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Family Farms: Farming Shaping Their Future

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FAMILY FARMS: FORCES SHAPING THEIR FUTURE

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FAMILY FARMS: FORCES SHAPING THEIR FUTURE

Prepared by Dr. Larry Janssen, Professor of Economics
for the 1991 Sewrey Faculty Colloquium, February 13-14, 1991
South Dakota State University, Brookings, South Dakota

INTRODUCTION

We are living in times of rapid change in agriculture and in rural America. Interstate highways, livestock confinement systems, pesticides, four-wheel drive tractors and personal computers are innovations that did not exist or were seldom seen 30 - 35 years ago. Rural America has changed a great deal from the time I was raised on a 320 acre Nebraska farm, driving 25 hp. Ford 8N tractors, and going to a one-room country school!

In times of rapid changes, many people are concerned about the future of agriculture and family farms. Today, I will share with you my perspectives on the topic: Family Farms: Forces Shaping Their Future. First, I will discuss the changing concept of a "family farm". Second, I will present four major forces that have major impacts on family farms in all industrialized, developed nations and discuss how these forces have changed the structure of agriculture. Third, I will discuss key findings from a multi-disciplinary study of "successful farms and successful farm families" in South Dakota.

My professional background is in agricultural economics and I also have work experience in farm credit. In the past few years, I have participated in a regional project (NC - 181) on "Determinants of Farm Size and Structure in North Central Areas of the United States" and have participated with other SDSU social scientists (Dr. Ron Stover, Rural Sociology; Dr. Virginia Clark and Ms. Peggy Schlechter, Home Economics Education; and Scott Peterson, former

research associate in Economics) on a multi-disciplinary study to "identify key characteristics which have enabled many farm families and their farm business to succeed in the current economic and social environment". In addition, I have worked with Dr. Douglas Malo, Professor of Plant Science, on a European Studies course called "European Agriculture and Society" which focused on the natural resource base and the social/economic organization of European farms. From these perspectives, I will address this topic.[1]

CHANGING CONCEPTS OF FAMILY FARMS

Concern about the future of family farms is a major reason why social scientists study structural changes in agriculture. Farm structure is the control and organization of resources needed for agricultural production. It includes the number and size of farms; ownership and control of resources; the managerial, technological and capital requirements of farming; farm-household interactions; and the social, economic,and political situations of farmers. The study of changing farm structure allows us to view agriculture in its entirety, but also to examine how changes affect individual farms (Rasmussen, 1989, p. 1-2; Knutson, Penn, and Boehm, 1990, p. 270-272).

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[1] This paper is a condensed version of materials prepared for the multi-disciplinary South Dakota Family Farm research project. It summarizes materials on family farm concepts, structural changes in South Dakota and U.S. agriculture, and empirical research on the topic: "Successful Farm Families and Farming in South Dakota". The basic research documents in the South Dakota Family Farm project are: (1) Clark, et.al. 1988. Successful Family Farming in Times of Crisis: Review of Previous Studies; (2) Clark, et. al. 1990. Successful Farming in South Dakota: Technical Research Report; and (3) Peterson. 1990. Successful Farming in South Dakota: Interviews with Families Identified as Successful. The South Dakota Family Farm project was funded by the Midwest Technology Development Institute with additional support from South Dakota State University and the South Dakota Agricultural Experiment Station.

What we call "family farms" has dramatically changed over the years. Our urban society has held, and continues to hold, the concept of a pastoral family farm in high esteem, partly because many people were raised on small family farms or had parents who did. The pastoral family farm is viewed as a small, independent, diversified, self-sufficient, family operated unit that provides most of the family's material needs. This image has steadily been replaced by the reality of fewer modern commercial family farms (and a growing number of very large agribusiness farms) and many smaller, part-time farms (Janssen and Edelman, 1983).

The modern commercial family farms that produce most of our food are anything but self sufficient, diversified, or independent. These commercial farms are complex, specialized, capital intensive businesses that operate on relatively narrow profit margins. They rely on international markets that are subject to shifts in capital investments, foreign policy, and world weather conditions. Crop reports from Brazil and Argentina or the latest development in US-EC trade negotiations or policy switches in the Soviet Union often have more impact on the U.S. farm economy than many domestic news events!

Brewster (1979) discussed the Jeffersonian concept of a pastoral family farm as self-sufficient agriculture, with full ownership and control of land farmed, using only family labor and management. The Homestead Act of 1862 (and later amendments) greatly enhanced this concept as actual public policy! During the late 1800's and early 1900's, the "family farm concept" was modified to include some rented land, some hired labor, and the purchase of commercial inputs. In the 1930's, USDA executives defined family farms as full-time farm operations which could provide the family a satisfactory living and maintain the farm business without requiring large amounts of hired labor. This definition was

politically phased out in the 1950's and 1960's when vast outmigration occurred from U.S. farms and part-time farms became commonplace.

A current definition of the family farm used in many USDA reports is: "The essential characteristics of a family farm are not to be found in the kind of tenure, or the degree of sales, acreage or capital investment, but in the degree to which the productive effort and its reward are vested in the family. The family farm is a primary agricultural business in which the operator is a risk taking manger, who with his/her family does most of the farm work and performs most of the managerial activities" (Brewster, 1979).

Our European counterparts have also struggled with changing concepts of family farms. "Although definitions of the family farm may vary among the countries, it is generally regarded as a farm which is owned and operated by a family which may include one or more generations. Most of the land and capital is provided by the family, although additional land may be rented for expansion...and capital may be borrowed.....Most of the labor is provided by members of the family living on the farm, but additional labor may be hired, most often on a seasonal basis." (Galeski & Wilkening, ed., 1987, p. 1-2) Social scientists in Western European nations usually classify farms based on: (1) total farm labor requirements, and (2) the distribution of operator and family labor (or net incomes) between farm and nonfarm employment.

Professor B. F. Stanton, a Cornell University economist, advocates a European-style classification system of U.S. farms, based on labor requirements, as the best method for policy makers and the general public to understand structural changes in U.S. agriculture (Stanton, 1989). A labor based classification system may look like this:

(1) residential farms are units where agricultural production occurs, but the farm unit is not an important contributor of family income and only involves a few months of family or hired labor. These residential farms generate about 5% of farm production and consist of 40% - 50% of farm numbers;

(2) part-time commercial farms are units where agricultural production is an important contributor of family income, but use less than 12 months of labor. Almost all of these farms are family operations, but off-farm work may also be an important source of net farm income. These farm units generate 18%-20% of U.S. agricultural production and are 25% - 30% of farm numbers; and

(3) full-time commercial farms are units that require 12 months or more of labor and where farming is the principal occupation of the operator. Full-time commercial farms can be subdivided into commercial family farms and other farms, based on the number of families involved in ownership and management and the amount of hired labor and management. Off-farm income could be a major source of family income if earned by another family member. These businesses are 25% - 30% of farm numbers and generate 75% of U.S. farm production.

In summary, our concept of a family farm is shaped by our social, economic and cultural history. The key issues that have been involved in the concept of a family farm are: (1) family control of most management decisions; (2) family ownership vs. rental of farmland; (3) number of families involved in the farm business; (4) extent of hired labor vs. family labor; (5) farm family reliance on off-farm employment and off-farm income; (6) source of equity capital and extent of debt capital; and (7) farm business size as determined by various output measures (gross farm sales, value of production) or input measures (acres, labor requirements). Our concept of what items constitute a "family farm" has

changed over time and reflects the influence of structural changes in agriculture and in our national economy.

MAJOR ECONOMIC AND SOCIAL FORCES CREATING STRUCTURAL CHANGES IN FARMING

My review of agricultural trends in North America and Europe indicates the following major external forces are impacting the structure of agriculture (and family farming) in all of these nations: (1) technological change; (2) economic development; (3) national macroeconomic and agricultural policies; and (4) internationalization (globalization) of agriculture.

Technological Change

Technological changes have increased the ability of agriculture and agribusiness to produce more volume with less resources. New technology is successfully adopted if it reduces real costs per unit of output. This process has resulted in additional profits for the successful technology adopter and eventually lowers real food prices to consumers. Technological changes in agriculture and agribusiness are worldwide in scope, occurring at different rates in different locations.

The first great technological change -- the shift from human to animal to mechanical power -- greatly reduced labor requirements per acre of land. The second -- the scientific revolution -- greatly increased yields per acre of land or per animal. Both of these technological revolutions are continuing with increased attention to genetic engineering and biological controls, instead of greater reliance on chemicals and fertilizers. In addition, the contemporary information revolution is joining the other two in bringing about major changes in agriculture. Future paths of technological innovation are difficult to

predict, but will likely reflect greater attention to environmental consequences than in recent decades.

Economic Development

Economic development is the process of increasing per capita incomes and living standards of most people in a society. Since World War II, total economic activity and the living standards of most people have both greatly increased. Economic development has been greatly aided by increased public investment in education and health care. This has provided more resources for families, making it easier for families to adjust to changing economic opportunities available and for farm families to manage today's high technology agriculture.

Economic development is strongly associated with real income growth per capita and modest population growth. This has resulted in increased overall demand for most food products and changed the composition of demand for many food items over time. In general, there is a greater demand for built-in services (conveniences) in purchased foods and greater consumption of foods away-from-home. This results in a lower proportion of the consumer's food dollar captured by the farm sector and a higher proportion captured by agribusiness, food wholesaling and retailing.

The food retailers' perception of consumer food needs is a leading force driving changes in food processing and farm production -- to leaner meats, uniform product standards, and growing use of production contracts. In my view, the ability of family farms to respond to changing consumer and food industry concerns is the greatest challenge (and potential threat) for family farm agriculture in the next 20 - 30 years.

National Macroeconomic and Agricultural Policies

Macroeconomic policies have a tremendous influence on a nation's commercial agriculture sector. Macroeconomic policies affect agriculture by influencing the level of prices, cost of credit, and the demand for land and other capital assets. The U.S. farm financial crisis of the 1980's was precipitated by inflationary policies of the 1970's and shifting (by the Federal Reserve Board in late 1979) to a restrictive monetary policy that drastically increased interest rates in the early 1980's. Higher interest rates became the primary method of reducing inflation rates as fiscal policy remained expansionary. A balanced macroeconomic policy of fiscal and monetary restraint can have substantial positive impacts on commercial agriculture by reducing inflation rates and interest rates.

Agricultural policies of most industrialized nations (including the U.S.) provide some degree of price and income protection to farmers. The amount and type of price/income protection varies greatly by nation, but the benefits are usually distributed based on the amount of farm production, instead of financial need or poverty of farm families. In my view, the net result of agricultural price/income policies in the U.S. and in Europe has been to increase the rate of technological advance and accelerate the movement of farm families out of agriculture and shift many full-time farmers to part-time farmers. This latter point is hotly debated however!

Internationalization of Agriculture

The increased importance of international trade is illustrated by the fact that 2-3% of the world's food supply was traded across international boundaries in 1950, compared to 12-13% of the world's food supply in the 1980's (Kohls and

Uhl, 1985, p. 124). The physical tonnage of world grain production has increased by more 2.5 times, during this 40 year period.

Internationalization of U.S. agriculture is a reality and has both advantages and disadvantages. The major advantages are: (1) increased variety of consumer goods at lower costs, (2) increased sources of purchased inputs, and (3) rising economic standards of living for the vast majority, but not necessarily all, U.S. families. Increased international trade also fosters innovation and has the effect of forcing business to modernize facilities and management practices in order to remain competitive.

A major consequence of increased international agricultural trade is greater price instability. Government programs are not as effective in maintaining commodity price stability in an era of international markets. Furthermore, farmers in all industrialized nations are more vulnerable to the impacts of using agriculture to achieve international policy objectives.

Domestic farm policies are invariably linked to international trade policies. Major challenges facing world agriculture in this decade are how to reform agricultural policies and trade policies to capture the benefits of increased trade and meet the legitimate needs of domestic industries adversely affected by trade. Farmers in the U.S. and many other nations will be critically affected by the outcomes of agricultural trade policy reforms.

STRUCTURAL CHANGES AND THEIR CONSEQUENCES
- EXAMPLES FROM SOUTH DAKOTA AGRICULTURE -

The major external forces discussed above have had substantial impacts on the structure of agriculture. The following structural changes are occurring throughout North America and Europe: (1) declining farm numbers and increasing

farm size; (2) increased sales volume, concentration and specialization; (3) greater reliance on debt capital (until recently); and (4) growing importance of off-farm employment and income (Galeski and Wilkening, ed., 1987). South Dakota examples are used to illustrate these trends.

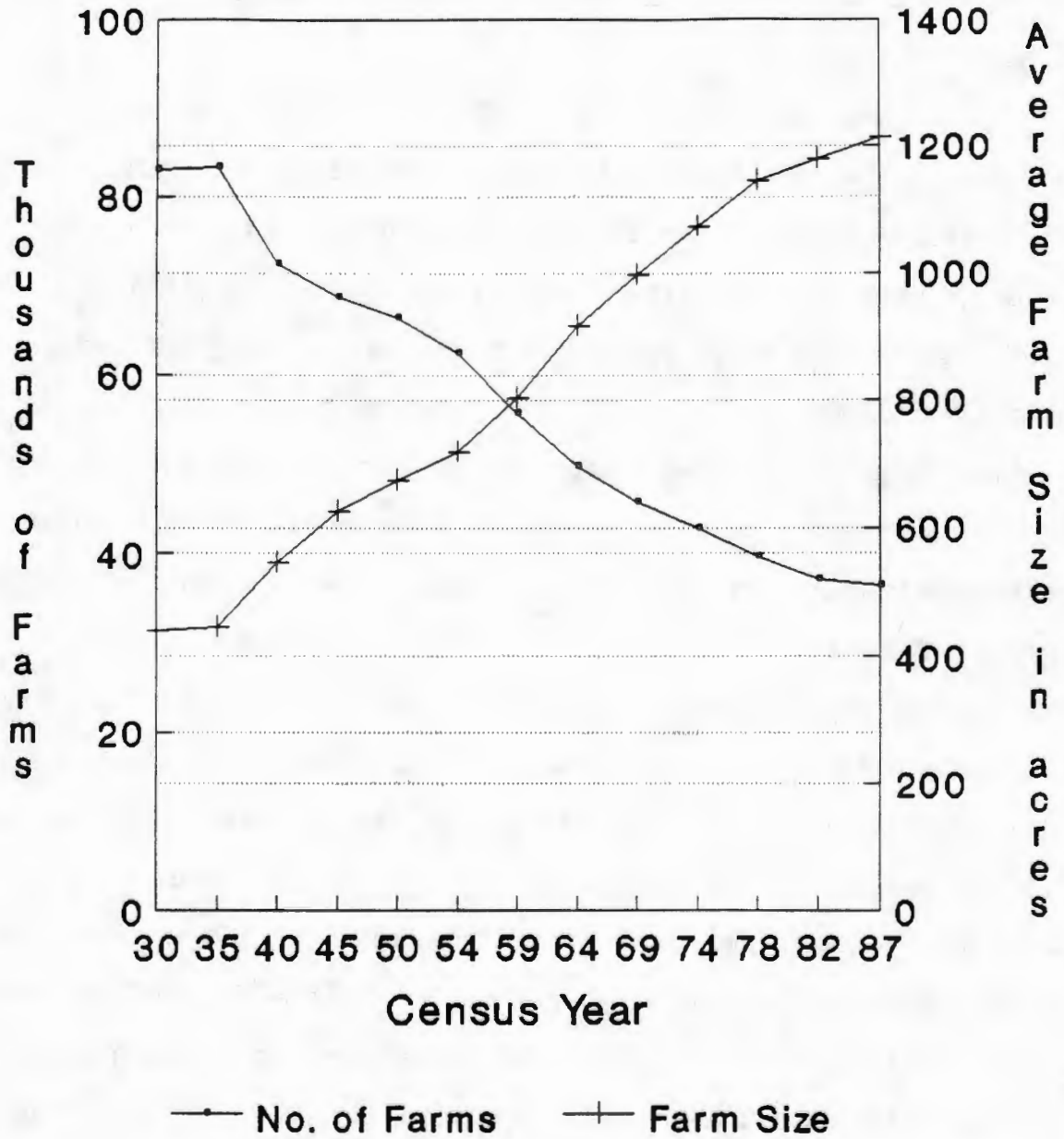
Declining Farm Numbers and Increased Farm Size

Since 1935, the total amount of land in South Dakota farms has remained about the same, the number of farms has decreased, and average size of farms has increased. From 1935 to 1987, the number of South Dakota farms declined from a peak of 83,500 to 36,400, while average farm size increased from 445 acres to 1215 acres (Figure 1). Percentage rates of decline in farm numbers have varied with changing national economic and farm economic conditions. The primary explanations for the long-term decline in farm numbers are technological changes in agriculture and national economic prosperity which has led to rapid growth in nonfarm job opportunities (Janssen, 1987).

The smallest farms are found in southeastern counties, with average farm sizes of 400 - 800 acres, while the largest farms and ranches are in western South Dakota where average sizes are several thousand acres. A dual trend in farm sizes (based on acres) is emerging in all regions of South Dakota. Increased average farm size is accompanied by a growing number of very small farms (less than 140 acres), a declining number of medium-size farms, and a growing number of large (2,000 acres or more) farm operations.

Future trends in farm numbers (and farm size) are sensitive to the age distribution of current farm operators and socioeconomic conditions that determine entry rates of younger people into farming. In 1987, 22,100 farmers were 45 years of age or older; most will retire from farming by the year 2015. however, there currently are only 14,400 farmers to replace them.

Figure 1
Increased Farm Size and Decreased Number of South Dakota Farms, 1930 - 1987



Increased Sales Volume, Concentration and Specialization

Average gross sales per farm in South Dakota has greatly increased over the past three decades from $9200 in 1959, to $20,900 in 1969, to $48,100 in 1978 to $74,800 in 1987. The main reasons for increased sales per farm have been inflation and economic pressure for increased farm size to maintain acceptable profit and net cash flow for business growth and improved family living standards (Janssen, 1987).

Large farms with sales volume of $250,000 or more in 1987 were 4% of farms and accounted for 36% of total sales volume. At the other extreme, small farms selling less than $40,000 were 55% of farms and accounted for 11% of sales volume (Table 1). Large farms are rapidly increasing in number and proportion of sales volume, while small farms are declining in numbers and proportion of sales volume. Most of the large farms are family farm units operated by one family or by a family partnership/corporation. Medium size farms have maintained their share of farm numbers and sales volume, but their operators have experienced the greatest adjustment pressures. Many of these farms are not large enough to generate adequate net incomes, but are large enough to prevent farm operators from assuming off-farm employment opportunities.

Sales concentration has increased for South Dakota and U.S. farms. Almost all of the increase in sales concentration has been generated by the largest 10% of South Dakota farms and ranches. In 1987, the largest 10% of farms generated 50% of South Dakota's gross farms sales, compared to only 35% of gross farm sales in 1959. Meanwhile the smallest 50% of farms have dropped from one-fourth of farm product sales in 1959 to 9% in 1987. Considerable economic pressures remain for continued sales concentration and it is likely that the middle 40% of farms will be unable to maintain their share of sales in the future.

Table 1. Distribution of Farms by Sales Volume, South Dakota, 1987.

Farm Sales Class	Thousands of Dollars	Percent of Farms	Percent of Sales
Large	$500 or more	1.2	23.5
	$250 - 499	2.8	12.5
Medium	$100 - 249	14.6	28.9
	$ 40 - 99	27.8	24.2
Small	$ 10 - 39	32.3	9.6
	$ 1 - 9	22.3	1.3
Total		100.0	100.0

Source: USDA. Census of Agriculture, South Dakota.

Increased sales volume and concentration have been accompanied with greater enterprise specialization on individual farms. However, South Dakota farms are not as specialized as farms in many other regions of the country. For example, most South Dakota farms raise several crops, forages and one or more species of livestock. Some larger farm units have gained the benefits of diversity and specialization by having several families in the farm operation, each specializing in some aspect of the operation, while maintaining a breadth of enterprises. The "sustainable farm" movement has also increased our attention on the use of appropriate technology and maintaining a greater diversity of enterprises. Many families on smaller farms have economically diversified their household by combining farm and off-farm employment.

Greater Reliance on Debt Capital

The combination of declining farm numbers and rapid growth of capital requirements in agriculture has led to phenomenal growth in capital and credit use per farm. In 1970, the average South Dakota farm operator controlled $138,000

in assets and had debts of $26,500. By 1982, asset values per farm had increased by 420% to $580,000 while debts increased 480% to $127,000 per farm (Table 2). More than half of the increase in asset values was caused by appreciation of

Table 2. Average Value of Assets, Debt and Equity, Per Farm, South Dakota, 1970-1989.

Year (January 1)	Total Assets	Total Debt	Total Equity	Debt to asset ratio
	thousand of dollars per farm			percent
1970	138.0	26.5	111.6	19.2
1974	214.7	37.4	177.3	17.4
1978	359.6	68.5	291.1	19.1
1982	579.9	126.5	453.4	21.8
1986	442.1	133.5	302.6	31.5
1989	447.6	96.5	351.1	21.6

Source: USDA, Economic Indicators of the Farm Sector: State Financial Summary

farmland values, while all of the rise in debt reflects increased cash flow commitments. This rapid increase in debt per farm was not sustainable, because net income increases were not sufficient to service this amount of debt.

From 1982 to 1987, South Dakota farmers experienced a 50% decline in farmland values, the sharpest 5 year decline in this century! Farmland values are a barometer of current income trends in farming and future income expectations. South Dakota farmers (and their lenders) faced with intolerable debt levels reduced total farm debt by $2.0 billion from 1982-1983 to the end of 1989, from $5.4 billion to $3.4 billion. Changes in financial priorities, greater attention to cost controls, improved livestock prices, Federal farm program payments and loan write downs were all responsible for this dramatic turnaround! The financial condition of South Dakota agriculture in the early 1990's is the best it has been since the early to mid 1970's! The next 20 years can also be financially

rewarding, if the 1980's lessons of conservative financial management and controlling costs are not forgotten.

Growing Importance of Off-farm Income

Income received from off-farm sources is a major component of net household income earned by many farm families. Since 1964, a majority of net family income earned by U.S. farm families has originated from off-farm sources and is concentrated among farmers with less than $40,000 of gross farm sales.

South Dakota farmers receive a lower proportion of their family income from nonfarm sources than farmers in most states. Off-farm income is typically 30% - 40% of farm household net income in South Dakota, compared to 50% - 60% of U.S. farm household net income. However, off-farm income in South Dakota has consistently increased and has been much less volatile than net farm incomes, which are subject to the uncertainties of weather, prices, farm exports and changing government farm programs (Janssen, 1987).

A major implication is that nonfarm employment growth throughout South Dakota is important for the continued viability of many South Dakota farm operations. A growing number of South Dakota farm families rely on off-farm income to meet living expenses, make debt payments and increase or stabilize family income levels. More spouses are pursuing nonfarm careers, and some producers are combining off-farm employment with farming and ranching. These employment options and improved net farm incomes are essential to the economic well-being of South Dakota farm and ranch families.

SUCCESSFUL FARM FAMILIES AND FARMING IN SOUTH DAKOTA

The previous review of family farm concepts, major external forces, and structural changes provides an overall macro-perspective of agriculture. However,

one needs to examine the conditions of individual farm families and farm businesses to assess how well they are coping with, adapting to, and influencing the many changes that are occurring.

Successful family life and successful farm business management are very important and interrelated concerns of farm couples. Dr. Ron Stover, Dr. Virginia Clark and myself, with Peggy Schlechter and Scott Peterson, have spent considerable time on the South Dakota Family Farm research project trying to identify key characteristics which have enabled many farm families and their farm business to succeed in the current economic and social environment.[2]

South Dakota Family Farm Project

Three basic assumptions guided this study. First, two components were needed to identify successful farm families: (1) financial viability and (2) quality of family life. Second, information should be obtained from the farm couple (both spouses) instead of only the farm operator. Finally, information should be obtained from a large-scale mail survey of farm families across South Dakota and from indepth personal interviews of selected farm families.

Data Collection Procedures and Respondent Characteristics

In the Spring of 1989, surveys were mailed to a random sample of farm households in each county of the state. Two separate questionnaires were sent to each household - one addressed to the farm operator and one addressed to their spouse. Each contained a core set of questions to be answered by both parties and other questions to be answered only by the operator or by his/her spouse. A total

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[2]Most of the contents in this section are a condensation of materials written by myself, Virginia Clark and Ron Stover entitled: "Successful Farm Families and Farming in South Dakota" which is published as SDSU Economics Commentator issue no. 291, Nov. 13, 1990.

of 549 married farm couples completed both questionnaires. In all 549 cases, the husband was reported as the farm operator.

Respondents were much more likely to operate commercial family farms (full-time or part-time) than are all South Dakota farm families. Nearly 80% of respondents generated annual farm product sales of more than $40,000, compared to only 47% of all South Dakota farm operations. Respondents are the same average age and operate somewhat larger farms (1577 acres vs. 1214 acres) than is the case with all South Dakota farms. Otherwise, respondent characteristics are typical of the farm population in South Dakota.

Case studies were completed on 16 of the 549 couples, using detailed on-farm personal interviews and, with their permission, examining their financial records using the FINPACK software programs. These families were personally selected by County Extension Agents in three South Dakota counties (Lincoln, Bon Homme and Jones) as examples of "successful farm families operating successful family farms". These case study respondents operate somewhat larger than average size farms in their locality, operate diversified crop and livestock farms, and are part owner operators relying more on rented land than owned land (Peterson, 1990). Findings from the case study farms are incorporated in each section along with findings from the entire set of 549 respondent couples.

Measures of Farm Family Success and Farm Business Success

A core assumption of this project was that truly successful farm families were successful from both family life and farm business standpoints. Thus, information was collected on both aspects of family farming.

Farm Business Success

Two key financial indicators - net farm income and total debt-to-asset ratio of the farm business - were used to classify respondents by farm financial position. These measures of farm financial viability were used as indicators of farm business success. A total of 420 of 549 respondents provided sufficient information to classify their financial position. One half of these classified farm operations were in a favorable financial postion and the remainder were in marginal income, marginal solvency or vulnerable financial position (Figure 2).

Farm operators in a favorable financial position have relatively low financial leverage, low amount of financial stress, and generate moderate-to-high net incomes. Many of these farmers are in a position to expand and make other management changes without undue restraint by their lender. Those in a marginal income position have low financial leverage and low farm income. These farms may have trouble expanding using debt capital unless they can improve their income prospects. However, most can probably survive in farming if they are willing to reduce living expenses or rely on off-farm income.

Farm operators in a marginal solvency position are highly leveraged and are generating modest-to-high net farm incomes. Reduced profits could easily switch these farmers into a precarious financial position. To survive and possibly expand, these farms must be carefully managed with considerable attention to risk management and financial management. Farm operators in a vulnerable financial position are highly leveraged, are not generating adequate net farm incomes, and must make immediate changes in their operation to ensure their continued survival as a family farm business.

Financial stress is still evident on many South Dakota farms. Only one-half of respondent operations were in a favorable financial position. Nearly one-third

Figure 2. Categories of Family Farm Success[1]: Net Farm Income by Total Debt/Asset Ratio

Total Debt/Asset Ratio	Net Farm Income[2]	
	At Least $10,000 Per Year	Less than $10,000 Per Year
Low Debt 0.00-0.39	**Favorable** (210 farms/ranches) Total Assets = $437 Net Worth = $375 Net Farm Income = $ 40 Fed. Payments[3] = $ 20	**Marginal Income** (70 farms/ranches) Total Assets = $231 Net Worth = $201 Net Farm Income= -$0.6 Fed. Payments = $ 10
High Debt 0.40+	**Marginal Solvency** (92 farms/ranches) Total Assets = $424 Net Worth = $152 Net Farm Income = $ 34 Fed. Payments = $ 28	**Vulnerable** (48 farms/ranches) Total Assets = $234 Net Worth = $ 81 Net Farm Income= -$2 Fed. Payments = $ 11

[1]Only 420 farming operations provided the necessary information for this classification. Dollar averages are reported for each category.

[2]The dollar figures have been rounded to the nearest 1,000 dollars. Net farm income equals net cash farm income minus depreciation. It is not adjusted for inventory changes.

[3]Federal farm program payments

of classified farms reported debt/asset ratios above 0.40 and 28% reported 1988 net farm incomes of less than $10,000. Government farm payments were about 15% of gross farm income and a majority of net farm income in all farm finance classes.

Larger farm size, higher sales/asset ratios, higher net margin percentages and subsequent higher rates of return on equity were the key differences between favorable (more than $10,000) and less favorable (less than $10,000) net farm income levels. These financial indicators show that producers achieving higher net farm income levels also have lower costs per dollar of output.

All case study farm respondents reported moderate-high net farm incomes and most were in a favorable financial positions. These respondents also indicated conservative financial management practices and careful attention to controlling input costs were important factors in their "business success".

Family Success

Two elements of family life were considered in measuring the extent of family success of respondent farm couples: (1) satisfaction with family life and (2) extent that a family operates as a cohesive social unit (coherence). Considerable family life research indicates that a strong relationship exists between the quality of life and respondents reported satisfaction with family life. Additional research indicates that families characterized by a high degree of cohesion are better able to adapt to highly stressful situations, and that successful adaptation to stressful situations is highly correlated to satisfaction with family life (Clark, et.al. 1988).

A measure of family satisfaction was obtained by asking respondents how satisfied they were with various aspects of their family life on a scale ranging from "completely satisfied" to "dissatisfied". Examples of the family life

aspects included are "the extent to which family members are close to each other" and "the way family members communicate with each other". A separate set of questions was used to measure family coherence. An average (mean) score across all satisfaction and (separately) across all coherence items was calculated for each respondent.

Based upon both the husband's and wife's scores for both satisfaction and coherence, each couple was classified into one of four family success categories. The family success categories and percent of couples in each category were: high (24%), medium-high (34%), medium-low (15%), and low (13%). A fifth category - "divergent"- was created for the 14% of farm couples where the husband's and wife's responses were starkly different.

Family success measures of respondent couples were strongly related to their farm financial position. Families operating low debt farms were very likely to be in the high or medium-high family success category, while families operating highly leveraged farms were almost as likely to be in the low or medium-low category as in the high or medium-high family success category (Table 3).

Relationship of Selected Variables to Farm Business/Family Life Success

Work Roles

Nearly half of respondent families had the farm operator and/or their spouse engaged in off-farm employment. The employment patterns were: for 52%, neither worked off-farm; for 6%, the husbands but not the wives worked off the farm; for 28%, the wives only worked off the farm; and for the remainder (14%) both worked off the farm. The incidence and extent of off-farm employment was much greater for young and middle-age farm couples, smaller operations, and for those in a higher leverage financial position.

Table 3. Relation of Farm Financial Position to Family Life Success Measure

Family Life Success	Financial Position: Low Debt (D/A<0.4)	High Debt (D/A>0.4)	All
	--percent of farm couples--		
High & Medium-High	65	46	58
Low & Medium-Low	21	40	28
Divergent	14	14	14
Total	100	100	100

Source: South Dakota Family Farm Survey.

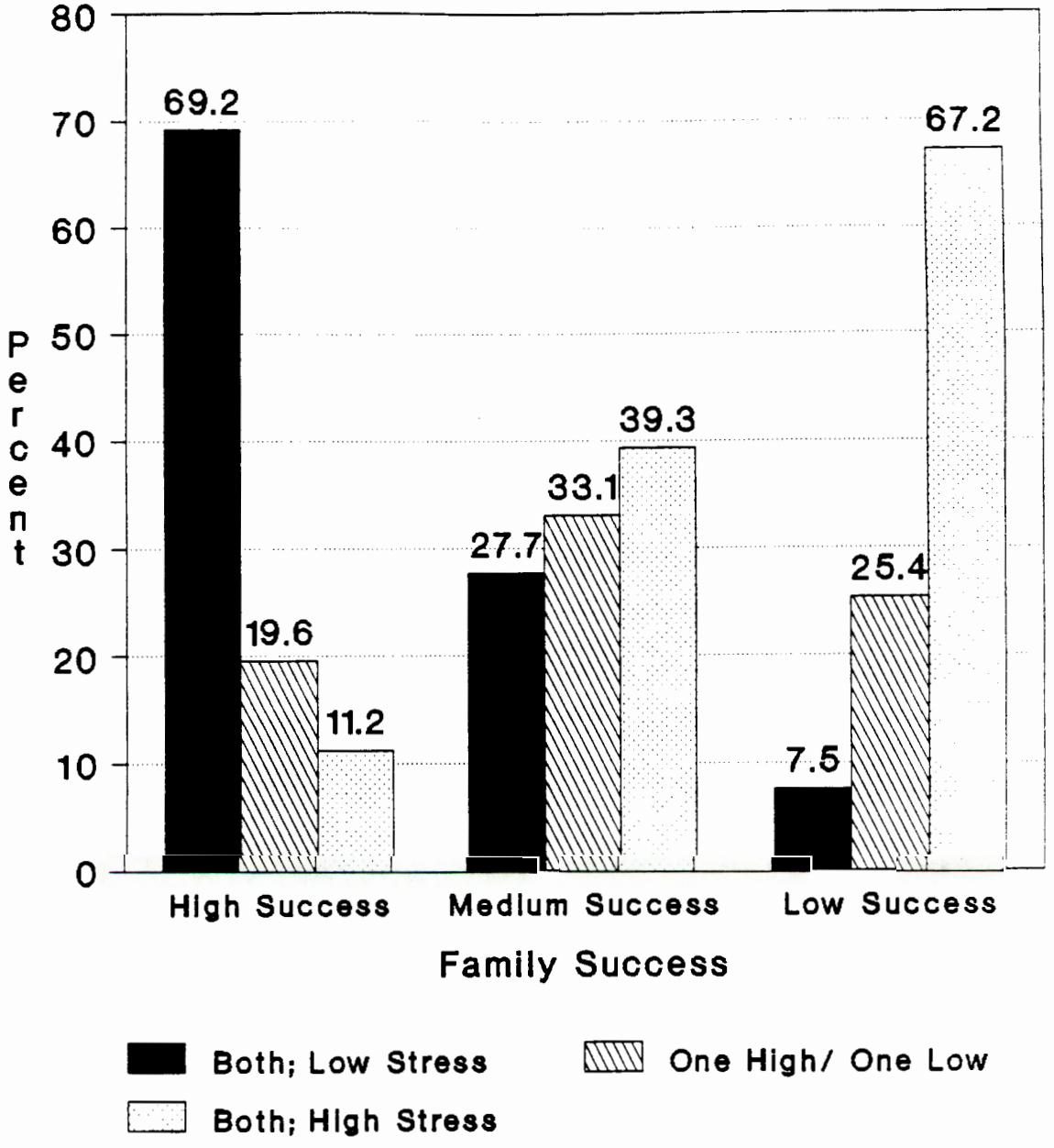
A majority of farm women (56%) reported active involvement in the daily work of the farm operation on a part-time/seasonal or a full-time, year around basis. The extent of farm women's active involvement in the farm operation declined if they were employed in a full-time off-farm job. Farm women assumed most houshehold tasks with occasional help or no help from their husband.

All case study farm operators were full-time farm operators and most received considerable assistance from their wife and children in performing farm related tasks. The work roles of family members were traditional and well-defined. A few spouses also worked at off-farm jobs.

Level of Stress

Respondent farm couples generally have moderate-to-high levels of stress. Lower stress levels were found to be positively associated with financial viability and with family life success. Nearly 69% of farm couples in the high family success category also experienced low levels of stress. In contrast, two-thirds of farm couples in the low family success category experienced high levels of stress (Figure 3). Those couples with

Figure 3
Couple Stress, By Family Success



Source: South Dakota Family Farm Survey

lower than average stress levels had higher family coherence and satisfaction scores and were much more likely to be in a low debt (favorable or marginal income) position.

Decisionmaking Style

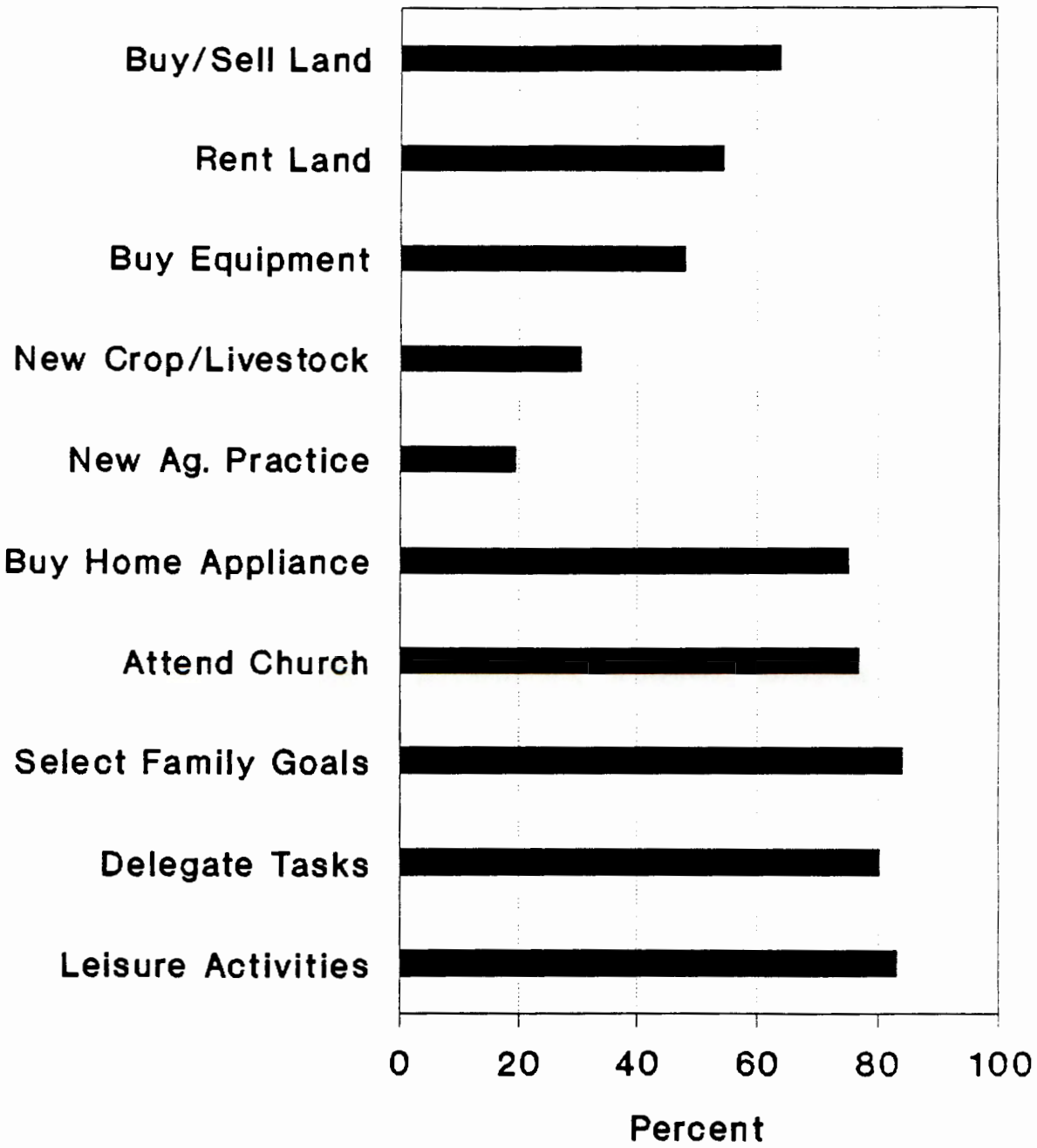
Stress-oriented studies indicate that shared decisionmaking is an important characteristic of "crisis proof" families and is a key characteristic of "successful families". Most respondent farm couples (75% - 84%) used a shared (collaborative) decisionmaking approach to family/household decisions and a majority used that approach to farm business decisions involving farmland rental or purchase. The operator was the principal decisionmaker on most other farm-related decisions (Figure 4). The extent of shared decisionmaking on farm-related decisions and family/household decisions was strongly and directly associated with family life success.

Almost all case farm respondents used a shared decisionmaking approach in making major farm business decisions and in making family decisions. All case study farm couples had fairly specific goals that combined family life and farm business preferences. In most cases of goal conflicts, the outcome of shared decisionmaking was priority given to farm business goals.

Extent of Couple Agreement

Most married couples have disagreements in their relationships. However, effective family functioning depends on their general agreement on basic issues including: making major decisions, child rearing, household finances and several other items.

Figure 4
Decisions Made Collaboratively



Source: South Dakota Family Farm Survey

Couple agreement on basic issues was strongly associated with farm financial position. The level of agreement was the highest for those in a favorable financial position and lowest for those in a vulnerable financial position. Couples reporting high levels of agreement were much more likely to have high levels of family satisfaction and coherence. Nearly half of farm couples reporting relatively low levels of agreement were in the low or medium-low family success category and very few (5%) were in the high family success category.

Farm Management Practices

Most repondents made numerous changes in farm management practices in the past five years. From 1984 - 1988, debt reduction was a priority for 70% of farmers, while purchasing crop insurance was a management change for nearly half of respondents. Renting more acres was a management change for nearly 40%, while 26% of respondent families purchased additional farmland. More than 60% of respondents reported using production records, balance sheets, income statements, and annual cash flow statements for making management decisions. Enterprise budgets were periodically used by 42% of farmers, while 30% reported using multi-year cash flow plans.

Respondents' use of farm records and many other management changes were strongly related to their farm financial position. Farmers achieving higher net farm income levels were much more likely to use farm production and financial records, raise new crops, use forward contracts, and purchase crop insurance. Respondents in a high leverage and moderate-high net income (marginal solvency) position had made the most changes in their operations and were much more likely to use farm records in making decisions. Farmers in a low leverage and low net income (marginal income) position had made the least amount of management

changes, were less likely to use Federal and state programs, and were the least likely to use farm records in making decisions. Farmers in a favorable financial position had made changes that permitted expansion of their operation, while those in a vulnerable financial position had emphasized debt reduction and other survival strategies.

All case study respondents used farm records in their decisionmaking processes, participated in Federal and state programs, and had made specific management changes in the past five years. Most of them used forward pricing and cash market pricing for their grain and livestock sales. All case study farmers had expanded in the past five years by renting additional land or purchasing farmland.

All case study farmers had started farming with family assistance or in a "family partnership", but had expanded their operation primarily from renting or buying land from unrelated individuals. All of these operators were between 24 - 34 years of age when they assumed primary responsibility for operating the farm and making the management decisions.

OVERALL ASSESSMENT

High levels of family life satisfaction and coherence are major attributes of "successful farm families". These families also have high levels of couple agreement on basic issues, practice shared decisionmaking, and have greater ability to handle stress. Major characteristics of "successful farm managment" are: (a) production ability and timeliness; (b) marketing and financial management; (c) ability to handle change and other stressors; and (d) positive attitudes toward work, family and other key relationships. Family farming requires an integrated approach to business managment and family life. For most

farm couples, successful farm business management and successful family life are very much interrlated.

In closing, I agree with Professor Don Paarlberg's assessment that family farms are and will remain a major institution in our society. Paraphrasing Paarlberg, the family farm "has survived war, depression, natural disaster, technological revolutions and, with a little luck, it will survive academic studies and the best efforts of politicians!" (Paarlberg, 1980,p. 203).

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