kept good records. He started pasture farrowing 30 years ago, at a time when all the interest was in confinement."

Not content with their success in pasture farrowing, the Wilsons are studying the "Swedish system" of hog production. This is a confinement system, but it provides ample bedding, more space,

"People think they'll put hogs out on pasture and forget them," says Dan.

and stable groupings of sows to reduce stress and take advantage of pig psychology. In September, Dan and Lorna will travel to Sweden with a group led by University of Minnesota researcher Marlene Halverson. "We just did some five and ten-year goal setting," explains Colin. One goal is to allow our kids to farm if they want." The Swedish production methods may help that happen, since there are many unused buildings in the area that could be adapted to the system.

Dan and Lorna Wilson, Colin and Carla Wilson and their families are farming together successfully and enjoying the life of their community. Like many PFI members, they are pursuing agricultural sustainability, and they are planning for the sustainability of farming in the next generation.

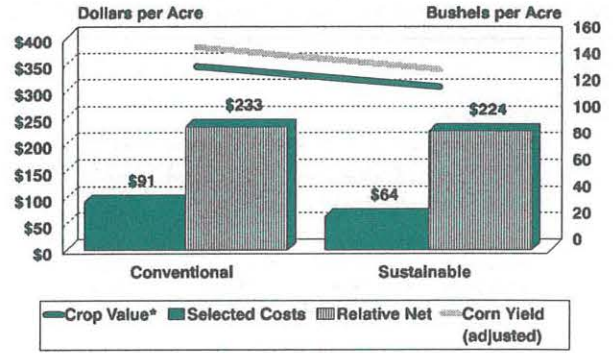
THE TRANSITION TO SUSTAINABLE AGRICULTURE IN IOWA, PART II: CORN PRODUCTION

Rick Exner

The last issue of *the Practical Farmer* reported results of a study carried out by PFI, Iowa State University, and organizations in four other states for the Northwest Area Foundation. That article focused on soil fertility, weed seed numbers in the soil, and the late season corn stalk nitrate test, comparing 95 sustainable and conventional ("production-maximizing") farmers. These farmers were chosen from an initial cross section sample of 1,067 producers and 169 members of sustainable agriculture organizations. Ranking on a sustainable-conventional scale was based on nine criteria related to farming practices and two measures of attitudes. The 169 farmers were chosen not to be representative of their organizations but to provide an "anchor" of examples on the sustainable end of the scale.

The Iowa study focused on corn – simply because it is a "common denominator" that can be compared across most farms. The previous article

Relative Costs, Gains, and Partial Net *



* Crop value calculated at \$2.25 per bushel. Yield adjusted for rainfall and soil map unit. 1991 corn yields used with 1989 detailed production costs.

Figure 2.

showed that, while sustainable farmers were less likely to have soil tests in the excessive range, many farmers of *both* types could profitably cut back on fertility amendments. It also noted that weed seeds were more prevalent in the soil of sustainable corn fields but were not correlated with corn yields in the study year of 1991.

To many people, however, these statistics are of secondary interest. The real question to them is "bottom line profit." What does it matter if soil tests and input costs are high if the yields are great?

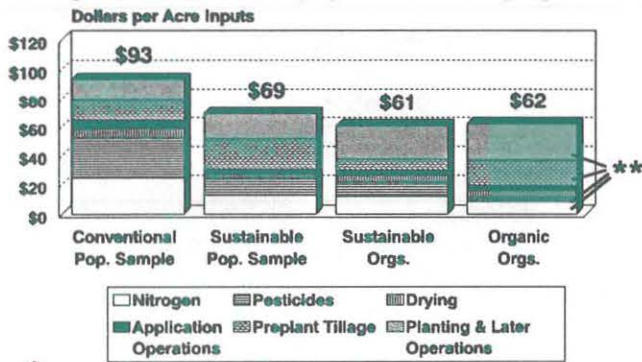
This is a line of reasoning you may recognize from your own coffee shop. You may also remember headlines like "Alternative Farming Less Profitable," that reported study data but really didn't go beyond yields to get to net profit. ISU researchers and their PFI advisors made sure

from the beginning that this project would look at production costs as well as yields.

Detailed information on production costs were gathered for the 1989 crop year on a "typical" corn field designated by each respondent. In 1991, researchers actually went to the field to measure yields and soil characteristics. Between typical 1989 production costs and 1991 yields, a hypothetical net profit can be reached, but it should be kept in mind that costs and yield actually came from different years.

Overall, selected production costs for the three sustainable groupings was \$24-\$32 less than for the conventional farmers.

Selected Input Costs for Corn in 1989 Nitrogen, Pesticides, Equipment, and Drying Costs



* Significant differences among groups for these costs.

Figure 3.

Here's the long and short of it: sustainable farmers had significantly lower 1991 corn yields than conventional farmers, and they also had significantly lower production costs. Combining 1989 costs and 1991 yields, the bottom line net profit was not statistically different between sustainable farmers and production maximizers. Figure 2 shows overall costs, yields, and theoretical partial net for the two groups. Figure 3 details production costs for:

- 1) conventional farmers, chosen through the cross-section sample of the farming population;
- 2) sustainable farmers selected through the cross-section sample;
- 3) members of two sustainable agriculture groups (PFI and the Farm 2000 group in Poweshiek County); and

... the bottom line net profit in corn production is similar among Iowa farmers pursuing sustainable and conventional (production-maximizing) agriculture ...

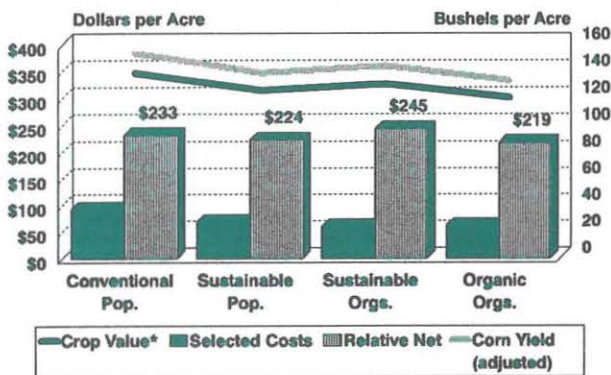
- 4) members of two organic-sustainable organizations (Iowa Organic Crop Improvement Association and Iowa Organic Growers and Buyers Association).

These costs include: nitrogen (including manure N), herbicides and insecticides, application of these inputs, labor and machinery from field preparation to harvest but not harvest itself, and corn drying costs. Not included here are costs for harvesting, other fertilizers, and land.

Conventional farmers tended to spend more on nitrogen and pesticides. Sustainable farmers spent more on planting and later operations. Overall, selected production costs for the three sustainable groupings was \$24-\$32 less than for the conventional farmers. PFI and Farm 2000 producers ("Sustainable orgs." in the figure) spent less than the other three groups on preplant tillage.

In fact, Figure 4 shows that, based on this fairly small and nonrandom sample, participating PFI members enjoyed as good or better net profits from

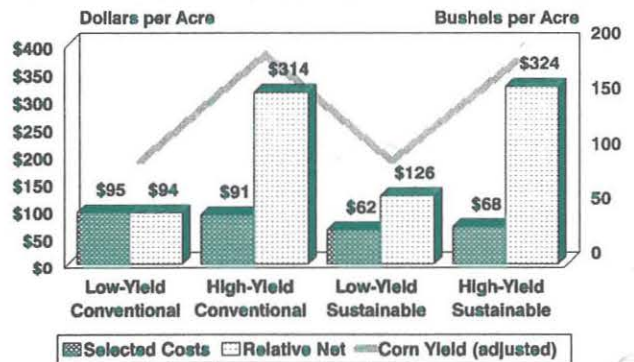
Relative Costs, Gains, and Partial Net



* Crop value calculated at \$2.25 per bushel. Yield adjusted for rainfall and soil map unit. 1991 corn yields used with 1989 detailed production costs.

Figure 4.

Relative Costs, Yields, and Partial Net *



* Crop value calculated at \$2.25 per bushel. Yield adjusted for rainfall and soil map unit. 1991 corn yields used with 1989 detailed production costs.

Figure 5.

corn production as other conventional and sustainable groups.

These averages for yields, costs, etc. obscure the fact that within each group there is a wide *distribution*. In fact, there are more differences among farmers within these groups than there are between group averages.

Among the 95 farmers, we looked for the top-yielding and low-yielding quarters in the sustainable group and in the conventional group (Figure 5). These quartiles amounted to only about a dozen farmers each, but you can see that the high-yield quarter of both groups resembled each other in yield and net profit more than they looked like the low-yield quartile in their own group. Also, the low-yield sustainables ended up with a better bottom line than did the low-yield conventional farmers. The difference is largely due to lower production costs among those sustainable farmers.

This study is showing that:

- 1) the bottom line net profit in corn production is similar among Iowa farmers pursuing sustainable and conventional (production-maximizing) agriculture;
- 2) sustainable farmers tend toward a strategy of reducing costs, while conventional farmers tend to look for profitability through yield;
- 3) the categories "sustainable" and "conventional" encompass great variability, with differences between the groups being less than differences among farmers within each group.

In the next article, we will look again at the characteristics of sustainable and conventional farmers, sketching a picture of each group and examining attributes of success. 🍷

WHAT KIND OF "SUSTAINABILITY" DO WE WANT?

Thayne Cozart

(Editors' note: This article contains the views of Thayne Cozart on the term "sustainability." Mr. Cozart is director of communications for the National Farmers Organization.)

The term "sustainable" brings to mind different images and definitions for various groups and individuals in agriculture. Since the term itself is being used more and more these days, perhaps we need to review three separate definitions.

For instance, many farmers have switched or are switching from what they call "conventional" production to what they call "sustainable" production. To these folks, "sustainable" means crops and livestock that are "organically grown" using no artificial fertilizers, pesticides, antibiotics or growth stimulants. To them, sustainable means ag production by "natural" means. They believe that American consumers are becoming more health conscious and are willing to create a growing market for commodities grown under "sustainable" conditions.

On the other end of the production spectrum are farmers who interpret "sustainability" in the same way, only they reject the idea, rather than embrace it. They believe that their farms are incapable of generating enough income unless they use many production-enhancing technologies. These farmers believe consumers don't pay much attention to how food is grown so long as it's cheap, eye-appealing and plentiful.

There's another definition of "sustainability" that some economists and rural sociologists are using with more frequency. It has nothing to do with production methods. It refers to the ability of farm families, rural communities, and rural beliefs and values to sustain themselves from one generation to the next.

That's the definition of "sustainability" that makes the most sense to me. Just what do we want to sustain in rural America? Do we want to sustain the family farm structure with its wide distribution of land, people and benefits? Do we want to sustain rural communities with their schools, churches, 4-H clubs, FFA chapters, small businesses and cultural heritages? Do we want to sustain such qualities of life as clean air, clean water, peace and quiet, and neighborliness?

If we do, then we need to scrap the arguments about sustainable production and concentrate on simply sustaining the rural America that we all enjoy and value so highly. 🍷

FOOTPRINTS OF A GRASS FARMER

Shaping Our Mental Attitude

Tom Frantzen, Alta Vista

The process of changing our farms into profitable, diverse, and stable operations is what most people regard as the development of a sustainable agriculture. The basic tenet of this philosophy is that our agricultural activities need to be harmonious with nature, economically viable, and a core element in sustaining our rural communities. With these concepts in mind, I would like to share some thoughts on how we can shape our mental images in a fashion that will improve our prospects of farming the kind of agriculture we want to see.

"If your only tool is a hammer, you will view all of your problems as nails" (anonymous source). If your only crops are corn and soybeans – and confinement hogs to feed them to – then you tend to see anything else in your fields as weeds or unwanted pests. Most of the people in the sustainable community realize that we need more tools (crop diversity) in row crop production. On our farm, we have made a serious effort to broaden our row crop spectrum with grain amaranth and narrow strip intercropping.

This is a difficult challenge with poor grain prices and undeveloped alternative crop markets. However, if we can alter the way we see our activities as farmers, we can open up new possibilities for profit. For example, "pesty weeds" like Canada thistle, quackgrass, and lambsquarter, hated and attacked with every expensive means known in row crop agriculture, become "crops" when they appear in our planned grazing cells. If these cells can produce livestock at a profit, then a great stride is taken on the path to sustainability. Weeds, with no seed, fertilizer, or maintenance expense, become a diversification crop after we alter the way we view our occupation.

Another way to improve on our mental image of sustainable agriculture would be to see our operations as an "economic airplane." Consider a single engine plane on a long journey. Everything

Weeds, with no seed, fertilizer, or maintenance expense, become a diversification crop after we alter the way we view our occupation.



Multiple "engines:" diversity and stability. Trees and hazelnuts shelter hogs, which fertilize next year's corn.

rides on one power source. There isn't anything that the people on board wouldn't do to maintain performance. Even if some of the "tinkering" would cause more troubles long term, that engine must perform!

Now a sustainable operation should be managed with the concept of a *multiple* engine plane on a very long journey. Flight on this economic aircraft is powered by four or more engines or economic enterprises. If one powerplant develops difficulty, the remaining ones carry us along. A quick-fix

cure, like excessive reliance on chemicals or nonrenewable resources, would be avoided by the flight crew because they would see that long term, the quick cure may cause another set of more serious difficulties. The cycles of natural biological processes becomes the mechanic on board. The flight crew of the sustainable plane know that nature seldom strikes all of its enterprises at one time.

With this view in mind, we seek out opportunities to diversify our farms. We as a family desire to change our agricultural practices and help stabilize our rural community. It is critically important that we avoid seeing ourselves as victims of financial circumstances. If we see ourselves as victims, we will in time become as such. Perhaps the most important improvement that we can all make is to shape our mental image in a positive fashion. We need to view our operations as a tract of land that harvests the energy of the sun and transforms it into saleable products in a sustainable manner. 🌱

FROM THE KITCHEN

Marj Stonecypher, Floyd

Time out of my busy schedule to send you all a couple more recipes from my kitchen, where I don't seem to have much time to spend. Kids coming for horseback handicap therapy, weeds, lawn mowing, checking cattle twice a day and moving them every other day, and Ray keeps me hopping.

Did you have a chance to try the baked **Spinach Casserole** a couple of newsletters back? I've changed it a bit, added one cup of fresh broccoli stems and four packed cups of fresh spinach (instead of frozen). Cook in the microwave until done. Mix in 3 tablespoons butter, 4 oz. cream cheese, and 1/2 to 3/4 cup stuffing. Micro one minute or 'till butter and cheese is melted. Mix 1/2 to 3/4 cup stuffing and melted butter (amount you desire) together and put on top. Microwave 1 minute. This is easier and faster than baking. You can add more of cheese, butter and dressing to your taste (or decrease).



Note: Cut fresh spinach off, leaving at least 3" of stem. It will come back.

Now to keep cool, try this:

BANANA SPLIT DESSERT

- 3 large bananas
- 1/2 gallon vanilla ice cream
- 1 cup chopped nuts
- 1 cup choc. chips
- 1/2 cup butter
- 2 cups powdered sugar
- 1 1/2 cups evaporated milk
- 1 tsp. vanilla
- 1 large Cool Whip

Crumb crust:

- 3 cups graham cracker crumbs
- 6 Tbsp. sugar
- 2/3 cup butter, melted

Cover 11 x 15" pan with crumb crust (save 1 cup for top). Cover with layer of banana, sliced cross-ways. Slice 1/2" slices of ice cream over bananas and sprinkle chopped nuts; freeze. Cook choc. chips, butter, milk and powder sugar until thick. Add vanilla; cool. Pour over ice cream; freeze. Spread with cool whip and top with reserved crumbs. Keeps for weeks in freezer. (Note: choc. chip mixture is also a good hot fudge topping for ice cream, if you don't want to make the rest of the dessert. This can be cooked in the microwave).

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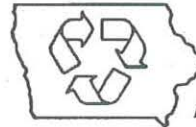
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