Agricultural Economics Report No. 258 June 1990

USDA Farm Programs: North Dakota Farmer Participation and Opinions

Roy M. Jacobsen, David L. Watt, Bruce Dahl,
Randy Sell, F. Larry Leistritz, and Gary Goreham

Department of Agricultural Economics
North Dakota State University
Fargo, ND 58105

Table of Contents

List of Tables

USDA Farm Programs:
North Dakota Farmer Participation and Opinions

Roy M. Jacobsen, David L. Watt, Bruce Dahl,
Randy Sell, F. Larry Leistritz, and Gary Goreham[1]

The closing years of the 1980s were particularly challenging for North Dakota farmers and ranchers. Heavy debt, high interest rates, and falling land prices induced the financial crisis between 1981 and 1984 but began to improve somewhat in 1986, 1987 and early 1988. However, during 1988 farm and ranch operators in many parts of the Northern Plains were faced with the worst drought conditions since the 1930s.

Despite the severity of the 1988 drought, disaster payments and deficiency payments helped most North Dakota farmers and ranchers do reasonably well financially that year (Leistritz et al. 1989). Also, many farmers sold off grain inventory and reduced beef herds, which also increased their cash returns. However, with another drought in 1989 and the prospects of continuing drought conditions in 1990, the immediate future of farming in North Dakota looks difficult.

It was in the context of the financial stresses being experienced by many farmers in the 1980s that the 1985 Farm Bill was enacted. Now, with the 1990 Farm Bill under consideration, many special interest groups are lobbying for the addition of more environmental restrictions to farm policy, and policymakers are looking for information on farmer participation in and attitudes toward USDA farm programs.

Study Procedures

To gather this information, a survey of North Dakota farm and ranch operators was conducted in March and April 1990. The survey was administered to 675 North Dakota farmers and ranchers. Their names were obtained from three sources in order to compare farmers with membership in environmentally oriented organizations with the other North Dakota farmers. These sources were; the North Dakota/Manitoba Zero Tillage Farmer's Association, the Northern Plains Sustainable Agriculture Society (NPSAS), and a panel of farmers previously surveyed by the NDSU Agricultural Economics Department (Leistritz et al. 1989). A response rate of over 68 percent was achieved. Thus, we believe that the result of this survey can be generalized to similar groups of farm operators across the state.

The survey was conducted in two steps. The first step consisted of a telephone survey. The respondents of the telephone survey were mailed a questionnaire to be completed and returned.

The responses to the farm program and farm income questions asked in the telephone portion of the survey are shown in Table 1 and

[1]The authors are, respectively, research assistant, associate professor, research assistant, research assistant, and professor, Department of Agricultural Economics; and assistant professor, Department of Sociology, North Dakota State University, Fargo, ND.

TABLE 1. PARTICIPATION IN AND OPINION ON USDA FARM PROGRAMS BY NORTH DAKOTA FARM SURVEY RESPONDENTS

Item	Farm Panel*	NDMZTFA**	NPSAS***
# responding	340	65	56
Involved in government program	88%	98%	79%
Which programs?			
Feed grain	66%	82%	50%
Wheat	79%	92%	64%
CRP	25%	37%	21%
Programs restrict rotations	35%	71%	64%
Which programs?			
Feed grain	19%	45%	38%
Wheat	14%	51%	41%
CRP	1%	3%	2%
Base constraints	3%	3%	13%
Set aside	--	8%	9%
All programs	2%	--	--
Programs promote conservation	42%	37%	36%
Which programs?			
Feed grain	4%	2%	--
Wheat	5%	2%	--
CRP	7%	3%	5%
Set aside	13%	18%	13%
Sodbuster	2%	--	--
Conservation plan	3%	--	--
All programs	1%	--	--
Programs damage conservation	20%	52%	39%
Which programs?			
Feed grain	3%	15%	7%
Wheat	4%	22%	5%
Base constraints	2%	2%	5%
Set aside	4%	18%	7%
Sodbuster	2%	3%	2%
Swampbuster	3%	--	--
Conservation requirements Too strict or too lenient			
No response	5%	2%	13%
Far too strict	9%	8%	4%
Too strict	36%	22%	21%
Just right	39%	34%	29%
Too lenient	10%	26%	30%
Far too lenient	1%	9%	4%

*A panel of farmers previously interviewed by the NDSU Agricultural Economics Department.
**Members of the North Dakota/Manitoba Zero Tillage Farmers' Association.
***Members of the Northern Plains Sustainable Agriculture Society.

Table 2. The responses of the three groups (general panel, no-till, and NPSAS) are discussed below.

Farm Program Participation and Opinion

Farmers were asked in which of the various farm programs they were involved. Of the 65 no-till farmers included in the survey, all but one were involved in federal farm programs in 1989 (98 percent). Ninety-two percent participated in the wheat program, and 82 percent participated in the feed grain program. Thirty-seven percent of the no-till farmers took part in the Conservation Reserve Program (CRP).

Fifty-six of the farmers participating in the survey were members of the Northern Plains Sustainable Agriculture Society (NPSAS). Most of these farmers have Farm Verified Organic acreage. Although a slightly smaller percentage of this group were involved in farm programs when compared to the other two groups, it was still fairly high (79 percent). Sixty-four percent said they were in the wheat program, 50 percent in the feed grain program, and 21 percent in CRP.

The 340 survey respondents drawn from the 1989 longitudinal farm panel were representative of all North Dakota farmers. Their characteristics compared closely to those found in the 1982 Census of Agriculture. Eighty-eight percent of the farm panel were involved in government programs. The wheat program had the greatest proportion, 79 percent. Over 66 percent of the farmers were in the feed grain program. One-fourth of the farmers (25 percent) were involved in the Conservation Reserve Program (CRP).

Farm Programs and Crop Rotation

The farm operators were asked how they believed the various programs affected their ability to rotate crops. Nearly three-quarters of the no-till group (71 percent) said that farm programs kept them from using a desired rotation. Fifty-one percent said the wheat program restricted their rotation options, and 45 percent said the feed grain program was restrictive.

Nearly two-thirds of the NPSAS members, 64 percent, felt that their rotation choices were limited by farm programs. Forty-one percent stated that the wheat program limited their rotation options, and 38 percent felt that the feed grain programs kept them from planting a desired rotation. Thirteen percent said the base acreage constraints of the farm programs were restrictive.

Over a third (35 percent) of the longitudinal farm panel felt that some of the farm programs kept them from planting a desired rotation. The feed grain program and the wheat program was reported by 19 percent and 14 percent, respectively, as restricting their rotations. Three percent said the base acreage constraints limited their rotation options.

Farm Programs and Conservation Efforts

The survey included questions on farm programs and their effect on farmers' conservation efforts. More no-till farmers felt that farm programs damaged their conservation efforts than farmers who felt that such programs promoted conservation efforts (52 percent and 37 percent, respectively). Twenty-two percent named the wheat program and 15 percent the feed grain program as being damaging.

Few of the no-till farmers mentioned any specific programs as promoting conservation. One farmer believed that the feed grain program promoted conservation practices, and one farmer named the wheat program as a factor in promoting conservation. Two farmers believed the CRP helped promote conservation. Twelve farmers (18 percent) said that the set-aside requirements of farm programs promoted their conservation efforts, while an equal number said that set-aside damaged their conservation efforts.

Items were included on the survey to measure farmers' opinions regarding the conservation requirements of the current farm program. The no-till farmers had a diversity of opinions. Beliefs were almost evenly distributed between too lenient and too strict (26 percent and 22 percent, respectively) The most frequent response was that the conservation requirements of current farm programs are "just right" (34 percent).

Thirty-six percent of the NPSAS members said that farm programs promoted their conservation efforts, while 39 percent said farm programs were damaging to conservation. While 5 percent believed the CRP promoted conservation, 7 percent believed the feed grain program damaged their conservation efforts. Thirteen percent said that set-aside promoted conservation, compared to 7 percent who said it was damaging. The largest percentage of NPSAS members believe the current conservation requirements are too lenient.

Forty-two percent of the farm panel said that farm programs promoted their conservation efforts, while 20 percent said their conservation efforts were damaged by farm programs. Set-aside provisions and CRP were named most often by the farm panel as being helpful to their conservation efforts (13 percent and 7 percent, respectively). Interestingly, set-aside was also named most often by the farm panel members who thought farm programs were damaging to their conservation efforts (4 percent of the respondents). The general belief of these farmers was that the conservation requirements of the current farm program are too strict.

Financial Characteristics

Of the three groups surveyed, the no-till farmers had the highest average gross farm income in 1989, $145,698. Fifty-seven percent had gross farm incomes between $100,000 and $249,999. On average, 16 percent of the no-till farmers' gross farm incomes were from farm program payments (see Table 2).

The average net cash farm income was $11,324, 8 percent of average gross farm income. Twenty-nine percent of the no-till farmers had a net cash farm income of $25,000 or more. A larger portion (31 percent) had a zero or negative net cash income for the year. The remaining 40 percent had net incomes between $1 and $24,999.

TABLE 2. FINANCIAL CHARACTERISTICS OF NORTH DAKOTA FARM SURVEY RESPONDENTS

Item	Farm Panel 1988	Farm Panel 1989	NDMZTFA 1989	NPSAS 1989
Average gross farm income	$124,903	$119,250	$145,689	$79,834
Distribution				
< $40,000	13%	20%	3%	37%
$40,000-99,9999	42%	39%	27%	44%
$100,000-249,999	34%	30%	57%	15%
$250,000-499,999	8%	8%	13%	2%
> $500,000	3%	3%	0%	2%
Average net cash farm income	$22,441	$17,279	$11,324	$10,735
Distribution				
Zero or negative	11%	16%	31%	22%
$1 to $4,999	7%	15%	8%	11%
$5,000 to $9,999	12%	17%	11%	20%
$10,000 to $24,999	36%	29%	21%	31%
> $25,000	33%	22%	29%	16%
Average total assets	$419,047	$407,162	$531,712	$396,369
Average total debt	$133,991	$139,279	$201,237	$111,824
Average net worth	$285,891	$269,633	$330,474	$211,992
Average farm program payments	Not Available	$19,915	$23,456	$18,442
Average debt/asset ratio	.38	.56	.42	.57
Distribution				
No debt	16%	14%	11%	13%
.01 to .4	47%	44%	42%	30%
.41 to .7	23%	26%	27%	28%
.71 to 1.00	10%	9%	17%	25%
More than 1.00	4%	7%	3%	5%

Average total assets of the no-till group was $531,712, and average total debt was $201,237. Average net worth for 1989 was $330,474, and the average debt to asset ratio was 0.42.

The NPSAS member farmers had an average gross farm income of $79,834 for 1989, the smallest of the three groups. Thirty-seven percent made less than $40,000; 44 percent were in the $40,000 to $99,999 range; 15 percent fell into the $100,000 to $249,999 range. Farm program payments made up an average 23 percent of their gross farm income for the year, $18,442. The average net cash farm income was only slightly under that of the no-till farmers -- $10,735, or 13 percent of the average gross farm income. Of the NPSAS members, 31 percent made between $10,000 to $24,999, 20 percent made between $5,000 to $9,999, and 16 percent made more than $25,000 in net cash farm income in 1989. Twenty-two percent of the NPSAS member farmers had net cash farm incomes of zero or less.

The NPSAS members reported an average net worth of $211,922 in 1989. Average total assets were $396,369 and average total debt was $111,824. The average debt to asset ratio was 0.57.

For 1989, the average gross farm income for the farm panel group was $119,250, down 5 percent from the 1988 figure of $124,903. Twenty percent made less than $40,000, 39 percent were in the $40,000 to $99,999 range, and 30 percent were in the $100,000 to $249,999 range. In 1988, the bulk of the farmers were in the $40,000 to $99,999 range (42 percent), and the $100,000 to $249,999 range (34 percent). Seventeen percent of these farmers gross farm income last year came from government payments.

The longitudinal farm panel had the highest net cash farm income in 1989 of the three groups surveyed -- $17,279. That amount was down 23 percent from the previous year. Twenty-nine percent had net cash farm incomes between $10,000 and $24,999, 22 percent made $25,000 or more, and 17 percent were in the $5,000 to $9,999 range. Sixteen percent had net cash farm incomes of zero or less, up five percent from the previous year.

Average total assets for the longitudinal farm panel group fell 3 percent from $419,047 in 1988 to $407,126 in 1989. Average total debt increased 4 percent from $133,992 in 1988 to $139,279 in 1989. This resulted in an increase in the debt to asset ratio of 32 percent -- from 0.38 in 1988 to 0.56 in 1989. Average net worth fell from $285,891 in 1988 to $269,663 in 1989, a difference of 6 percent.

Conclusions and Discussion

Overall participation in USDA farm programs for all three groups was high. The lowest participation was in the NPSAS member group (79 percent). This may be because they feel the current programs do not give them sufficient flexibility in their crop choices. This conclusion is supported by the fact that a large portion of this group (64 percent) felt the farm programs kept them from planting a desired rotation. In any case, nearly one-fourth of these farmers (21 percent) were not participating and therefore not benefitting from the current farm programs.

Although the no-till farmers had the highest participation in farm programs (98 percent), they also had the largest percentage saying farm programs restricted their rotations (71 percent) and damaged their conservation efforts (52 percent).

Also, one might have expected the no-till farmers, with their emphasis on leaving sufficient ground cover to prevent soil erosion, would have felt the current conservation requirements are too lenient. However, that is apparently not the case. More of the no-till farmers felt that conservation requirements are just right (34 percent), rather than too strict (22 percent) or too lenient (26 percent). A greater portion of the NPSAS member farmers (30 percent) felt they are too lenient and most of the farm panel group felt they are just right (39 percent) or too strict (36 percent).

Although the NPSAS members' gross farm income was just over half that of the no-till farmers ($79,834 vs. $145,689), their net cash farm income was only 5 percent less than the no-till group. This implies that the NPSAS farmers had much lower costs than the no-till farmers. A major factor in this may be that the average NPSAS member had only half as much debt as the average no-till group member. Also, the longitudinal farm panel respondents had 18 percent less average gross farm income than the no-till farmers, but their average net cash farm income was 53 percent greater. This shows that the gross margin of the no-till farmers was much less than that of the other two groups -- 8 percent for the no-till compared with 13 percent for the NPSAS and 14 percent for the longitudinal group.

Even though the NPSAS members had the lowest participation in farm programs, they had the largest percentage of average gross farm income in the form of government payments -- 23 percent. The next largest was the longitudinal group at 17 percent, followed by the no-till farmers at 16 percent. This suggests that during the drought conditions of 1989, the NPSAS members who were involved in farm programs were more dependant on program payments for their farm income. Unfortunately, income data for previous years for both the NPSAS and the no-till farmers is not available, so comparisons of financial status under varying weather conditions are not possible for these two groups.

The farmers belonging to the no-till association had the largest farms with total assets over $500,000. The average for the farm panel is very close to that of the sustainable association -- around $400,000 of assets. The no-till group had the highest average amount of debt, but also the highest average net worth and the average debt/asset ratio was lower for the no-till group.

Thirty percent of both the no-till and NPSAS groups had debt above 70 percent of their assets. This implies that those 30 percent, unless they had very stable and profitable farm operations, face potential cash-flow problems because of the heavy debt load. Only 16 percent of the farm panel was in this at-risk category. However, that 16 percent was a increase from the 14 percent of the 1988 period. Much more noticeable was the increase in the debt/asset ratio from 0.38 to 0.56 of the farm panel and the fact that both the no-till and NPSAS members also have high average debt/asset ratios. The narrow gross margin of the no-till group with a debt/asset ratio of 0.42 implies a tenuous situation for many of those individuals. And the debt/asset ratio above 0.5 for the other two groups likewise implies that in general, the leveraging is high enough to become an issue when considering appropriate agricultural policies for the future.

From the data on the longitudinal farm panel, the drought of 1989 was a financial hardship for most North Dakota farmers. The "conservation compliance" program has the potential of being costly, and many proposed environmental restrictions will potentially increase costs or reduce yields. Unless income increases to help make up for increased costs, many farm operators are at a greater risk of going out of business.

Environmental issues are on many policymakers' agendas. However, with the strong possibility of continuing drought in 1990, and the financial stress that will undoubtedly accompany it, 1991 will not be a good year to impose further environmental restrictions on farmers without an adequate form of compensation.

This survey is a part of a three year study on the impacts of alternative farming methods on economy, ecology and society. Scientists in a variety of disciplines will be studying crop yields and production costs, soil and groundwater conditions, and the social and economic impacts on the community and regional level. Future reports will cover these aspects of the study and their policy implications.

References

Leistritz, F. Larry, Brenda L. Eckstrom, Janet Wanzek, and Timothy L. Mortensen. 1989. Economic Effects of the 1988 Drought in North Dakota: A 1989 Update of the Financial Conditions of Farm and Ranch Operators. Agr. Econ. Rpt. No. 248. Fargo: North Dakota State University, Dept. of Agr. Econ.

sds