



profitable

Practices+Strategies

for a
NEW GENERATION

Case studies prepared by the **CENTER FOR RURAL AFFAIRS** for the
North Central Initiative for Small Farm Profitability, a USDA-funded project

***Profitable Practices and
Strategies for a
New Generation***

published by the
CENTER *for* RURAL AFFAIRS



VALUES. WORTH. ACTION.

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Introduction

Wyatt Frass

Assistant Program Leader, Rural Opportunities and Stewardship Program, Center for Rural Affairs

This booklet, *Profitable Practices and Strategies for a New Generation*, brings you stories of people making a difference in rural America. These people have endured record low prices and a rural economy mired just short of depression. They have seen their neighbors move away and their home town businesses boarded up.

But they have not become victims of the times.

The people we introduce you to here have the vision and courage to try something new, despite the risks. They have taken control of their fate and are working to make things better. “Better” not just for themselves, but for their communities, their neighbors, their children.

The first six stories profile strategies to increase profits in producing or selling crops and farm products. What is most amazing about these six stories is not the producers’ unusual ideas or unique skills. It is how they express their values and ethics through their farming. You’ll find that these profitable farmers and ranchers are far more concerned with being good stewards, neighbors and friends.

Next you’ll find eight stories of how beginning farmers found land and resources to start farming. They share their strategies for using programs and resources for a profitable start. In many cases, these beginners found more than the tangible assets of land and buildings. They also found mentors who care enough about them to help them get through the tough startup years. They show how important it is for beginners and landowners to share their dreams for the land that means so much to them.

The final section outlines strategies used for reducing equipment costs. The last study in that section highlights MachineryLink.com, an online company founded by a Kansas wheat farmer who used his experiences to help other farmers across the country share new equipment, or buy and sell used equipment.

The remaining three stories highlight groups that share their equipment—and more. These groups have put together marketing strategies that pool raw materials and resources to bring high-quality products to their customers. The trust and cooperation demonstrated here are time-honored rural traditions, traditions that expect each to contribute his strengths and good reputation for the benefit of all.

These stories are sometimes technical, as many of you farmers will want to know the details. They are sometimes rather vague, too, to protect privacy or fragile new markets.

Yet these people are overwhelmingly generous with their knowledge, advice, hospitality and encouragement. You’d be hard-pressed to buy food, share equipment, shake hands over an agreement or just be neighbors with better people.

In the spirit that these stories are offered, share them, along with your own insights, with a neighbor who could use some encouragement or a new idea.

February 8, 2002

Hartington, Nebraska

Alternative Practices & Marketing

Martin Kleinschmit, Research Associate, Center for Rural Affairs

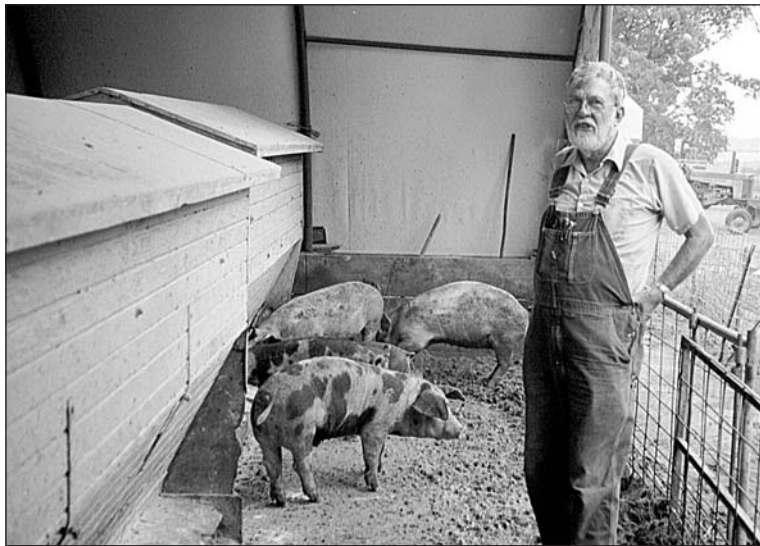
These case studies of profitable practices are presented to show how management adjustments can affect the bottom line. Profit is defined as price minus expenses. Adjustments that farmers and ranchers make to lower expenses or raise the selling price affect profits.

Cutting costs is the easiest way to raise profits with commodity production. Each dollar saved is a dollar that does not have to be paid back or taxed. The operators illustrated here cut costs by matching their operations to nature's cycle and by taking advantage of the resources they control in order to reduce inputs in money and labor. Cutting costs should not seriously reduce production, in order to maintain sufficient volume to generate enough income to meet your needs.

Increasing the selling price means operating out of the commodity system realm. It means raising different things or raising the same things differently. In the commodity production system, all products are considered the same and so sell for the same price. A specialty product can demand a higher price because it is unique. That difference can be either real or perceived. It is still different.

Cutting costs and selling specialty products does not come without extra investment. The new investment is in the form of knowledge and skills gained. Unlike conventional farming investments, however, these assets can be passed down to future generations and sideways to neighbors without capital outlay or depreciation schedules.





Dwight Ault moves from a conventional confinement hog operation to using hoop structures for finishing hogs. The change significantly reduces animal stress, improves working conditions and increases profit for this southeastern Minnesota farm.

Letting Pigs Be Pigs: Building a Better Hog Operation

This case study was prepared for the North Central Initiative for Small Farm Profitability by Martin Kleinschmit, Research Associate, Center for Rural Affairs. Written by Rebecca S. Kilde.

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State-of-the-Art Thirty Years Ago

Dwight Ault purchased his farm in 1970. The farm had an old 40 by 60-foot dairy barn on the premises that Dwight converted into a farrowing barn for hogs. To complete the hog finishing cycle, he built a 40 by 80-foot insulated confinement finishing barn, complete with slats and a good manure pit. "It was state-of-the-art at the time," says Dwight.

The finishing barn did what it was supposed to do, but after 30 years of use it needed repair. The concrete slats were breaking down, the building needed to be rewired and the maintenance was just getting to be a nightmare.

Swedish Pigs and Open Pens

Around the same time that the barn needed extensive repairs, Dwight decided that he wanted to reconsider the way he raised hogs. He had worked on a committee with animal welfare activist Marlene Halverson for 12 years, and those twelve years of discussion and conversation had planted some ideas about new ways to run his operation. He also noticed some behaviors that seemed to be the result of stress. Says Dwight, "It was really unnerving to go in the confinement barn and hear pigs fighting and see blood splattered all over the place from tail biting or ear biting."

Dwight and his wife were invited to visit Sweden to see how hogs are raised in an animal-friendly, deep-bedded system. This style of raising pigs considers the social needs of the animals, providing something for them to

chew on and allowing them to move around and interact with each other. At the time, Dwight thought the Swedish system a bit too technical for him, but he did change the way he farrowed pigs by replacing the crates with open pens.

Hoop Houses: Simple, Inexpensive and Flexible

Dwight began considering hoop structures for finishing hogs in 1996, after attending a workshop put on by Iowa State. Hoop structures are buildings that look a lot like greenhouses. Tubular arches, or hoops, are placed on top of four to six foot wooden side walls. The hoops are covered with an opaque, UV-resistant, polyvinyl tarp. The end walls have tarps that can be raised or lowered to accommodate changes in weather conditions.

Most hoop structures have a fourth of the floor covered with concrete for the feeders and waterers. The rest is earthen

put up. Dwight put up his first 30 by 84-foot hoop structure in 1997, which accommodates between 180 and 230 pigs. The structure was ready for hogs only two weeks after he decided to build it. He thinks farmers can do the building themselves and save even more on construction, because the skills required are not as sophisticated as those needed to build confinement barns.

Repeating a Good Thing

He liked the hoop house so well he put up another one three years later, and is now in the process of modifying his old confinement finishing barn to operate like a hoop structure so he can finish all the pigs his 300 sows produce.

"Hoop structures cost less per pig to purchase and build, but do require a little more work," according to Dwight. One area that needs a different approach is environmental management prac-

"THE REAL VALUE OF HOOP STRUCTURES IS THE MENTAL & PHYSICAL ENVIRONMENT THE ANIMALS HAVE TO LIVE IN, AND THE FARMER HAS TO WORK IN."

floor covered with straw or crop residue, and bedding is added as needed.

The Agriculture Engineers Digest (AED 41), published in 1997 by the Midwest Plan Service, Iowa State University, lists hoop construction cost per pig at \$125 less than a confinement system.

Hoop structures are also fast to

tices. The Midwest Plan Service says that farmers who convert to hoop structures need to change from warm to cold barn air management, where body heat rather than heaters keep the animals warm. The key to a successful cold barn is a ventilation system that allows enough air to escape to remove excess moisture, but not enough to chill the hogs.

Are Hoop Houses for You? Chart #1: Hoop Houses v. Conventional

Use this comparison to decide if hoop structures will work for your hog operation.

	Confinement	Hoop
Building costs (investments) per unit	\$64.29	\$19.64
Fixed costs per unit	10.18	5.36
Feed	43.40	46.20
Labor	1.58	3.00
Fixed and operating costs	\$55.16	\$54.56

This table, which was excerpted from the Midwest Plan Service document *Agricultural Engineers Digest*, indicates that the total cost of producing hogs is about the same in both operations. The big difference between the two is in building costs. The investment for a hoop structure is figured at 10 years, and confinement units at 15 years. Your figures may vary. Building investment is the costs of building and interior systems (feed, water, ventilation, manure, etc.) needed per unit of production.

If you like what you see here, the complete comparison is available for \$4 plus \$1 postage from: Midwest Plan Service's *Agriculture Engineers Digest* (AED 41), by Michael C. Brumm, Jay D. Harmon, Mark C. Honeyman, James B. Kliebenstein; copyright 1997 by Iowa State University, Ames, Iowa 50011-3080, (515-294-4337).

Good ventilation is also necessary in warm weather in order to allow heat to escape while still providing protection from the sun.

The need for bedding is another major consideration when using hoop structures. Most operators change the bedding when a new group of hogs are added, and stockpile it until it can be spread on the fields. Dwight needed to replace his honey wagon with a manure spreader able to handle solid waste, but he already had both a front-end loader and tractor to load and haul the material.

An advantage of the need for bedding, according to Dwight, is that it, "can help diversify your farming operation. The need for bedding may encourage growing more forage or small grain crops." Products that would normally go to waste can be used for bedding. Corn and bean stover are commonly used, and poor quality alfalfa is also a good

source for bedding.

Dwight thinks that the system allows him more flexibility in his management practices, and notes that, "You can mix pigs of different sizes with more success than in a confinement unit."

Letting Pigs Be Pigs

"There are a lot of other unidentified advantages with hoop structures that can't always be measured in dollars," says Dwight, "The real value of hoop structures for hogs is the mental and physical environment the animals have to live in, and the farmer has to work in."

Dwight thinks there is a lot less stress on his hogs now that they are in a hoop structure. He notes that, "The pigs don't intimidate each other as much because they have something to chew on and keep busy and occupied." Dwight doesn't even clip tails—something he would never even consider if the animals were in confinement. Dwight likes that

hoop structures "let pigs act like pigs."

The Up Side and the Down Side

The *Pork Industry Handbook* (PIH 138) lists these advantages and disadvantages. Some will be more important than others, depending on individual needs and resources.

Hoop structures are an advantage if you:

- Want facilities with versatility to match a rapidly changing swine industry.
- Need a short-term structure that can be removed after use or that can be adapted for other uses.
- Want to keep fixed costs down.
- Have limited capital.
- Are not interested in accepting the additional financial risk associated with a large capital investment.

- Prefer to handle solid manure and have the capability to do so.
- Want a working environment with lower levels of manure gases.
- Have the equipment and land resources to harvest crop residue for bedding.
- Prefer a system of production that is less automated and requires more specialized husbandry skills.
- Believes pigs should be reared in an environment with bedding.
- Need a structure built quickly.

These are some disadvantages:

- More difficult to observe

individual animals if they are in a large group.

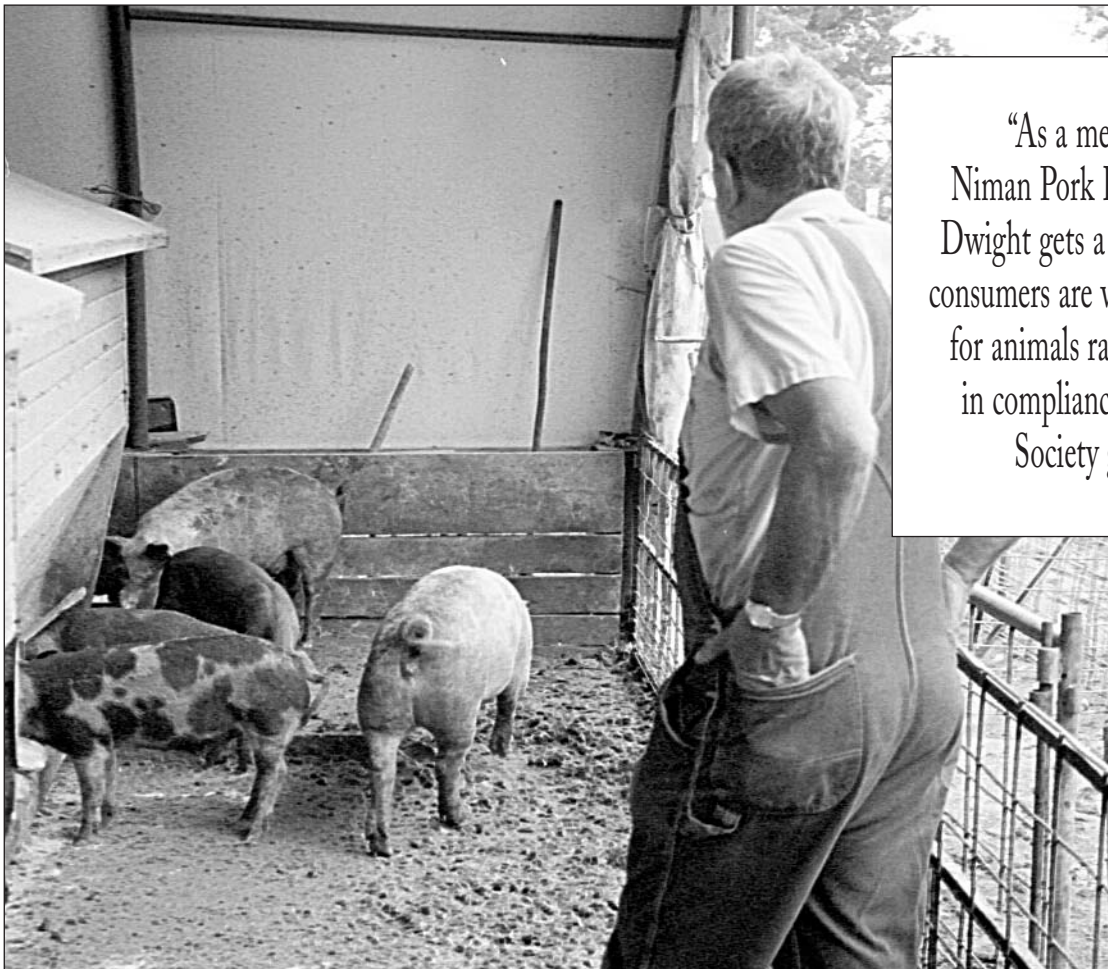
- Hoop pigs have less feed efficiency.
- Less favorable labor environment during inclement weather.
- Hoop pigs have slightly less lean than confinement pigs.
- More labor is needed with hoop structures.
- Hoops need large amounts of bedding.
- Since hoops are open, birds may carry diseases in.

Enjoying Pigs and Profits

By raising hogs in open pens and using hoop structures, Dwight's more humane produc-

tion practices bring in an extra four to five dollars premium per cwt. for his hogs—which more than offsets the extra cost of feed and labor. As a member of the Niman Pork Ranch Company, he gets a premium because consumers are willing to pay more for animals raised and harvested in compliance with Humane Society guidelines.

Dwight sums it up this way, “If you love technology and have to have everything automatic, you won’t like hoop structures. If you enjoy hogs and like to see them enjoy life, you’ll like hoop structures for hogs.”



“As a member of the Niman Pork Ranch Company, Dwight gets a premium because consumers are willing to pay more for animals raised & harvested in compliance with Humane Society guidelines.”



Tim and Krisanne Cada convert to organic production on the family farm, increasing profits while maintaining their farm's manageable size and their quality of life.

Less Land, More Profits: Organic Crop Production Makes a Stand

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How They Started

1983 saw a change of operators on the Cada farm in northern Nebraska's Colfax county when Tim and Krisanne Cada took over the farm from Tim's grandfather. For the next nine years Tim farmed those 400 acres a lot like his neighbors, rotating corn, soybeans, alfalfa, and pasture.

Life was fairly easy for the young couple. They'd plant the crops and spray for weeds in the spring, play softball in the summer, and harvest the crop in the fall. The farm supported the young couple well enough, but Tim bought a grain-vac to earn extra cash. That piece of machinery was responsible for introducing Tim to a whole new way to farm.

Soybeans, a Grain-vac and a New Pick-up Truck

In early 1994, Tim was hired to move a bin of organic soybeans. He wasn't too impressed by what he saw until he found out that those soybeans were selling for \$9.50 a bushel. "The quality didn't impress me, but the price did!" said Tim.

He talked to a couple of organic farmers to learn more, and decided to try organic soybeans on 45 acres of alfalfa land. Those 45 acres had been chemical-free for at least three years, and qualified for organic certification immediately.

Tim was pretty high on the learning curve that first year. He expected low weed pressure because the field had been in alfalfa. He drilled the beans on 27 acres of the field and planted the rest in 36-inch rows. Weeds

took over the drilled section, reducing the yield and eye appeal of the field.

To his surprise, with less than a 30 bushel per acre yield, the 1,500 total bushels still generated \$24,000. Tim said "WOW!" and went out and bought a new pick-up truck.

rent conventions. Tim's strategy, organic farming, combines traditional respect for natural systems with current technologies to manage and support those systems.

Unlike the conventional farmer who attempts to feed the crop, organic farmers improve the quality of the soil to accept

"I ALWAYS STRIVE TO PRODUCE A QUALITY PRODUCT, BUT BUYERS WEREN'T WILLING TO PAY FOR IT. NOW I GET PAID FOR THE QUALITY."

A New Way to Farm, a New Way to Think

Within five years the whole farm was certified organic, and the crop rotation had been expanded to include small grains. Making that switch required a change in Tim's attitude as well as his farming practices.

The conventional model that most farmers follow relies on purchased inputs to support high production levels of a few commodity crops. The emphasis on a few agricultural products has created oversupplies and lower prices for those crops. With declining profit margins, many farmers need to get bigger, find off-farm employment to supplement farm income, or get out. Farmers and ranchers who have expanded acres to preserve their income level found that increased acres require more time and labor unless they buy inputs—fertilizers, pesticides and herbicides—to minimize their time in the fields.

Another way to stay on the farm is to think outside the cur-

and hold more water and nutrients, reducing the need for irrigation and fertilization. The focus is on conservation and enhancement of the soil and the life systems it supports. You could say the organic farmer's real crop is the soil.

Tim uses tillage to replace herbicides and manure instead of commercial fertilizer—time and equipment not required by conventional farmers. Because organic farmers invest more in time and labor than purchased inputs, organic farmers have fewer or lower out-of-pocket expenses to recover. The crop diversity that they incorporate to manage pests minimizes the risk of a crop failure since there are more than one or two crops.

Less Land + Intensive Management = Profits for Farmers and Benefits to Rural Communities

Higher prices paid per unit for organic grains and livestock means organic farmers can con-

tinue to make a living on fewer acres than the conventional farmer, keeping more farmers on the land and more families in rural communities. Those families tend to spend money right in their communities, contributing to a vital local economy.

The Cadas continue to plant 80-100 acres each of corn and soybeans. "That's enough to live on if the crops do well," says Tim. "If I make money on the remaining acres, that's just extra money in the bank and allows me to experiment with other crops and practices, focusing on improving the quality of the soil." Tim also diversifies the types of corn and beans varieties he plants, often two to three types of soybeans and two or more kinds of corn.

Organic farming does require more equipment and labor than conventional farming, which replaces labor with herbicides, but controlling weeds is expensive in either farming system. It's just a matter of where you choose to put your investments. Investments in labor or equipment stay in the local economy, rather than profiting a distant corporation.

Since Tim puts in about 500 hours a year in the tractor seat, it made economic sense for him to invest in a new tractor this year. He began his farming career with four-row equipment but is now using eight-row machines to cover the fields faster. Tim notes, "If all farmers in the country were 'organic,' the chemical dealers may suffer, but the equipment

dealers would surely prosper."

Says Tim, "A piece of tillage equipment may be expensive to buy, but that equipment will be around year after year for me to use. The farm chemicals the neighbors buy are usually gone after one season."

A Growing Market

Marketing has changed for the Cadas—for the better. Tim remembers trying to get a local

"WE SHOULD BE WORKING TOGETHER TO IMPROVE OUR RETURNS AND CUT EXPENSES."

feedlot to buy his conventional corn. "They found every reason in the book to dock me on price. I felt as if I was begging them to take it," he says. "Since switching to organic, the buyers call me and compete for my product." Growing organic makes it possible for Tim to sell for a premium, but the quality of his product makes customers more likely to come back year after year. "I always strive to produce a quality product, but buyers weren't willing to pay for it. Now I get paid for the quality," Tim states.

Organic food production is the fastest growing agricultural food sector in the world. It has grown by about 20 percent annually for the last nine years, while conventionally-grown grains have continued to lose value.

What Will the Neighbors Say?

As an organic farmer surrounded by conventional farmers, Tim

faces some unique challenges. One is the risk of contamination by spray and pollen from adjacent land. Tim explains the problem to his neighbors and asks them to "Keep your spray and pollen on your side of the fence. As long as you don't jeopardize what I'm doing on my farm, I don't care what you do on yours."

It is a challenge to manage with the least amount of field operations and still get the optimum weed control. "I now tolerate a few weeds to earn the organic premium," says Tim, although he thinks some

neighbors may have resented the organic caution signs (posted to ward off accidental spraying) because the Cada crops looked as good as the adjacent chemical-treated fields.

Tim recalls the time a hunter stopped to ask permission to hunt the neighboring CRP field. Tim couldn't grant permission because the land didn't belong to him, but he did tell the man that the field wasn't enrolled in CRP. It was a soybean field where the herbicide hadn't worked!

At first, the neighbors thought Tim was crazy for going organic. Not only did he take over his grandfather's farm, which limited their ability to expand, but now he was growing corn and beans without chemicals! Some said it was just plain stupid.

Now most neighbors accept and respect the way Tim farms and say, "He certainly works for the premium he gets."

Chart #2:

Organic v. Conventional Net Return/Acre

SOYBEANS

	CADA'S ORGANIC FARM	NEIGHBOR'S CONVENTIONAL FARM
Seed	\$20	\$22
Planting	6	6
Spray twice (includes product)		30
Disc	6	
Field cultivate		6
Rotary hoe twice x 4 each	8	
Cultivate twice x 6 each	12	6
Harvest	20	20
Hand weeding	13	
Total direct expenses	\$91	\$84
Yield (bu./acre)	30	38
Price/bu.	\$16	\$4.50
Gross return/acre	\$480	\$171
Total direct expenses	<\$91>	<\$84>
Net return/acre	\$389	\$87

CORN

Disc	6	
Field cultivate		6
Manure hauling	20	
Seed	25	25
Planting	6	6
Fertilizer		30
Crop chemicals		27
Rotary Hoeing (\$4 each)	8	
Cultivate (\$6/acre each)	12	6
Hand weeding	5	
Combining (harvest)	16	16
Total direct expenses	\$104	\$110
Yield (bu./acre)	136	154
Price/bu.	\$3.45	\$1.80
Gross receipts/acre	\$469	\$277
Total direct expenses	<\$104>	<\$110>
Net return/acre	\$365	\$167

In this comparison, the organic farm generated an average of \$377/acre compared to the conventional model at \$127/acre. A difference in profit of \$250/acre supports Tim's statement that the return from 200 acres (200 X \$377 = \$75,400) is enough for a family to live on.

That's the Story. Here's the Numbers.

The cropping patterns and costs associated with them are typical for Tim's operation. Some years the number of Tim's field practices change, depending on the weather and the previous crop. The prices are what Tim received in 2000, and are also typical, even though the farm suffered last year from drought conditions.

Organic yields are usually within 90 percent of conventional crops. Organic farmers often grow low yielding specialty crops to maximize prices.

For purposes of this study, we are using a semi-no-till farming system as a comparison. Chemicals replace tillage operations and the crop is sold at the local elevator. These figures reflect the production costs in Tim's region, according to numbers in the *2000 Nebraska Custom Rates* published by University of Nebraska-Lincoln (EC00-823-A), and correlate closely with the figures for conventional farming in the *Nebraska Farm/Ranch Business Management 2000 Annual Report*.

Government payments, land payments/rent, interest, buildings, hired labor or insurance expenses were not included in this comparison. When assigning costs we used the local custom rate, even though Tim and the conventional farmer contribute the labor and provide most of the machinery. Both include no charges for personal labor or hired labor because both are single-family operations.

Prices given here are for cleaned grain. The clean-out percent varies from year to year, but even poorer quality grain normally sells for more than double the conventional grain price. The organic price is normally contracted before harvest, and delivery is usually three to six months after harvest. No expenses were allotted to the conventional farm for hauling the grain out. Organic growers normally price their grain FOB the farm, so incur no transportation expenses.

More Than Profit

Like any comparison, these figures are a guide, not gospel. That said, the profit figures Tim provides make organic farming look very attractive. Tim embraces organic agriculture because of the philosophy as well as the profits. He sees organic agriculture as an alternative to the "cannibalism" in conventional agriculture, where farmers feed on each other to survive. "Instead," he says, "we should be working together to improve our returns and cut expenses."



A group of grass-based dairy farmers in southeastern Minnesota decide to set their price by marketing and distributing premium quality, specialty dairy products themselves.

Buttering Up Your Customers: Direct-Market Dairy Products Keep Profits on the Farm

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Taking Back the Profit

Dan and Muriel French are grass-based dairy farmers just south of Minneapolis and St. Paul, Minnesota. They began management-intensive grazing about 15 years ago to cut costs and improve profits. But, like most dairy farmers, they were prisoners of market price. They could cut their costs, but were stuck with the price.

And they had no control over that price. The pitfall of commodity prices is that as costs to the producer go down, the price of the commodity goes down, too. The average dairy farmer, it seems, can never get ahead. Even very efficient farmers watch their potential profits drive off the farm with the milk truck.

After years of talking about it, a group of six grass-based dairy farmers, including Dan, decided they would try to get around that market bias.

Instead of taking what was left of the profits after everyone else took their share out, they would take control of processing, distribution and marketing in order to keep more of that profit on the farm.

Unlike most current milk cooperatives, this group focuses on getting profits to the farmers rather than building equity for the organization. Although they're now a formal co-op with rules and bylaws, the six families that comprise PastureLand Farms still make decisions by consensus at their bi-weekly meetings. They're committed to that decision-making process, and feel that if they can't reach consensus about an issue, then it probably needs more discussion.

First Things First

The first step was to decide what the group wanted to produce and market. There is currently a successful niche market for organic milk, but that didn't seem feasible in this situation because fluid milk has a limited shelf life and processors have a 500-gallon minimum batch.

The group chose to start with cheese and butter. These easily movable and storable products have a long shelf life, which makes it easier to match supply to demand. PastureLand plans to add ice cream in the future, and will consider adding fluid milk as the co-op gets bigger.

Next, they needed to find processors able to make quality specialty products. Small dairy processors have been disappearing all over the country, but Minnesota has more than most states. They used the state business directory to find processors, calling around until they found good prospects—often through

PastureLand decided to focus on the high-end specialty market. The higher premiums are needed to pay the farm-gate price and cover operating and processing expenses.

But if they were going to ask for more money for their product, there had to be a real difference that would attract consumers to PastureLand products. The market for organics is growing, but they wanted to go beyond organic to pioneer the next step in quality food.

Grass is Better

The farmers found the answer right at home. Milk from ruminants that graze fresh grass is rich in conjugated linoleic acid (CLA), as much as five times as much as is found in the milk of grainfed animals. Research suggests CLA can reduce cancerous tumors (Ip, C, J.A. Scimeca, et al. (1994) "Conjugated linoleic acid. A powerful anti-carcinogen from animal fat sources," p. 1053.

**"THE BIGGEST PROBLEM MOST START-UP BUSINESSES
HAVE IS NOT FIGURING A LARGE ENOUGH PROFIT."**

leads from processors that were too small or busy for their needs.

Once they had a product and a processor, they were ready to start marketing. But why would consumers pick PastureLand's cheese and butter?

Standing Out in a Crowd

Recognizing they couldn't compete with generic and mainstream products on price,

Cancer 74 (3 suppl):1050-4.)

Other health benefits that may be associated with CLA consumption are decreased obesity and heart-attack rates. (For more information on CLA and the benefits of grass-based agriculture, go to www.eatwild.com, or read *Why Grassfed Is Best!* by Jo Robinson.)

The health benefits of CLA make PastureLand products

unique in a crowded specialty market. To enhance that difference, the group sought out specialty cheese and butter makers to give their product a unique taste. In addition to butter, they currently offer gouda, herb gouda, tomato-basil gouda, cheddar, and fresh cheddar curds, and anticipate adding more cheese varieties in coming months.

PastureLand's "Points of Difference" are emphasized on their brochure, packaging and promotional material:

- * The milk comes from family farms in southeastern Minnesota.
- * The farms are grass-based, which, in addition to providing a humane environment for their animals, prevents erosion and provides habitat for wildlife.
- * Their products are high in CLA and Omega-3 acids.
- * No growth or production-enhancing hormones, antibiotics, or medications are used in their herds.
- * Supplementary feed is free of GMO grain.

Additional research is underway investigating other human health benefits of dairy and meat products from grass-fed animals, but customers already tell Dan that there's something unique about PastureLand cheese. Customers with milk and cheese allergies are able to digest PastureLand cheese with no problems. Dan says, "There must be more things different about our product than we know now."

Now Just Find Some Customers

To spread the word, group members promote their product with brochures, in food co-op letters, and with press releases. They go to farmers markets, buying clubs, specialty stores, and health and nutrition meetings. Their products are listed on websites for natural food campaigners Sally Fallon's Weston A Price Foundation, westonaprice.org, and Jo Robinson's eatwild.com. Word of mouth is also a strong marketing tool.

Member farmers make deliveries to stores and buying clubs. Other direct marketers offer PastureLand cheeses and butter in order to expand their own product offerings—called piggyback sales.

Making the Numbers Work

Dan says, "The biggest problem most start-up businesses have is not figuring a large enough profit." A new business need to compensate for higher initial costs and a lack of the economy of scale enjoyed by established businesses.

Grants from the Minnesota Department of Agriculture and other organizations helped with start-up costs and organizational development. To fully capitalize the start-up phase in 1999, PastureLand's six dairy farmers received \$11 per hundredweight, which was the market price at the time. Milk prices have increased since 1999, but the cheese price has remained the same.

Since their milk was priced at \$15 per hundredweight, the \$4 difference was the investment

equity contributed by the farmers. Transportation and processing costs of about \$2 per hundredweight were added to the milk price, making the take-home price \$17 per hundredweight.

The farmers' contribution is smaller this year, and once the business gets going, the farmers' initial investment will be returned. Last year the group moved about three percent of its milk through the co-op, and the goal this year is 15 percent.

Every Silver Lining Has a Dark Cloud

Since the industry is moving to larger scale all the time, the cost to process small volumes is high. To get their milk to the processor, the group rents a truck that is capable of delivering 45,000 pounds of milk although they currently only deliver only 4,800 pounds, enough for one batch of cheese. The transportation costs are the same for a full or partial truckload of milk. The yield is about 500 pounds a week, which is processed, cut, wrapped and transported to the warehouse at the French farm.

Volume is also a problem for making butter. It takes about 23 pounds of milk to produce a pound of butter. The milk is taken to the cheese plant to be separated, and then the cream is transported to the butter plant. PastureLand currently can provide one truckload a week, the minimum amount of cream needed to make the churn work. That's only half the capacity of the churn, though, and their costs are higher per pound than if they

could provide enough cream to process a full batch.

Many processors don't even want to handle small volumes. After finding a processor that is willing to work with you, says Dan, a plant can merge or be bought out. You either have to find another processor, or re-educate the key people and management to keep production steady, and both options take a lot of time. It's a challenge to keep up with the dynamics of the industry.

Maintaining brand identity is critical in a specialty market, but packaging can be expensive. Small lots of packaging materials cost more to print than larger runs, and different packaging machines use different paper or film. PastureLand originally used plain paper to wrap its butter, but the farmers realized that it didn't make sense to ask premium prices for butter wrapped in generic paper. They spent nine

months developing their own packaging paper with their logo and marketing information on it.

Costs per pound will go down as volume increases. Dan figures the ideal size for the co-op is 25 farms, which will minimize many of the costs associated with low volume.

So You Wanna' Sell Cheese? (or butter, or beef, or...)

Dan says the first step in direct marketing any product is to evaluate your resources. Make sure you have the support system you need to get your product to market, and find a market that can bear the expenses you need covered. PastureLand entered the premium, high-end deli cheese market for just those reasons. Dan notes, "The milk price and generic cheese price fluctuate widely, but the deli cheese price is relatively constant."

Anyone starting this type of business needs to understand

that it is a long process that requires time, work, planning, and money. In the early stages it's a huge added workload. Besides managing your existing business (in Dan's case, his dairy farm), you also have to take on the marketing and delivery.

The success of this kind of enterprise is dependent on the people involved. Dan says, "It takes people with passion and vision to get something like this started, but without someone who can organize to minimize costs and fill orders, it is not going to succeed."

Dan and the other farmers used grant programs to get started, but he thinks others can start up with different funding sources. Thanks to this group, there will be a model to follow. Is this idea profitable? "It's too early to tell, but it feels real good!" says Dan.



"It takes people with passion and vision to get something like this started, but without someone who can organize to minimize costs & fill orders, it is not going to succeed."



An alternative product, alternative marketing and clear goals enable Larry, Rose and Monty Mason to come back to the home farm to take care of their parents, restore the prairie and build a profitable and growing agricultural enterprise.

Tarbox Hollow: A Home on the Range

This case study was prepared for the North Central Initiative for Small Farm Profitability by Martin Kleinschmit, Research Associate, Center for Rural Affairs. Written by Rebecca S. Kilde.

Additional information is available through the Center for Applied Rural Innovation and Food Processing Center, University of Nebraska, 58 H. C. Filley Hall, Lincoln, NE 68583-0947 or online at www.farmprofitability.org.

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Back to the Home Place

Larry and Monty Mason's parents needed more help as they grew older, and so Larry, his wife Rose and Monty all returned to the quarter section farm near Dixon, Nebraska, where they grew up.

The farm had 320 acres enrolled in CRP to provide income for the elder Masons, but that income wouldn't support the whole family. The CRP contract was about to expire, so the Masons began to explore their options.

Pioneers on a New Frontier

The obvious choice was to put the land back into crops.

But considering how unprofitable cropping had been, what it did to the land, the huge cost of buying equipment for crop production, and the fact that they didn't really like tractor driving all that much anyway, the Masons kept looking.

They wanted an enterprise that combined the resources available on the farm and their own passions. The Masons, who are very interested in reconstructing native prairie on their land, recognized that the farm's biggest resource is grass.

They discovered that buffalo could use that abundant grass to generate enough money to support the lifestyle they wanted. Buffalo are easy to care for and do a good job of utilizing even poor quality forage.

In addition, the consumer market for buffalo meat was emerging and showing signs of improving at a good rate.

But they still needed capital to get started.

Financing the Start:

A Buffalo in Sheep's Clothing

Raising buffalo was uncommon in Nebraska and few lenders knew much about it, so the Masons began their buffalo

rather cheaply. They sold some of their mature animals at premium prices before the end of the lucrative breeders market.

With their buffalo gaining in market value they didn't have

“IDENTIFYING YOUR RESOURCES IS THE MOST IMPORTANT THING A PERSON STARTING A NEW BUSINESS SHOULD DO. MAKING THE BEST USE OF THE RESOURCES YOU HAVE WILL MINIMIZE YOUR INVESTMENT AND CAPITALIZE ON YOUR ADVANTAGE.”

enterprise by feeding sheep—something that would cash flow and lenders understood. By repaying their initial loan on time or early, they built equity while cultivating a good relationship with their banker. After a couple of years of feeding sheep they approached the banker with figures and cash flow projections on raising buffalo. The banker went along with the plan.

The first year, 1993, they purchased 60 yearling female buffalo calves. Buffalo heifers don't breed until they're two years old, so after one year of feeding their investment had doubled its worth. They sold a few animals to make the bank payments but bred most of them, which further increased their value.

Fortune would have it that 1993 saw the beginning of a breeding market surge so they benefited from good timing. Since the Masons entered this market relatively early they were able to build animal inventory

much trouble financing the purchase of more animals and more land. The Masons purchased an additional 200 acres of CRP land in 1996 and rented 200 more acres in 1999.

There's More Than One Way to Sell a Buffalo

The Masons diversified their wholesale operation with services such as tours, buffalo hunts, a “cowboy shoot” timed pistol accuracy competition, and black powder shooting activities.

The tours featured an educational presentation followed by a wagon ride to the pasture. The buffalo were conditioned to recognize people as the source of range cake, a protein supplement for cattle, and a few could even be hand-fed. Visitors were encouraged to purchase souvenirs and packages of frozen buffalo meat.

The pistol and black powder shooting events were intended as outreach to the community and

didn't generate profit, but the tours supplied a big portion of their income. In 2000, the sixth year of the enterprise, over 4,000 visitors brought in \$20,000. But this year they ran into a snag.

Transforming a Roadblock...

New government regulations come into effect this year that apply to farms that give public tours, and have made it very difficult to continue tours at Tarbox Hollow. "The typical, one-size-fits-all mentality of the regulations do not fit the needs of buffalo," says Larry.

For example, obligatory health inspections necessitate running the animals through a working chute—a stressful process for any animal, but especially the free-roaming buffalo. They fight the enclosure, often to the point of self-injury. The Masons feel the process is one of the most dangerous for animals and humans alike, and should be used only when absolutely necessary.

The regulations, compounded with the threat of Foot and Mouth Disease, shut down the tours.

But how would the family compensate for the lost tour income?

...into a Short Detour on the Way to the Goal

While the tours did provide a major portion of the farm's income, they were also very time-consuming. The Masons always intended to cash flow their operation with meat sales, and it seemed like a good time to start.

Larry, Rose and Monty's active family partnership uses a consensus process to identify strategies

that fit their long-term goal. They worked out a plan to include education and more aggressive marketing to insure the success of the business.

The Masons' existing customer base is primarily people looking for a unique food. They will begin to promote lean and tasty buffalo meat as a regular item on the average consumer's grocery list as well, taking their product from specialty to mainstream markets.

They also plan to expand on another familiar specialty market: health-conscious consumers. They currently sell through a Natural Meat Co-op, and regularly supply two alternative medical institutions with fresh, unfrozen buffalo meat. Buffalo meat has a high level of conjugated linoleic acid (CLA), which some studies suggest fights cancer and reduces cholesterol. CLA is found only in animals that eat fresh grass.

The environmental benefit of raising buffalo on prairie is another strong selling point.

They'll get the word out locally by speaking to clubs and organizations, and actively seek out other marketing opportunities. To reach a broader audience, Tarbox Hollow has developed a web page (tarboxbuffalo.com) where browsers can see pictures of the farm, learn about the health benefits of eating buffalo meat, order meat packages, register for a buffalo hunt, and get directions to the farm. The site also gives links to related web resources.

Consumer education has benefits beyond simply increasing

current sales. False information is the specialty meat producer's biggest enemy, and education is the best tool to combat it. Most of the Mason's sales are directly to customers, and they believe that developing an educated consumer base will improve long-term customer loyalty as well as sales.

The "cowboy shoot" (a timed pistol accuracy competition) and black powder shooting activities will continue at Tarbox Hollow. The Masons enjoy providing a popular service—a location for shooting enthusiasts to enjoy their sport—at no charge. The increased traffic may have the added side effect of bringing in new sales.

The Bottom Line

What started with 60 yearlings on 160 acres is now 300 buffalo running on 700 acres, 200 of which are rented. Annual buffalo sales now include 50-60 head of breeding stock and 52 for meat. The buffalo hunts bring in another \$5,000 annually. There are no plans to increase the size of the herd, but the Masons do want to increase the volume of the buffalo meat sales.

Because expenses are minimal, the profit margin is 50 percent. They sell an animal for double what they have invested in it. Margins are high in part because they market directly, bypassing a middle-man and keeping more profit on the farm. They also sell most of the animal, including the skull, hide, and sometimes even the internal organs.

If the Masons sell the hide and other products as well as the

meat, they need to sell only 50 mature animals per year. A 1,000 pound animal will gross about \$2,500-3,000 with a net of about \$2,400. If the animals are calves (under one year) for the breeding or feeder market, they need to sell 125-150 annually. Typically buffalo breeding stock sells for about \$800 a head, similar to the price for beef calves.

Their primary expense is purchased winter feed for the buffalo, although Tarbox Hollow buffalo rack up about a 25 percent lower feed bill than cattle. Since feed is a major portion of either a beef or buffalo operation's fixed costs, this translates into a 25 to 30 percent savings over beef production.

The Masons don't raise winter-feed, because haying equipment is expensive to buy and it takes too much time and land. They figure they can buy the feed eight out of ten years for less than it would cost them to put it up themselves.

Adding to the profitability of the breed, a buffalo cow's productive life is much longer

than cattle. It is not unusual for a buffalo cow to produce calves for 20 years. The low culling rate allows buffalo producers to sell more female calves than the beef producer, who typically culls at eight to ten percent or more annually.

Other major expenses are land taxes and rent. The veterinary bill is usually insignificant.

Challenges

There is no local facility to process the animals. Larry says, "Buffalo harvest should be done under field conditions to minimize stress and lower injury. Most buffalo meat now is processed in North Dakota using animals that are fed in cattle-type feedlots."

Feedlot buffalo producers are the biggest competitors for the kind of grass-fed operation the Masons run. They have found allies in other grass-fed buffalo producers, and through the Nebraska State Buffalo Association the Masons learn new techniques and help direct public policy that could affect their operation.

There seems to be a relationship between the cattle and buffalo markets. Larry Mason thinks that when cattle producers get sick of low prices for cattle,

some switch to buffalo, driving up the price. As the cattle market recovers, cattlemen switch back to beef.

These Tools Travel Well

Although the Masons started this business only six years ago, they feel they have achieved their goals of caring for their parents and supporting themselves in Dixon County, Nebraska, and restoring a native prairie plant community on the farm. As Larry says, "We're able to support ourselves in the lifestyle we want."

Larry, Rose and Monty have capitalized on the unique resources of their particular location, but they have also recognized their unique human resources and talents. Rose does the bookkeeping, greets visitors, and gives presentations about the diversity of products available from the buffalo. Monty, who likes to write, takes care of much of the communications, press releases, and brochure editing. Larry is active in the Nebraska State Buffalo Association, and does public policy work. All three promote the farm through public speaking.

Even if you're not interested in buffalo production, the principles the Masons use to achieve their goal are sound for any new business. The first step is to identify your goal, and decide how to achieve it. Then do your homework. Learn as much as you can about your product before you start.

Larry says, "Identifying your resources is the most important thing a person starting a new business should do." He adds, "Making the best use of the resources you have will minimize your investment and capitalize on your advantage."



"We're able to support ourselves in the lifestyle we want."



Making a change from a conventional dairy to a management intensive grass-based one lets this Nebraska farmer run a profitable operation milking 90 cows. This manageably-sized farm provides a viable alternative to the large-scale confinement model.

Can Smaller Be Better?

A Comparison of Grass-Based and Conventional Dairy Farming

This case study was prepared for the North Central Initiative for Small Farm Profitability by Martin Kleinschmit, Sustainable Agriculture Specialist, Center for Rural Affairs. Written by Rebecca S. Kilde.

Additional information is available through the Center for Applied Rural Innovation and Food Processing Center, University of Nebraska, 58 H.C. Filley Hall, Lincoln NE 68583-0947 or online at www.farmprofitability.org.

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The Mike Wichman Dairy Farm

After 12 years of milking Mike Wichman was in a situation familiar to many dairy farmers. His old stanchion barn was run down and in need of repair. The continuously grazed native-grass pastures did fine when the grass was growing, but the cost of winter feed and grain diminished profits enough to prevent him from rebuilding. In 1985 he decided to participate in the federal government's Dairy Buyout Program, and quit the dairy business.

During the next seven years Mike read about managed grazing systems and followed the Holistic Management course guidelines for identifying resources, choosing landscapes and improving quality of life. (See the case "Summer Calving" for more details about Holistic Management.) What he read inspired him to try a seasonal, grass-based dairy system.

What Mike Left Behind

The conventional approach to dairying in the U.S. is a confinement system where the cows don't move much—they just eat and produce milk. Feed is processed and brought to the cattle. Facilities are built to protect the animals (and the farmers) from the elements, to harvest the milk, to process and deliver feed, and to catch and manage manure and other animal waste. Production per cow is maximized to offset the high investment.

University of Nebraska-Lincoln (UNL) animal science dairy specialists estimate this modern dairy model requires an investment of

\$3,000 per cow. Because of the small profit margins per cow, a herd size of 1,500 animals is considered the minimum today. That's up from 1,000 five years ago.

That low profit margin per cow also mandates high production per cow, and many animals are culled early in their milking career because of low or substandard milk production. Stress and disease also take their toll, making it necessary for many confinement systems to replace over a third of their animals each year.

“GOOD FOR THE ENVIRONMENT AS WELL AS THE COWS, A WELL-MANAGED SYSTEM OF CONTINUOUS GRASS PRODUCTION REDUCES EROSION, ENCOURAGES WATER INFILTRATION, BUILDS SOIL ORGANIC MATTER LEVELS, AND RECYCLES MANURE.”

The milk processing industry favors large confinement systems because they produce larger volumes of milk on a consistent basis.

Let the Cows Do Some of the Work

In a grass-based dairy the animals typically walk to the pasture, eat grass and walk back to the barn to be milked. The pasture is managed intensively by quickly rotating cows through small paddocks. This allows the grass to recover before the cows graze it again, increasing the quality and quantity of forage produced. The high quality forage replaces purchased feeds, and the cows become their own feed delivery system.

This model focuses on maximizing natural resources and profits

while making a minimum financial investment. Optimum, rather than maximum, production goals reduce the number of cows that need to be culled for low production or health reasons. Each cow's productive life is longer, which minimizes the number of replacements needed to maintain the herd. Excess heifers can be sold for two to three times as much as a mature culled cow.

Good for the environment as well as the cows, a well-managed system of continuous grass production reduces erosion, encourages water

infiltration, builds soil organic matter levels, and recycles manure.

Ideally, production should match natural cycles. Breeding, calving, milking and animal development are synchronized, which simplifies management. For instance, group calving facilitates herd replacements. Mistakes, however, can affect large groups of animals.

Grass doesn't grow year round in Nebraska, but cows don't give milk for 12 months either. Matching the cows' lactation period to the forage growth cycle takes advantage of high quality forage when it's available. Ideally, the cows are dry in the winter. This reduces feed costs and gives the farmer a break in the winter, but milk income isn't available to cover winter costs.

Surfing that Learning Curve

After the seven-year absence mandated by the Dairy Buyout Program, Mike purchased a 160-acre, light-soiled farm and re-entered the milking business. He converted an existing calving barn into a milk parlor, and installed a pivot irrigation system to maintain native grass production and quality.

He divided the farm into small paddocks with high tensile fences. White clover was frost seeded into the native grass to increase the energy of the forage, and nitrogen fertilizer was added to increase forage production.

Mike was one of a select few in his area using management intensive grazing for dairy. “There just isn’t a lot of help out there for the grass-based dairy farmer,” Mike notes, “We have to learn by ourselves or from each other, and we are a small group.” He was pretty high on the learning curve, and found himself with a high debt load that was keeping him from investing in the production end of the business. He sold the land and equipment to an investor and leased it back, giving him some working capital.

20/20 Hindsight

Mike is a pioneer in grass-based dairying. “I guess I am and I have made all the mistakes possible to prove it,” he responds.

Knowing what he knows after 15 years in this location, Mike would have picked land with better soil. He would prefer to have his operation located on sub-irrigated meadows instead of the sandy soil he now uses for grazing. The pivot, which is necessary for the light soils, costs too much to operate and maintain. And the extra fertilizer needed is not just expensive—it may be causing health and breeding problems for the herd.

The application of nitrogen fertilizer has caused a copper deficiency in his animals. The symptoms include lack of cycling and foot problems. Because of the breeding problems, Mike is milking year-round, but he now supplements copper and hopes to return to seasonal milking in the future.

“With a better soil base,” Mike notes, “I could avoid a lot of irrigation and fertilizer expenses.”

Cutting costs goes a long way to increase profits, but sufficient milk

production is also critical. Milk prices have rebounded, so Mike decided to invest the extra money to supplement with grain to increase milk production per cow, rather than increasing herd size.

Mike started with Holsteins, the standard of the confinement-dairy industry, but thinks other breeds of cattle are better suited for grazing. He’d recommend Jerseys or a Jersey/Holstein-cross. The crossbreeds are cheaper and produce more milk than purebred Jerseys.

Fine-tuning & Experimentation

Mike continues to explore options to increase his profit and improve his business. He plans to harvest all the winter feed for the cows instead of buying it. Getting the herd back to a spring calving period will also improve his profitability because more animals will be producing milk while the grass quality is at its prime. Growing calves out to sell them as yearlings or feeders, instead of selling them as newborns is too labor and time intensive right now, but is an option for the future.

Mike has experimented with different milking schedules. Earlier

“There just isn’t a lot of help out there for the grass-based dairy farmer. We have to learn by ourselves or from each other, and we are a small group.”



this spring he tried once-a-day milking, then switched to milking every 16 hours. He has returned to twice-a-day milking.

He'd like to get into a specialty market, and says, "I'm afraid that being small in an area with little competition for my milk, the processor will abandon us small producers for the sake of the larger herds. We need to be thinking of ways we can compete without adding large investments in cows to raise volume."

The Bottom Line

These 1999 figures provided in the table below are the latest numbers for comparison with a conventional operation from *Nebraska*

Farm and Ranch Business Management Annual Report.

With relatively high milk prices (\$13.96 per hundredweight) in 1999, the dairy operation was quite profitable for Mike.

This isn't a comprehensive outline of income and profit, but just gives an idea of how the operations differ.

Interest expense was not included because Mike leases his farm. Neither includes family labor or management

A couple of entries need some explanation. The calf and vet expense almost looks like a mistake, but Mike's expenses for vet services since he began his grass-based operation are practically nothing each year. Feeding expenses include purchased feed and

grain on the UNL side; Mike's side includes seed, fertilizer and irrigation expenses. Mike's hired labor and machine expenses covered help with feed production, while the UNL's entry covered help with milking.

While milk sales per cow were lower for Mike, his expenses were considerably lower. With about 90 cows on pasture, Mike's total milk production was 12,437 hundredweight at a cost of \$97,221, which works out to \$7.81 in costs per hundredweight. The conventional herd average listed in the *UNL Farm and Ranch Business Management Report* is \$13.73 per hundredweight. With production costs of almost \$6 less, Mike is better able to with-

stand a low-priced period than conventionally managed herds.

The most compelling numbers are the profits. The average for the UNL farms listed was \$3,136.61 per cow gross income, minus \$2,785.02 in expenses, for a total profit of \$351.59 per cow. Compare that with Mike's operation: \$2,192.82 gross income less \$1,086.26 in expenses, for a total of **\$1,112.56 profit per cow**. Mike grossed \$197,354 in 1999, with a net income of \$100,133.

These numbers reflect well on Mike's management, but also show that small-scale grass-based dairy farms can be more profitable than the current model of large-scale confinement operations.

Comparison of Managed Grazing with Confinement

	Mike's Operation (\$ per cow)	Confinement Operation (\$ per cow)
Income:		
Milk Sales	1,993.13	2,925.39
Calf & Cull Cow Sales	199.69	211.22
Total Income	\$ 2,192.82	\$ 3,136.61
Expenses:		
Feeding	664.37	1,238.23
Breeding, Calf & Vet	76.78	215.82
Utilities	26.28	95.39
Insurance	14.07	33.63
Hired Labor & Machine	93.96	229.69
Supplies	39.97	209.25
Power & Machinery	--	346.01
Building Repairs & Misc.	--	120.46
Land Charge (Rent/Taxes)	164.83	25.69
Depreciation (Mach. & Bldg)	--	270.85
Total Expenses	\$ 1,080.26	\$ 2,785.02
Profit Per Cow	\$ 1,112.56	\$ 351.59



A traditional cattle ranch operation in the Nebraska Sandhills changes its management practices from March calving to May/June calving. Matching the nutritional needs of the cattle to the forage available can cut production costs and improve profitability. Focus on long-term goals encourages creative solutions to management challenges.

Summer Calving: A Practice to Improve Profits

This case study was prepared for the North Central Initiative for Small Farm Profitability by Martin Kleinschmit, Research Associate, Center for Rural Affairs. Written by Rebecca S. Kilde.

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The Ravenscroft Ranch

In the Sandhills just west of Valentine, Nebraska, is John Ravenscroft's fourth generation, 30,000-acre cattle ranch. This ranch, with its rolling hills covered with grass, may look like many other ranches in the region, but it's different in ways that make it more profitable. It has fewer expenses and more cattle per acre.

John's father and grandfather purchased the farm in 1959. Prior to 1985, the Ravenscrofts operated their ranch like most ranches. They spent much of the summer putting up hay for winter feeding, and much of their time in the winter feeding that hay to the cows.

The Ravenscroft ranch hired as many as 12 summer laborers to put up hay for winter feed. In addition to that seasonal help, John and his brother, James, hired four full-time hands to care for and feed the pregnant cow herd, which calved in March.

The Ravenscrofts invested in haying technology in 1982 to reduce labor expenses, but 5,000-6,000 bales of hay, each weighing 1,600 pounds, were still harvested and fed to maintain the nutrition level of the herd through the winter. Despite the reductions in hired labor the ranch did well to break even in a good year, and lost as much as \$20,000 in a poor year.

Big Changes

In 1985 John and his brother and partner, James, joined the Holistic Management (see sidebar on page 24) group in western Nebraska. They joined the group to learn more about grass management, and hoped to improve how

they used the ranch's resources. At one training session, Holistic Management originator Allan Savory challenged them to match calving time to the natural growth cycle of the grass.

That idea radically changed the way the Ravenscrofts managed their ranch.

Because of the nutritional drain on a cow's body from calving and milk production, a high energy ration is critical for at least 30 days prior to calving.

Cows also need to be in good physical condition at the time of calving if they are expected to re-breed and calf again on their anniversary date. For these

Big Results

The plan worked. According to John, since 1986 "...things only improved." Hay requirements and workload dropped immediately and dramatically. The normal 4,000 ton hay requirement now dwindled to 1,000 tons. "Over the years we evolved to where we were working for the cows. Now the mature cows work for us. Cows find their own feed on the open range of the ranch [at a cost of only \$4/month]," John notes. Only once since 1986 have John's cows needed hay during the winter.

Moving to a later calving date saved a lot of money for the

"OVER THE YEARS WE EVOLVED TO WHERE WE WERE WORKING FOR THE COWS. NOW THE MATURE COWS WORK FOR US. COWS FIND THEIR OWN FEED ON THE OPEN RANGE."

reasons, the Ravenscrofts were investing a lot of money in high-quality feed for their pregnant cows all winter.

If the high-energy diet period coincides with the natural grass production period, nature can provide that high-quality feed at a lower price. In the commodity market, ranchers have very little control over prices, so those who incorporate cost-cutting practices can increase profits in a good marketing year and minimize losses in a poor marketing year.

The Ravenscrofts changed their calving schedule the following season.

Ravenscrofts, but good grass management is critical to the success of that breeding schedule. "Our grass management has to insure there is grass enough for them to eat," says John.

Management Adjustments

The switch to later calving came with other adjustments. The Ravenscrofts needed to do some major culling the first few years after converting to summer calving. Because the summer-freshened cows were now eating lush grass instead of stored hay, they produced more milk. Cows with poor udders soon developed problems and had to be culled. John

Holistic Management

Holistic Management is a decision-making process that is a practical framework for developing a clear, focused vision for your future, and enables you to plan how to get there in the most economically, environmentally and socially sound way.

After establishing a long-term, comprehensive set of goals, a process is established to monitor your progress toward those goals that considers all aspects of an operation—economic, environmental and social—and offers opportunities to adjust decisions or management practices to achieve the stated goals.

While applicable to a broad range of situations, Holistic Management is a valuable tool for farmers and ranchers who are interested in improving their bottom line while enhancing their quality of life and improving the environment.

To learn more about Holistic Management, contact:

The Allan Savory Center for
Holistic Management
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says the hay feeding probably allowed these weaker cows to go undetected before.

On a positive note, Dystocia (calving difficulties), is now almost non-existent at the Ravenscroft ranch. John credits culling, winter exercise and exposure to fresh grass for nearly eliminating this once-routine complication on the ranch.

John feels they have recaptured some of the natural abilities of the beef cow. Calving on the range makes the cows better mothers, in John's opinion. "They have the opportunity to have their calf with some privacy, which seems to make them bond better with the calf," he says.

Weaknesses still exist. Even though some of their 1,600 cows remain productive at 13-14 years of age, the Ravenscrofts learned that summer-born heifers have difficulty breeding back unless they have extra feed during the winter. Unwilling to change their winter feeding program, they now buy all their replacement cows from another ranch that still calves in March.

While calves born on fresh grass are significantly more healthy, some problems crop up. For example, the calves born in May have few problems with scours (diarrhea), but beginning in June calves need to be treated. John thinks the May calves' natural scouring creates too much exposure for the June calves to overcome naturally. Segregating the herd would probably eliminate much of the problem, but sorting the herd would be too much work, and keeping the herd as a unit fits the ranch's grazing plan. The

Ravenscrofts choose to treat the affected calves.

Finishing

The calves are usually weaned at 400-450 pounds in November or December. The younger end of the calf crop is combined with about 3,500 head of purchased spayed heifers, and fed a ration of hay, protein and corn through the winter. The calves gain about two pounds a day until spring, when they are put back on fresh grass and are sold as feeders in August-September.

Larger calves are also fed through the winter, but the Ravenscrofts retain ownership of these animals all the way to slaughter. The calves, weighing 600-700 pounds in May-June, are shipped to the feedlot as true yearlings and sold for slaughter in November.

The Economics of Innovation

The Ravenscrofts say they are more profitable since they switched to summer calving, which encourages better grass management and reduces costs. More intensive grass management cuts the winter feed costs because the cows have forage in the hills during the winter. John estimates savings of \$80 per cow: \$60 for winter feed, and \$20 in labor charges.

Intensive grass management also allows John and his sons to support more cattle per acre. Most ranches in the area need 12 acres per cow for summer pasture. Because John uses the hay meadows for summer grass, he is able to feed cows on an average of five acres each. The ranch grows enough grass for more

than 1,600 cows. More cows per acre producing calves with fewer expenses spells profits in the cattle industry.

Other advantages includes better early weight gains and the flexibility to time the sale of fat cattle in November, which is historically a higher priced market.

Since adopting the change in management, the ranch has made a profit every year for the last 16 years. At one point the ranch was debt-free. Profits bought another 12,000-acre ranch three years ago, allowing both John and James to own and operate a ranch with their immediate families.

John now manages the ranch with his three sons: one works with John, one is in college and

the other is in high school. John makes most management decisions alone, based on how they will affect his family, the ranch, the balance sheet and the environment. He realizes these decisions should be made more often at family meetings. John revisits his financial plan two to three times a year to make sure he is on track with his goals.

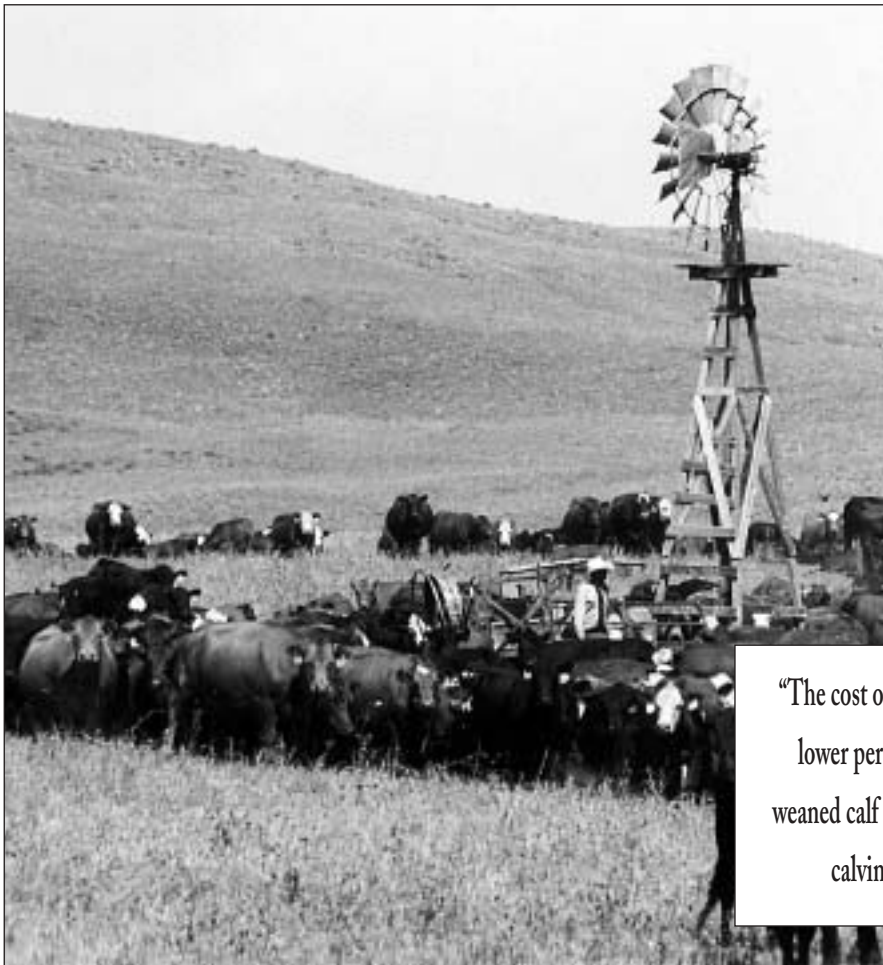
Looks Good on Paper, Too

Economic data from research comparing a March vs. a June calving herd done by the Gudmundsen Sandhills Laboratory in Whitman, Nebraska, supports John's experience. The four-year study, conducted by Dick Clark, University of Nebraska-Lincoln Agriculture

Economist, showed a June-born, weaned calf cost \$74-79 less. The study's findings, published in *Nebraska 2001 Beef Cattle Report*^{*}, attributed the cost reduction to hay and calving labor savings.

Some differences between John's operation and those in the study are due to variations in specific resources and experiences. For example, John decided on May as the principal calving season because he experienced difficulty getting the cows to rebreed on a June calving schedule. He feels the quality of the grass in September does not provide the nutrition his cows need to conceive.

The practices and logic John uses can fit most parts of the



* The UNL research is listed in the **Nebraska 2001 Beef Cattle Report** (publication number MP 76-A) is available through the UNL Cooperative Extension Institute of Agriculture and Natural Resources, University of Nebraska, 202 Ag Hall, Lincoln, NE 68583-0708. Research title: June versus March Calving for the Nebraska Sandhills: Economic Comparisons by Gordon Carriker, Dick Clark, Don Adams, and Russ Sandberg.

"The cost of producing a June-born weaned calf was \$74-79 lower per calf than the cost of producing a March-born weaned calf due to reduced harvested forage and feeding and calving labor expenses." -*Nebraska 2001 Beef Cattle Report*

country. Although the hills of western Nebraska are frequently covered with snow during the winter and early spring, the wind usually blows them clean enough for cattle to continue to graze the nutritional dormant warm season grasses. Locations without this option need to look for other feed stuffs, such as corn stover, stockpiled grass or windrowed hay.

The technologies of managed grazing and timely calving can be passed on to future generations and throughout communities at little or no cost. It also fits the formula for profitable ranching: $PRICE-COSTS=PROFIT$.

Looking to the Future

Thinking and planning differently is difficult to do alone. The

HRM group in the Sandhills provided positive peer support for John and James to abandon conventional logic and begin thinking creatively. They were able to look at their resources and design a system that fit those resources, rather than trying to make the ranch fit inappropriate or out-dated production standards. John and his family began to think more about what they wanted for the ranch, for themselves and for their community, and less about weaning weights and production goals. John says, "The biggest hang up (ranchers have) is weaning weight. Cost is more important."

These days, John is working to increase the herd. While more cows would spread the indirect costs of running the ranch over

more cattle, the initial investment of buying and raising calves uses up the extra feed and increases the financial risk to the family.

Cattle purchases can be adjusted to fit the feed resources and take advantage of variable profit margins in the cattle market. The purchased cattle help utilize grass and hay resources without locking the Ravenscrofts into feeding a specific number of cattle

The principle of matching the nutritional needs of the animal to grass production will continue to save money and boost profits. John said, "I'd have a hard time going back to the way things used to be."

"I'd have a hard time going back to the way things used to be."

