

COMMUNITY IMPACTS OF SUSTAINABLE AGRICULTURE IN NORTHERN CEDAR COUNTY, NEBRASKA

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An "Evaluation of Relative Impacts of Conventional and Sustainable Systems on Rural Communities" was a joint project of the University of Missouri at Columbia, the University of Minnesota, and the Center for Rural Affairs in Walthill, Nebraska. The following is a report of a study of expenditure patterns, production methods, farming practices and future plans of twenty-eight (28) farmers in northeast Nebraska.

The study was intended to accomplish two objectives: (1) evaluate local expenditure patterns of farmers by farm type, farm size and farming methods used, and (2) gauge the effect future input expenditures, farm population, and farm land tenure will have on rural communities.

METHODOLOGY

The Hartington-Wynot area of Nebraska was selected as the site for the study because of its economic dependence on production agriculture and the number of small to moderate-sized diversified farming operations. Out of approximately 460 farms within a ten mile radius of the two towns of Hartington and Wynot,¹ 62 were asked to assist with the project by completing a detailed questionnaire. This was not a random sampling, but farm families asked to participate included a variety of farmers in terms of age, size, and type of operation. Conclusions from this study are not statistically significant as to farmer characteristics elsewhere, but the study is an important indication of real differences among farmers in a small community. The study surveyed just over 6% of all farms in the area.

Out of the 62 farmers solicited, 28 agreed to participate. The 28 farm families were mailed a five page survey (Figure 1) and then to complete the questionnaire, each farm family was personally interviewed.

Several common elements exist between the 28 farming operations. They are all family owned and operated--either as a sole proprietor or a general family partnership and all but one consider farming to be their principle occupation. Most rent land in addition to the land they own but only one of the farmers owns no land and only two rent out part of their land to others. All the farms have both livestock and crops and they all apply manure to at least part of their cropping acres to supplement chemical fertilizers. All produce alfalfa and over half raise oats, which is becoming uncommon among the general farm population.

Despite these similarities, however, there were differences in the sample of farm operations. The number of years the operator had farmed ranged from three to 36 years with the age varying from 28 to 61. The number of acres owned ranged from zero to 1,125 acres and the number of livestock owned ranged from zero to 670 beef cows, zero to 150 milk cows, and zero to 1,836 hogs. One of the farmers raised sheep.

After conducting the survey we classified each farm as either "sustainable" or "conventional" based on an assessment of their farming practices, specifically, their use of chemicals and fertilizers and crop rotations. Farmers with no to little chemical use and greater crop rotation were classified as sustainable. Farmers with high chemical purchases and lesser uses of crop rotations were classified as conventional. Coincidentally, after evaluating the 28 participants, they turned out to be equally divided, 14 conventional farms and 14 sustainable farms.

The data was analyzed comparing the sustainable and conventional farms as to size, income, spending patterns and future plans for farming practices and land tenure. Although this is a small sample, it provides some insights for communities about what type of farm structure they may want to support in the future.

FIGURE 1.

SURVEY

The purpose of this survey is to:

- A. Determine how your farm fits into various categories of: size, income, type and agricultural practices.
- B. Gain insight into how your family spends locally for both farm and family- type expenditures (local being defined as the communities of Hartington/Wynot).
- C. Compare your 1992 farming operation with your operation in 1987.
- D. Plans for the future (the next 5 years and beyond).

1. THE FARMING OPERATION

- a. Number of years you have been a farm operator? _____ YEARS
- b. Number of years some or all of the land has been in your family? _____ YEARS
- c. The legal ownership status of your farm business?
 1. Individual sole proprietorship
 2. Family sole proprietorship
 3. Partnership
 4. Family corporation
 5. Other; specify: _____
- d. Has the ownership status of you farm changed since 1987? ___ YES, ___ NO
If so, in what way? _____
- e. Is farming your principal occupation? YES ___ NO ___ UNSURE ___
- f. Age of principal operator (s) _____
- g. Number of households operating the farm? _____
- h. Number of persons in each household(s)? 1st household ___ 2nd household ___
3rd household ___ 4th household ___
- i. Age range of household members (ex. 5-18) 1 _____ 2 _____ 3 _____ 4 _____
- j. Total acres (owned, rented and leased out) _____ Acres owned _____ Acres .
renting _____, Acres leased to someone else _____
Total crop acres _____ Crop acres owned _____ Crop acres renting _____
- k. Crop Acres owned as a percent of total crop acres: _____ %
If yes, how? _____
- l. How many workers did you hire in 1992? _____ 1987? _____
--full-time workers:
 - 1.) Hired workers _____
 - 2.) Unpaid Family (kids, spouse) _____
 - 3.) Part-time hired workers (including family members) 1992 _____, 1987 _____
Number of months they worked _____ MONTHS
- m. Value of land and buildings \$ _____
Value of machinery and equipment \$ _____

2. FARM FINANCIAL INFORMATION

The information in this section of the questionnaire will look at the financial position of farmers in this area and how the purchasing habits of the farmers affect the surrounding communities. Remember, all of your answers will be kept in strict confidence and used for research purposes only.

The following items ask about specific farming income and expenses. It would be helpful for you to take the requested numbers directly from your 1992 1040-F Tax Form.

(Line numbers that are in parenthesis refer to your 1992 tax form.)

	(A) 1992 DOLLAR	(B) MARKETED/ PURCHASED IN AREA
INCOME		
EXAMPLE: SALE OF LIVESTOCK	\$5,987	50%
a. Sales of livestock and other items bought for resale (Line 1)	\$ _____	____%
b. Sales of livestock, produce grains and other items you raised (Line 4)	\$ _____	____%
c. Total distributions received from cooperatives (Line 5A)	\$ _____	____%
d. Total agricultural program payments (Line 7A)	\$ _____	
e. Crop insurance proceeds received in 1991 (Line 8A)	\$ _____	
f. Custom hire (machine work) income (Line 9)	\$ _____	____%
g. Other farm income (Line 10)	\$ _____	____%
h. Gross farm income (Line 11)	\$ _____	
EXPENSES		
a. Cost of livestock bought for resale (Line 2)	\$ _____	____%
b. Chemicals (Line 13)	\$ _____	____%
c. Conservation expenses (Line 14)	\$ _____	____%
d. Custom hire (machine work) (Line 15)	\$ _____	____%
e. Depreciation deduction (Line 16)	\$ _____	
f. Feed purchased (Line 18)	\$ _____	____%
g. Fertilizers and lime (Line 19)	\$ _____	____%
h. Freight and trucking (Line 20)	\$ _____	____%
i. Gasoline, fuel, oil (Line 21)	\$ _____	____%
j. Insurance (Line 22)	\$ _____	____%
k. Interest (Line 23A plus 23B)	\$ _____	____%
l. Labor hired (Line 24)	\$ _____	____%
m. Rent or lease:		
1. Vehicles, mach, equip. (Line 26a)	\$ _____	____%
2. Other, land animals, etc. (Line 26b)	\$ _____	____%
n. Repairs and maintenance (Line 27)	\$ _____	____%
o. Seed purchased (Line 28)	\$ _____	____%
p. Storage and warehousing (Line 29)	\$ _____	____%
q. Supplies purchased (Line 30)	\$ _____	____%
r. Taxes, state and local (Line 31)	\$ _____	____%
s. Utilities (Line 32)	\$ _____	____%
t. Vet. fees, medicine, breeding fees (Line 33)	\$ _____	____%
u. Net farm income (Line 36)	\$ _____	

3. FAMILY EXPENSES

This portion of the survey will ask what PERCENT you spend in the surrounding communities (Hartington/Wynot area).

	DOLLAR	PERCENT
a. Food & Meals	\$ _____	____%
b. Medical Care & Health Ins.	\$ _____	____%
c. Church & Charities	\$ _____	____%
d. Household supplies	\$ _____	____%
e. Clothing	\$ _____	____%
f. Personal Care	\$ _____	____%
g. Gifts	\$ _____	____%
h. Education	\$ _____	____%
i. Recreation	\$ _____	____%
j. Utilities	\$ _____	____%
k. Vehicle Operating expense	\$ _____	____%
l. Interest	\$ _____	____%
m. Life Insurance Payments	\$ _____	____%

PURCHASES

n. What are the main kinds of farm and family purchases you would like to make in the Hartington/Wynot area, but your needs for those items can't be met?

FARM PURCHASES

FAMILY PURCHASES

What are the main kinds of farm and family purchases you could buy in the Hartington/Wynot area, but you choose to buy elsewhere? Please briefly comment on why you choose to shop elsewhere for these items.

FARM PURCHASES

FAMILY PURCHASES

OFF-FARM INCOME

Gross off-farm income \$ _____
 Off-farm income as a percent of total family income _____ %
 Total off-farm jobs in the family _____ #

4. YOUR CROPS AND LIVESTOCK -- PAST AND PRESENT

Put an "x" in the appropriate column --For example, if you harvested more corn acres in 1992 than in 1987, you would put an "x" in the "more than 1987" column.

CROPS	More Than 1987	Same As 1987	Less Than 1987
a. _____ Acres of corn harvested in 1992.	_____	_____	_____
b. _____ Acres of soybeans harvested in 1992	_____	_____	_____
c. _____ Acres of sorghum harvested in 1992.	_____	_____	_____
d. _____ Acres of alfalfa harvested in 1992.	_____	_____	_____
e. _____ Acres of other hay harvested in 1992.	_____	_____	_____
f. _____ Acres of _____ (other) in 1992.	_____	_____	_____
g. _____ Acres of _____ (other) in 1992.	_____	_____	_____
h. _____ Acres of pastureland in 1992.	_____	_____	_____
i. _____ Acres in CRP or other Programs	_____	_____	_____

j. Pounds per acre of commercial fertilizer applied to your principal crop field in 1992 _____.

Type of fertilizer applied? _____
 More than 1987, Same as 1987 or Less than in 1987. (circle the correct answer)

k. Do you use crop rotation? _____ YES _____ NO
 If YES: How long is the rotation cycle? _____ YEARS
 Does this differ from what you were doing in 1987? _____ YES _____ NO
 If YES: Comment: _____

LIVESTOCK	More Than 1987	Same As 1987	Less Than 1987
Dec. 31, 1992	_____	_____	_____
a. _____ # of beef cattle	_____	_____	_____
b. _____ # of milk cows	_____	_____	_____
c. _____ # of hogs & pigs	_____	_____	_____
d. _____ # of sheep & lambs	_____	_____	_____
e. _____ # of poultry	_____	_____	_____
f. _____ # of other livestock (type _____)	_____	_____	_____
g. _____ # of other livestock (type _____)	_____	_____	_____

5. MARKETING STRATEGIES

a. What are your primary markets?

- 1. Local _____%
- 2. Dealers _____%
- Marketing clubs/organizations _____%
- 4. Neighbors and personal contacts _____%
- 3. Other (name) _____%

b. Do you do any value added processing on the farm? YES NO
If yes, what? _____

c. Do you barter? (for example work for feed) YES NO
If yes, what? _____

6. PLANS FOR THE FUTURE - in the next five years do you plan to:

a. Add farmland to your operation?

- 1 = Yes (a) Number of acres you plan on purchasing? _____ACRES.
- (b) Number of acres you plan to rent _____ACRES
- 2 = No 3 = Unsure

b. Reduce the number of acres you farm?

- 1 = Yes By how many acres? _____ACRES
- 2 = No 3 = Unsure

c. Raise any new crops?

- 1 = Yes What new crop(s) are planned? _____
- 2 = No 3 = Unsure

d. Decrease inputs?

- Yes By what methods? _____
- No 3 = Unsure

e. Substantially change the amount of labor used on your farm?

- 1 = Yes What labor changes are planned? _____
- 2 = No 3 = Unsure

f. Change the amount of time you or other family members work off-the-farm?

- 1 = Yes What changes are planned? _____ 2 = No 3 = Unsure

g. Leave farming for another job?

- 1 = Yes 2 = No 3 = Unsure

h. Retire from farming?

- 1 = Yes 2 = No 3 = Unsure

i. What do you think will happen to the farmland you own when you retire?

- 1 = Do not own farmland
- 2 = Farmed by child/grandchild
- 3 = Farmed by another relative
- 4 = Rented outside the family
- 5 = Sold outside the family
- 6 = Have no idea
- 7 = Other Specify: _____

j. What are your retirement plans? Do you plan on retiring on the farm, moving to the Hartington/Wynot area or elsewhere?

k. Would you encourage your children or grandchildren to farm?

- 1 = Yes Why _____
- 2 = No Why not? _____
- 3 = No children or grandchildren

Thank you for agreeing to be part of the study group and for giving up the time to complete this survey. We will send you a copy of the final report when it is completed.

HISTORICAL BACKGROUND

Northern Cedar County's communities have celebrated or are preparing to celebrate 125 years since they were founded. The pioneering families were enticed by the Homestead Act, which promised them land and a home for their families. The predominant cultural heritage is German Catholic.

The land was considered ideal for crop production. Income was from a variety of products raised on the farm--milk, cream, beef, pork, chickens and eggs. The crops were primarily corn, oats and hay, which was used to feed and bed the livestock. Most farms had orchards and gardens to feed the family and to trade or sell the surplus. The economy was agriculturally based, with the communities providing services needed by the farmers to raise and sell their products.

Northeast Nebraska is much like the rest of the country--while farm size has gotten bigger, farmers are fewer. The smallest rural communities have continued to survive if there is a strong church or school but consolidation of smaller schools is even affecting these social ties. The economic crisis of the 1930s and 1980s accelerated the decline in farmers, contributing to the erosion of the community's economy. In the 1980s community leaders sought to diversify the economic base, looking at recreation, manufacturing, and telemarketing businesses. These strategies only put them in competition with other rural communities in their own and other states and only the larger communities are marginally successful at attracting such companies. Any success at diversifying the economy has therefore been slow. These communities are still largely reliant on production agriculture and agriculture related services.

AGRICULTURAL AND COMMUNITY CHARACTERISTICS

Cedar County, Nebraska is located in the northeastern corner of the state. The land along the river bottom is wooded, with large areas having been cleared for row cropping. The soil types range from sandy loam and gumbo to light chalk rock in the north. Eighty percent of the land is tillable with the remainder used for grazing. Average annual precipitation is 27 inches.²

Agricultural production in the county is diversified. Cattle (86,000 on feed) and hogs (195,000 on feed) are the leading types of livestock. The Industrial Facts for Hartington states: "Cedar County was first in the production of milk for the last ten years, averaging 84,744,000 pounds annually." However, the exodus from dairying has been so rapid in the past several years that there are now efforts by business leaders to encourage existing dairy farmers to increase their herds or other farmers to go into dairying. Cash crops are corn (160,000 acres) and soybeans (77,000 acres). Cedar County is also first in the state in oats production, planting 31,000 acres, which is used both as a feed grain and for crop rotation. Alfalfa and hay (53,000 acres) is produced primarily for feed and as part of a crop rotation.³

Hartington (pop. 1,583⁴), the county seat, is the largest community in Cedar County. County government, two schools

(K-12 public and 2-12 parochial), and service oriented businesses are the predominant employers in town. There are also recreational facilities such as parks, a golf course, and a dance hall. Hartington experienced a decline in the 1980s, demonstrated by a loss in population of 174 people between the 1980 and 1990 census. Residents have struggled over how hard they should try to diversify the community's economy beyond agriculture and what it needs to prosper, but as an official town description indicates, "The community's basic economic activities include grain farming, pork and beef feeding, dairying, cheese processing, manufacturing and retail sales."

Wynot is ten miles northeast of Hartington. It has a post office, school (K-12 public), church, and ball park, with its entire business community agri-related--repair shops, feed, fuel, fertilizer and farm services. The town was founded to provide a settlement near the railroad. Old-timers say it became Wynot because when no one could agree on a name someone finally said "Why Not?" and the name stuck.

SURVEY RESULTS

The questionnaire the 28 farmers completed was divided into six categories: (1) farming operation, (2) farm financial information, (3) family expenses, (4) crops and livestock-past and present, (5) marketing strategies, and (6) plans for the future (practices and retirement). The analysis below compares the sustainable and conventional farms and looks at what community impacts would result if one or the other farm type was predominant. Figure 2 is a chart showing the relative differences between the two groups of farmers. You cannot draw statistically valid conclusions from it, but it does give you some general indication of the differences.

1. The Farming Operation

In our study there were few differences between the characteristics of the sustainable and conventional farmers in terms of age, number of years in farming, and form of ownership. One striking difference between the two types of farms was the amount of land they own and rent. The conventional farmer controlled approximately twice as many acres as the sustainable farmer, averaging 732 acres versus 383 acres. The average number of acres rented by conventional farmers exceeded by 240 acres the average number rented by sustainable farmers. In addition, the average number of acres owned by conventional farmers was 135 acres higher than that owned by sustainable farmers.

2. Farm Financial Information⁵

Although the conventional farms had an average higher gross income than the sustainable farms, they had a lower net income -- \$5,705 for the conventional farms and \$12,472 for the sustainable farms. Much of this can be attributed to lower input costs for the sustainable farms. The average cost of fertilizers for conventional farms was four times that of the sustainable farms and seed costs were three times as high. Conventional farms also spent an average of \$6,139 on

Figure 2.
Differences between sustainable and conventional farms
 (in descending order of significance)

<i>Conventional farms significantly higher</i>	t ratio ¹	<i>Sustainable farms significantly higher</i>
Chemical expense/acre	3.38	
Total fertilizer expense	3.30	
Total chemicals expense	2.86	
Acres of corn harvested	2.81	
Total acres	2.57	
Seed purchase expense	2.57	
Gross farm income	2.52	
Family recreation expense	2.50	
Fuel expense	2.48	
Total ag program payments	2.35	
Family gifts expense	2.32	
Total family expenses	2.26	
Interest expense	2.20	
Sales of livestock bought for resale	2.13	
Seed purchased/acre	2.11	
Acres of soybeans harvested	2.08	
	2.01	Farm utilities expense
Other rent expense	1.94	
Fertilizer expense/acre	1.90	
	1.89	Family Medical expense
Family utilities expense	1.86	
Feed purchase expense	1.81	
Cost of Livestock bought for resale	1.80	
No. of beef cattle	1.79	
Hired labor expense	1.78	
Interest expense/acre	1.69	
	1.68	Family food/meal expense
Repairs expense	1.66	
lb/acre of commercial fertilizer	1.58	
Acres of other hay harvested	1.52	
Custom work expense	1.45	
Crop insurance proceeds	1.42	
Family clothing expense	1.40	
Value of land and buildings	1.37	
Farm Insurance expense	1.35	
Acres of pastureland	1.28	
Total taxes paid	1.24	
Family vehicle expense	1.22	
Total taxes paid/acre	1.21	
Custom hire income	1.20	
Family education expense	1.16	
	1.14	Other farm income
Machinery rent expense	1.11	
Depreciation deduction expense	1.09	
	1.09	Family personal care expenses
Cost of lvstk purchased for resale/acre	1.08	
	1.00	No. of sheep & lambs
	1.00	Conservation expenses

¹ t ratio (derived from a statistical t-test formula) measures the differences between two samples (sustainable and conventional farms in our study) within the entire 28 farm survey population. The higher the t ratio, the more confidence there is that there is a real difference between the two groups of farms in the survey.

chemicals compared to \$55 for sustainable farms. Sustainable farms also spent less on fuel, interest, and hired labor. Conventional farms received significantly more income from custom hire work and sales of livestock bought for resale. In addition, the amount of federal agricultural program payments to conventional farms was nine times higher than those paid to sustainable farms.

With the exception of livestock, all of the farmers purchased over 70 percent of their inputs locally. There was no significant distinction between the sustainable and conventional farmers in where their farm inputs were purchased. (Despite the fact that most of the profit from the sale of inputs such as chemicals, fertilizers, and seed is realized by companies outside the community, we counted the expenditures as local if they were made at either a Hartington or Wynot dealer). Both types of farms had to go out of the area to purchase livestock because there is no public sale barn in either Hartington or Wynot.

The average off-farm income for the sustainable and conventional farmers was approximately the same.

3. Family Expenses

There were largely no differences between the two types of farms as to where they purchased other goods and services for the family.

4. Crops and Livestock - Past and Present

Conventional farmers devoted more land to corn and soybeans, the major commodity program crops. The sustainable farmers had longer crop rotations and more diversity in the number of crops. A larger percentage of the sustainable farms was in pasture, alfalfa, and oats. Seven of the sustainable farmers raised sorghum versus only two of the conventional farmers and eleven of the sustainable farmers sowed oats compared to only six of the conventional group. One sustainable farmer also produced barley.

All but one of the producers rotates crops. The sustainable farmers on average have a five year rotation while the conventional farmers averaged a three year rotation cycle. While almost half of the sustainable farmers planned to add new crops to their operation, only one of the conventional farms planned to do so. Five of the sustainable farmers and three of the conventional farmers planned to decrease purchased inputs. Seventeen of the farmers (seven sustainable and ten conventional) had no plans to decrease inputs while three were unsure. The average application of fertilizer for the conventional farmers was 120 pounds per acre as compared to 78 pounds per acre for the sustainable farmers.

All 28 survey farmers had livestock. The conventional farmers averaged 168 head of cattle as compared to 63 for the sustainable farmers. Seven of the sustainable farmers had dairy herds compared to only three of the conventional farms. Four of the sustainable dairy farms had under 50 cows, while the other three were between 100-150 cows. Two of the conventional dairy farms were between 100-140 cows while one was 40 cows.

All but nine (six sustainable/three conventional) of the 28 participants had hogs. The sustainable farmers averaged 240 hogs as compared to 405 for the conventional farmers. The

conventional farmers typically bought feeder pigs to feed out while the sustainable farmers were more likely to have a farrow to finish operation. The sustainable farmers had less invested in hog facilities, using more inexpensive huts, barns and yards rather than confinement barns.

5. Marketing Strategies

Most of the livestock was sold in Yankton (25 miles away) and Laurel (20 miles away), which have public livestock sale barns. The livestock sold to neighbors or other producers was very limited. The majority of the milk produced was purchased by Mid-America Dairy, a milk co-op that has a plant in Hartington. Grain and hay was sold to local elevators or to other producers.

There was no food processing or other value-added activities done on any of the farms. Bartering was limited to exchanging work with a neighbor and occasional trading of labor for machinery.

6. Plans for the Future

None of the farmers planned to leave farming for another job, although two were unsure at the time. Most of the farmers had not yet begun to plan for retirement but 12 (five sustainable/seven conventional) said they would move to either Hartington or Wynot when they did retire, eight (five sustainable/three conventional) said they would remain on the farm, seven (four sustainable/three conventional) had no idea what they would do, and one conventional farmer said he would move outside the area. The farmers were asked what they thought would happen to the farmland when they did retire and 18 (half and half) responded that they hoped a child or other relative would continue to farm the land, five (three sustainable/two conventional) said they would rent or sell it to someone outside the family, and five (two sustainable/three conventional) had no idea what would happen with the farm.

When asked whether they would encourage their children or grandchildren to farm, 20 said yes. Eleven of these were sustainable farmers and nine were conventional farmers. When asked to give a reason for their answer, the farmers responding positively said: "It's a good life". "It's a good place to live and raise a family". "You are your own boss and it is challenging." Those farmers who would not encourage their children to farm said: "There's not enough profit margin". "It's too much work". "It's too much work for too little return". "It's easier to work in town."

PLANNING A SUSTAINABLE COMMUNITY

If a community could decide what type of farm they wanted to support, our survey indicates there is a strong reason to seek a farm community made up of "sustainable" farms like those we studied because of the additional number of people and the economic activity that they create.

We analyzed what would happen if all of the 15,606 acres represented by our survey were farmed by either all sustainable farmers or all conventional farmers. Figure 3 shows what the current mixed farm community, the sustainable farm community, and the conventional farm community would look

Figure 3

	Total expenditures						Local expenditures					
	current "community"		alternative "community"		conventional "community"		current "community"		alternative "community"		conventional "community"	
Farm business expenditures												
Bus. Interest	291,676	7%	177,752	5%	351,447	8%	186,336	6%	157,621	5%	201,317	6%
Bus. Supplies	93,948	2%	122,039	3%	79,278	2%	80,371	3%	105,965	4%	66,794	2%
Bus. Util.	81,619	2%	113,924	3%	64,765	1%	73,192	2%	101,283	3%	58,366	2%
Bus. Insur.	50,095	1%	43,229	1%	53,685	1%	32,460	1%	38,391	1%	29,339	1%
Chemicals	86,769	2%	2,185	0%	130,934	3%	50,563	2%	624	0%	76,782	2%
Custom work	82,868	2%	63,985	2%	92,700	2%	80,215	3%	60,239	2%	90,515	3%
Depreciation	442,118	10%	550,112	15%	385,468	8%	442,118	14%	550,112	19%	385,468	12%
Equip rent	26,218	1%	15,762	0%	31,680	1%	17,947	1%	15,762	1%	19,195	1%
Feed	958,052	22%	972,566	27%	950,405	21%	794,814	26%	899,686	31%	739,880	24%
Fertilizer	141,078	3%	84,272	2%	170,730	4%	124,068	4%	84,272	3%	144,980	5%
Fuel	121,415	3%	115,953	3%	124,380	3%	119,854	4%	113,456	4%	123,131	4%
Hired labor	152,783	4%	127,969	4%	165,736	4%	152,627	5%	127,657	4%	165,736	5%
Land rent	176,660	4%	151,534	4%	189,925	4%	131,559	4%	126,409	4%	134,212	4%
Livestock	917,633	22%	408,253	11%	1,184,495	26%	256,563	8%	1,092	0%	390,306	13%
Repairs	289,335	7%	315,085	9%	275,914	6%	246,887	8%	292,144	10%	223,322	7%
Seed	112,519	3%	77,250	2%	131,090	3%	72,568	2%	71,788	2%	73,036	2%
Taxes	138,425	3%	94,104	3%	161,678	3%	118,606	4%	77,094	3%	140,454	5%
Trucking	13,265	0%	23,097	1%	8,271	0%	10,300	0%	14,201	0%	8,271	0%
Veterinary	85,365	2%	94,260	3%	80,839	2%	61,956	2%	84,741	3%	49,939	2%
Total:	4,261,843	100%	3,553,330	100%	4,633,421	100%	3,053,002	100%	2,922,536	100%	3,121,044	100%
Family expenditures												
Charity	49,315	9%	62,424	9%	42,448	9%	47,910	14%	58,523	14%	42,292	14%
Clothing	45,570	8%	56,182	8%	40,107	8%	7,647	2%	11,861	3%	5,462	2%
Education	32,929	6%	33,397	5%	32,773	7%	27,779	8%	25,282	6%	29,183	10%
Food	137,333	24%	193,358	27%	107,994	22%	71,475	22%	92,544	23%	60,551	21%
Gifts	25,594	4%	25,438	4%	25,750	5%	8,427	3%	6,711	2%	9,208	3%
Hshld. supplies	25,594	4%	31,992	5%	22,317	4%	14,045	4%	15,138	4%	13,421	5%
Hshld. Util.	27,935	5%	29,807	4%	26,998	5%	22,941	7%	21,848	5%	23,409	8%
Interest	10,300	2%	10,612	1%	10,300	2%	5,930	2%	5,150	1%	6,398	2%
Life Insur.	26,374	5%	33,085	5%	22,785	5%	11,548	3%	15,138	4%	9,676	3%
Medical	97,381	17%	135,928	19%	77,094	16%	45,413	14%	83,336	20%	25,594	9%
Pers care	13,265	2%	19,508	3%	9,832	2%	5,306	2%	7,647	2%	4,058	1%
Recreation	20,912	4%	20,288	3%	21,224	4%	13,733	4%	13,265	3%	13,889	5%
Vehicles	57,586	10%	58,210	8%	57,430	12%	49,159	15%	50,251	12%	48,691	17%
Total:	570,087	100%	710,229	100%	497,051	100%	331,315	100%	406,692	100%	291,832	100%
Other characteristics												
Net farm income	254,534		507,975		121,727							
Tot fam exp	570,399		710,229		497,051							
Off-farm income	215,987		320,235		161,522							
People	169		212		147							
Acres owned	8,610		9,774		8,000							
Acres rented	6,622		4,765		7,595							
Acres leased out	602		1,059		363							
\$ Value of land/bldgs	7,181,258		7,973,913		6,766,006							
\$ Value of equip	2,646,616		3,813,513		2,035,308							
Acres of corn	4,130		3,339		4,544							
Acres of soybeans	1,414		1,018		1,621							
Acres of sorghum	322		448		256							
Acres of alfalfa	1,876		2,688		1,451							
Acres of other hay	420		244		512							
Acres of other crops	1,232		1,629		1,024							
Acres of pasture	4,858		5,172		4,694							
Acres in CRP	504		407		555							
# of beef cattle	3,234		2,566		3,584							
# of milk cows	784		1,466		427							
# of hogs/pigs	9,030		9,774		8,640							
# of sheep	98		285		0							
# of poultry	336		326		341							
# of other livestock	182		163		192							
# total livestock	13,664		14,579		13,185							

like in terms of expenditures and other characteristics.

If all of the farms in the survey had been of the size and nature of the 14 sustainable farms identified, 44 more people would be living on the same number of acres than the current 169 people. If all of the farms had been similar to the survey's conventional farms, there would have only been room for 147 people, 22 less than the present population. If all of the farms were of the "sustainable" type, less land would be planted to corn and soybeans and more to alfalfa and other crops. More land would be owned and less rented. There would be slightly fewer beef cows, slightly more hogs (although not as many farmers who raise hogs), and many more sheep and milk cows. Total family income would be more than double the hypothetical conventional community and 80% higher than the current community, with both net farm income (100% higher) and off farm income (48% higher) contributing. Family living expenditures would be 25% higher than the current community and 43% higher than the hypothetical conventional community. Property tax base would be higher (\$11.8 million compared to \$9.7 million for the current community and \$8.7 million for the conventional community).

Based on our survey, some purchases of inputs would drop significantly under a "sustainable farm" system. Less would be spent on chemicals, fertilizer, fuel, hired labor, livestock purchased for resale, seed, taxes, and interest. However, more would be spent on supplies, utilities, feed, veterinary expenses, charity, food, and medical and personal care.

CONCLUSION

Rural communities can promote or discourage farm types through business development and retention strategies. For example, by encouraging the development of businesses that act simply as brokers and dealers for outside companies selling farm inputs, the town serves primarily a larger farm structure with fewer people and less diversity of economic activity. On the other hand, by promoting farm businesses and non-farm

employment opportunities that support smaller farms, the community will gain more people and generate more economic activity. Based on our survey, communities that surround themselves with small, owner-operated, sustainable farms will be more prosperous, more dynamic, and more stable. That is the future we would all benefit from.

REFERENCES

- Area Development Department, Nebraska Public Power District, 1991. Industrial Facts, Hartington, Nebraska. Columbus, Nebraska.
- Chism, John Wade, 1993. Local Spending Patterns of Farm Businesses in Southwest Minnesota, Graduate Thesis, University of Minnesota, Minneapolis, Minnesota.
- Farm & Home Publishers, LTD, 1990. Farm & Home Directory & Plat, Cedar County, Nebraska, Belmond, Iowa.
- Miller, Cheryl, 1992 Which Row to Hoe? "A Regional Perspective on Alternative Directions in Commercial Agriculture." Northwest Area Foundation, St. Paul, Minnesota.
- Nebraska Department of Agriculture, 1993. 1992-1993 Nebraska Agricultural Statistics, Nebraska Agricultural Statistics Service, Lincoln, Nebraska.
- ¹ Source: 1990 Farm & Home Directory & Plat, Cedar County, Nebraska.
- ² Source: Industrial Facts, Hartington, Nebraska.
- ³ Source: All livestock numbers and acreages taken from 1992/1993 Nebraska Agricultural Statistics.
- ⁴ Source: Industrial Facts, Hartington, Nebraska.
- ⁵ Note: Farm income and expenses is from the 1992 1040-F tax forms.