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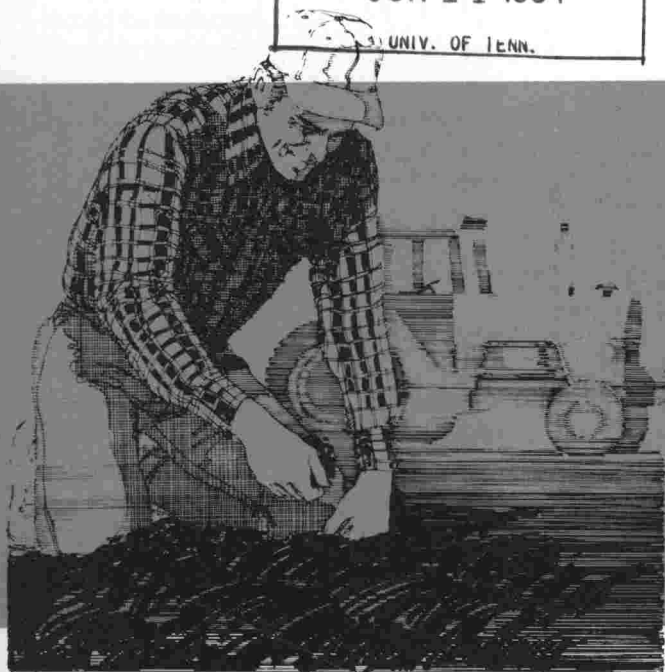
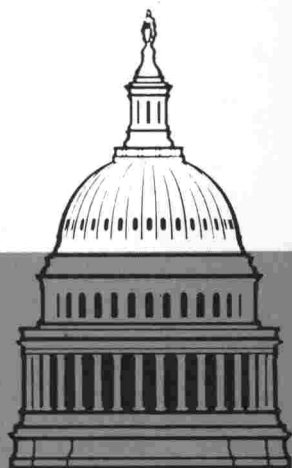
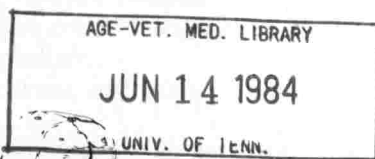
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Farm Problems and the Role of Government in Agriculture as Viewed by Tennessee Farmers

O. Neal Walker and Robert Orr



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Farm Problems and the Role of Government in Agriculture as Viewed by Tennessee Farmers

O. Neal Walker and Robert H. Orr*

INTRODUCTION

The goals of individual farmers frequently bear close resemblance to the farm fundamentalist creed, summarized by Paarlberg [4, p. 3] as consisting of the following beliefs:

1. Farmers are good citizens, and a high percentage of our population should be on farms.
2. Farming is not only a business but a way of life.
3. Farming should be a family enterprise.
4. The land should be owned by the man who tills it.
5. It is good to make two blades of grass grow where one grew before.
6. Anyone who wants to farm should be free to do so.
7. A farmer should be his own boss.

Prior to the twentieth century, the components of the creed were more or less internally consistent. But a high degree of success in "making two blades of grass grow where one grew before" (belief five) along with growth of science and technology in industry has resulted in an increasingly large proportion of the population being employed off-farm, in violation of belief one. Furthermore, the commercialization of agriculture and the subordination of agriculture in terms of national goals are now threatening the remaining articles in the creed.

Farm problems, and government actions intended to address these problems, tend to be multi-faceted and interrelated, resulting in frequently-unanticipated side effects. Thus it is difficult if not impossible to make an unambiguous, objective evaluation of a particular problem or government action. However individual farmers have subjective opinions on their goals and problems, and on the effects of government actions aimed at agriculture. The purpose of this article is to summarize the results of an investigation of goals, problems and opinions (regarding government programs) of a cross section of Tennessee farmers, as viewed by the farmers themselves. This study is not

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unique, as similar investigations have been completed [5] or are currently underway [1, 2] at other locations. However, previous investigations of the attitudes of farmers in the State of Tennessee have been parsimonious and issue-oriented [4].

During the summer of 1979, 450 Tennessee farmers located in 9 selected counties were interviewed by staff members of the Department of Agricultural Economics and Rural Sociology, University of Tennessee (Knoxville). Survey questions elicited information relative to demographic factors, employment (both on-farm and off-farm), farm organization, community attachments, production factors, and farmers' opinions, problems and goals. This paper analyzes the last of these categories — farmers' opinions, problems and goals. In general, questions in this category address what farmers consider to be their major problems and how they view the role (both past and future) of the government in assisting farmers in meeting these problems.

Sample Characteristics

Fifty farmers in each of nine selected counties (East Tennessee — Greene, McMinn and Morgan; Middle Tennessee — Robertson, Rutherford and Lawrence; West Tennessee — Obion, Henderson and Haywood) were interviewed. The counties were chosen as being representative of major types of agriculture within the state. Target sample areas were designated in each county with random selection of farmers in each target area. Of a total of 450 interviews, 435 useable questionnaires were obtained.

The age of respondents in the sample ranged from 23 years to 85 years with a mean age of 51.9 years (Table 1). Years of formal education ranged from none to 25 years (an M.D. plus graduate work in other fields) with a mean level of education of 10.7 years. Total acreage farmed by all respondents was 92,972 acres with a mean farm size of 213.7 acres. Soybeans were planted on 28.0 percent of aggregate farm acres with other major land uses being corn (11.9 percent), cotton (4.5 percent), wheat (3.8 percent), tobacco (0.6 percent) and pasture (19.0 percent). The remaining land (32.2 percent of the total) was allocated to specialty crops, household gardens, living space, wooded areas and unused land. Of farmers producing the respective crop, the average acreages devoted to production were corn — 62.3 acres, cotton — 118.4 acres, wheat — 70.0 acres, soybeans — 169.9 acres, tobacco — 3.3 acres, and pasture — 64.0 acres.

Location. The nine counties were grouped into three areas: West Tennessee (Obion, Henderson and Haywood), Middle Tennessee (Robertson, Rutherford and Lawrence), and East Tennessee (Greene, McMinn and Morgan). Sample respondents residing in West Tennessee comprised 32.2 percent of the total sample, had a mean age of 47.5 years and had 11.3 years (average) of formal education. Respondents residing in Middle Tennessee comprised 33.8 percent of the total sample, had a mean age of 52.0 years, and

Table 1. Characteristics of Sample Farms and Farm Operators by Location, Age, Education and Farm Size; Nine Selected Counties, Tennessee, 1979.

	Total sample	Location ^a			Age			Education			Farm Size			
		West Tennessee	Middle Tennessee	East Tennessee	Less than 35 yrs.	35-55 yrs.	Greater than 55 yrs.	0-11 yrs.	12 yrs.	More than 12 yrs.	1-29 ac.	30-100 ac.	101-400 ac.	More than 400 ac.
Sample size (number)	435	140	147	148	59	182	194	210	159	66	52	177	146	60
(percent of total sample)		32.2	33.8	34.0	13.6	41.8	44.6	48.3	36.6	15.2	11.9	40.7	33.6	13.8
Mean														
Age (years)	51.9	47.5	52.0	56.0	29.2	45.0	65.3	58.3	46.3	45.2	56.5	53.6	49.6	48.8
Education (years)	10.7	11.3	11.1	9.7	12.3	11.6	9.3	8.1	12.0	15.6	8.7	10.2	11.2	12.5
Farm size (acres)	213.7	239.1	250.9	152.8	229.2	252.4	172.8	133.1	257.8	364.1	16.7	60.0	219.9	823.1
Row crop (acres)	107.0	140.1	107.4	15.8	147.1	134.1	60.3	61.9	136.8	162.3	2.2	9.7	92.4	473.1

^aCounties sampled included: West Tennessee — Obion, Henderson and Haywood; Middle Tennessee — Robertson, Rutherford and Lawrence; and East Tennessee — Greene, McMinn and Morgan.

had 11.1 years (average) of formal education. Respondents residing in East Tennessee comprised 34.0 percent of the total sample, had an average age of 56.0 years, and had average formal education of 9.7 years. In terms of land resources and use, respondents in West, Middle and East Tennessee had average farm sizes (respectively) of 239.1 acres, 250.9 acres and 152.8 acres, with an average area devoted to major cropping enterprises (corn, cotton, wheat and soybeans) of 140 acres, 107 acres and 16 acres respectively.

Age. Sample respondents were grouped into three age groups (independent of location): less than 35 years, 35 to 55 years, and more than 55 years of age. Younger farmers had an average of 12.3 years education compared to an average of only 9.3 years for older farmers. Middle-age farmers controlled more total acres and devoted more acres to production of major row crops than did other age groups. Older farmers, on average, planted fewer acres and a smaller proportion of their total acres to major row crops than did other age groups, and had more acres classified as pasture and unused land.

Education. Sample respondents were divided into three education categories: 0 to 11 years (48.3 percent), 12 years (36.6 percent), and more than 12 years education (15.2 percent). Farmers with fewer years of formal education tended to be older and to farm smaller acreages than did well-educated farmers. While better educated farmers planted more acres to row crops (on average), they did not have a higher percentage of total cropland planted to row crops.

Farm Size. Sample respondents were categorized according to farm size into 4 groups. Group boundaries and percentage of farmers in each group were: less than 30 acres (11.9 percent), 30 to 100 acres (40.7 percent), 101 to 400 acres (33.6 percent), and more than 400 acres (13.8 percent). In general, larger farms tended to specialize in row crop enterprises (corn, cotton, wheat and soybeans) while smaller farms devoted a higher portion of farm acres to tobacco and pasture. Operators of larger farms tended to be better educated and older than those of smaller farms.

Farmer Opinions — Current Government Programs

Sample respondents were asked to give opinions on 13 types of government expenditures:

1. production quotas, allotments, supply control, etc.);
2. rural services (rural roads, schools, health, etc.);
3. zoning for land use;
4. price supports for agricultural products;
5. minimum tillage regulations;
6. USDA price forecasts;
7. chemical usage regulations;
8. import quotas and taxes;
9. USDA production forecasts;

10. research into synthetic substitutes (fibers, protein, milk substitutes, etc.);
11. county extension agents;
12. efforts to assist small farmers;
13. Experiment Station research.

For each type government expenditure, farmers were asked if the item should receive more emphasis, less emphasis, or continued support at the present level. A response of "less emphasis" was assigned a value of 1.0, "continued expenditures at present levels" was assigned a value of 2.0, and "more emphasis" was assigned a value of 3.0, with mean responses reported. Mean values and percentage frequency distributions of total sample responses are reported in Table 2.

Table 2. Mean Value and Percentage Frequency Response of Farmer Opinions of Current Government Expenditures on Agriculture, Nine Selected Tennessee Counties, 1979.

Type Government Expenditure	Mean value ^a	Less emphasis	No change	More emphasis
	----- percent of total -----			
Small farm assistance	2.74	7	12	81
Rural services	2.72	2	24	74
Import quotas	2.68	10	12	78
Price supports	2.37	25	13	62
Experiment Station research	2.26	12	50	38
County agents	2.18	16	50	34
Chemical usage	2.06	26	42	32
Land use zoning	2.05	39	17	44
USDA price forecasts	2.01	31	38	31
Production quotas	1.98	31	39	30
Research in synthetics	1.93	45	18	37
USDA production forecasts	1.68	52	29	19
Minimum tillage	1.67	54	25	21

^aFarmers were given three choices for expressing their feelings: An opinion that the item should receive less emphasis was assigned a value of '1'; maintain emphasis at current levels was assigned a value of '2'; and increase the emphasis was assigned a value of '3.'

Overall, sample respondents felt that attention to the categories of 1) assistance to small farms, 2) rural services, and 3) import quotas and taxes should be increased above present levels. The mean responses to these categories were 2.74, 2.72 and 2.68 respectively, and in each case the choice "more emphasis" obtained more than seven times the number of responses than did the choice "less emphasis." Similar support was expressed for rural services and import quotas when the total sample was divided into categories

by location, farm size, education, and age of farm operator (Tables 3, 4, 5 and 6).

Table 3. Farmer Opinions^a of Current Government Expenditures on Agriculture, by Location, Nine Tennessee Counties, 1979.

Type Government Expenditure ^c	Total sample	Location ^b		
		East Tennessee	Middle Tennessee	West Tennessee
	(N= 435)	(N= 148)	(N= 147)	(N= 140)
Small farm assistance*	2.74	2.58	2.86	2.76
Rural services	2.72	2.65	2.78	2.73
Import quotas	2.68	2.62	2.64	2.77
Price supports*	2.37	2.61	2.21	2.31
Experiment Station research*	2.26	2.51	2.10	2.19
County agents*	2.18	2.31	2.14	2.11
Chemical usage*	2.06	1.88	2.25	2.06
Land use zoning*	2.05	2.13	2.46	1.57
USDA price forecasts*	2.01	1.96	2.10	1.93
Production quotas*	1.98	2.14	1.71	2.11
Research in synthetics*	1.93	2.09	1.96	1.73
USDA production forecasts*	1.68	1.68	1.66	1.71
Minimum tillage*	1.67	1.51	1.93	1.55

^aFarmers were given three choices for expressing their feelings: An opinion that the item should receive less emphasis was assigned a value of '1'; maintain emphasis at current levels was assigned a value of '2'; and increase the emphasis was assigned a value of '3.'

^bCounties sampled include Obion, Henderson and Haywood (West Tennessee), Robertson, Rutherford and Lawrence (Middle Tennessee), and Greene, McMinn and Morgan (East Tennessee).

^cThe chi-square was used for each item to test the Ho: There are no differences in response among categories. An asterisk indicates rejection of Ho: at the 0.01 level.

Consistency in farmer responses was also evident with respect to which categories should be given less emphasis by government agencies. Both minimum tillage regulations and USDA production forecasts received more than twice as many "less emphasis" responses than "more emphasis" responses, and again, the response was consistent relative to location, farm size, age, and education of farm operator.

Examination of Tables 3, 4, 5 and 6 suggests the existence of patterns for some items within some of the classifications of sample respondents. For example, support for assistance to small farms was greatest among low acreage farm operators. As farm size increased, support for aid to small farms decreased. Support for production quotas, price supports, import quotas, and small farms decreased as education levels increased; while support for zoning restrictions, USDA production forecasts, research into synthetic substitutes,

county agents, and Experiment Station research increased as education levels increased. With respect to age, support for zoning regulations, USDA price forecasts, USDA production forecasts, county agents, and Experiment Station research decreased as age increased.

Table 4. Farmer Opinions^a of Current Government Expenditures on Agriculture by Farm Size, Nine Selected Tennessee Counties, 1979.

Type Government Expenditure ^b	Farm Size				
	Total sample	Less than 30 acres	30-99 acres	100-400 acres	More than 400 acres
	(N=435)	(N=52)	(N=177)	(N=146)	(N=60)
Small farm assistance*	2.74	2.88	2.84	2.69	2.43
Rural services	2.72	2.78	2.70	2.72	2.75
Import quotas	2.68	2.68	2.68	2.74	2.50
Price supports	2.37	2.45	2.53	2.21	2.25
Experiment Station research	2.26	2.12	2.23	2.34	2.22
County agents*	2.18	1.96	2.25	2.22	2.10
Chemical usage	2.06	2.14	2.14	1.98	2.00
Land use zoning	2.05	1.98	1.98	2.05	2.30
USDA price forecasts	2.01	1.90	2.02	2.06	1.91
Production quotas	1.98	2.06	1.97	1.98	1.93
Research in synthetics*	1.93	1.89	1.75	2.08	2.08
USDA production forecasts	1.68	1.56	1.61	1.81	1.63
Minimum tillage*	1.67	1.67	1.56	1.70	1.83

^aFarmers were given three choices for expressing their feelings: An opinion that the item should receive less emphasis was assigned a value of '1'; maintain emphasis at current levels was assigned a value of '2'; and increase the emphasis was assigned a value of '3.'

^bThe chi-square was used for each item to test the Ho: There are no differences in response among categories. An asterisk indicates rejection of Ho: at the 0.01 level.

Farmers' Problems

Sample respondents were asked to identify the three items (from a list of 12) which pose the most serious problems to long-run farm prosperity. The twelve suggested items listed were:

1. high land prices;
2. high property taxes;
3. high income taxes;
4. weather uncertainty;

Table 5. Farmer's Opinions^a of Current Government Expenditures on Agriculture, by Education, Nine Selected Tennessee Counties, 1979.

Type Government Expenditure ^b	Total sample	Education		
		Less than 12 years	12 years	More than 12 years
	(N= 435)	(N=210)	(N= 159)	(N=66)
Small farm assistance	2.74	2.80	2.68	2.68
Rural services	2.72	2.70	2.74	2.74
Import quotas*	2.68	2.74	2.71	2.42
Price supports*	2.37	2.46	2.42	1.98
Experiment Station research*	2.26	2.12	2.33	2.48
County agents*	2.18	2.03	2.29	2.41
Chemical usage*	2.06	2.08	1.97	2.25
Land use zoning*	2.05	1.91	2.11	2.31
USDA price forecasts	2.01	1.90	2.15	1.98
Production quotas*	1.98	2.15	1.88	1.72
Research in synthetics*	1.93	1.79	2.00	2.18
USDA production forecasts*	1.68	1.48	1.84	1.88
Minimum tillage*	1.67	1.63	1.62	1.91

^aFarmers were given three choices for expressing their feelings: An opinion that the item should receive less emphasis was assigned a value of '1'; maintain emphasis at current levels was assigned a value of '2'; and increase the emphasis was assigned a value of '3.'

^bThe chi-square was used for each item to test the H₀: There are no differences in response among categories. An asterisk indicates rejection of H₀: at the 0.01 level.

5. unpredictable market prices;
6. high input costs;
7. fuel shortages;
8. low market prices;
9. lack of rural facilities (services, schools, elevators, etc.);
10. purchases of farmland by non-farmers;
11. lack of sufficient credit;
12. other (specify).

Percentage frequency distributions (total and by categories) of farmer responses to the eleven suggested items are presented in Tables 7 through 11.

For the sample as a whole, items deemed to constitute major obstacles to long run prosperity included high property taxes and high input costs (Table 7). These two items received 25.1 percent and 22.8 percent of the number-one problem votes, respectively, and were considered to be one of the three major problems by 46.5 percent and 66.9 percent respectively of all respondents. High income taxes was not considered by most farmers to be a major

Table 6. Farmer's Opinions^a of Current Government Expenditures on Agriculture, by Age, Nine Selected Tennessee Counties, 1979.

Type Government Expenditure ^b	Total sample (N=435)	Age		
		Less than 35 years (N=59)	35-55 years (N=182)	More than 55 years (N=194)
Small farm assistance	2.74	2.74	2.69	2.78
Rural services	2.72	2.69	2.78	2.67
Import quotas	2.68	2.68	2.61	2.74
Price supports	2.37	2.44	2.32	2.40
Experiment Station research*	2.26	2.36	2.35	2.13
County agents*	2.18	2.31	2.24	2.09
Chemical usage	2.06	1.95	2.05	2.12
Land use zoning	2.05	2.28	2.07	1.98
USDA price forecasts	2.01	2.18	1.99	1.97
Production quotas*	1.98	2.06	1.91	2.02
Research in synthetics	1.93	1.90	2.02	1.85
USDA production forecasts	1.68	1.86	1.67	1.64
Minimum tillage	1.67	1.59	1.72	1.65

^aFarmers were given three choices for expressing their feelings: An opinion that the item should receive less emphasis was assigned a value of '1'; maintain emphasis at current levels was assigned a value of '2'; and increase the emphasis was assigned a value of '3.'

^bThe chi-square was used for each item to test the Ho: There are no differences in response among categories. An asterisk indicates rejection of Ho: at the 0.01 level.

problem, while lack of rural facilities, purchases of farmland by non-farmers, and lack of sufficient credit were of least concern to sample residents.

When sample responses were categorized by farm size, education and age of operator, considerable diversity of opinion was revealed. Major departures from the overall pattern are discussed below.

Location. While 61.4 percent of those sampled in West Tennessee indicated concern over high input costs, only 12.1 percent of those respondents considered high property taxes to be a major problem. Fuel shortages, weather uncertainty, and low and/or unpredictable market prices were viewed as major problems by more than 40 percent of those questioned. These perceived difficulties are reflective of the commercial nature of farming in West Tennessee. In Middle and East Tennessee, the two most prominent perceived problems were high input costs and high property taxes.

Farm Size. As farm size increased, concern over high property taxes as a serious obstacle to farm prosperity appeared to decrease, while concern over weather uncertainty appeared to increase. Data also suggested trends in farmer concern relative to high income taxes and purchase of farmland by non-

Table 7. Percentage Frequency Distributions of Farmer Opinions on Obstacles to Long-Run Farm Prosperity, Nine Selected Tennessee Counties, 1979.

Obstacles to Long-Run Farm Prosperity	All Farmers			
	First problem	Second problem	Third problem	Total ^a
	----- percent -----			
High input costs	22.8	24.7	19.5	67.0
High property taxes	25.1	13.8	7.6	46.5
Weather uncertainty	10.6	12.0	11.7	34.3
High land prices	13.6	9.7	7.6	30.9
Unpredictable market prices	7.1	11.8	11.3	20.2
Fuel shortages	6.0	8.1	14.7	28.8
Low market prices	6.0	11.1	10.8	27.9
High income taxes	2.3	3.2	4.8	10.3
Purchases of farmland by non-farmers	0.7	1.6	3.4	5.7
Lack of sufficient credit	1.1	0.9	1.1	3.1
Lack of rural facilities	0.5	0.2	1.4	2.1
Other	4.2	3.1	6.1	13.4

^aDifferences in totals reported here and equivalent figures reported on Tables 8, 9, 10 and 11 are due to rounding errors.

farmers. Such trends are to be expected given the differing situations faced by operators of various sized farms. Property taxes would be expected to constitute a larger proportion of total expenses than would income taxes for small farms while the reverse would be true for larger, more productive farms. Operators of small farms frequently maintain off-farm employment, leaving their total income less dependent on agricultural prices. Operators of large farms are more likely to be interested in expanding land resources and thus would be expected to view presence of non-farmers in the land market with concern. However, the differences in farmer opinion by farm size were not significantly different at the 0.01 level (Chi Square).

Education. Farmers with low levels of formal education were most concerned about high property taxes and high input costs. As education levels increased, concern over high property taxes decreased while concern about high land prices, fuel shortages, and purchases of farmland by non-farmers increased. Lack of sufficient credit appeared to be of little concern for well-educated farmers and of minor importance for the less well-educated.

Age. Concern about high land prices and high property taxes appeared very much related to age of respondent. As farmer age increased, high land prices were rated as less of a problem while high property taxes were rated as a problem by more farmers. This may be reflective of the extent to which individual farmers are in an "expansion" stage. As farmers age, they tend to be

Table 8.. Percentage Frequency Distributions^a of Farmer Opinions on Obstacles to Long-Run Farm Prosperity—By Location, Nine Selected Tennessee Counties, 1979.

Obstacles to Long-Run Farm Prosperity ^c	Total sample (N= 435)	Location ^b		
		West Tennessee (N= 140)	Middle Tennessee (N= 147)	East Tennessee (N= 148)
		----- percent -----		
High input costs	66.9	61.4 (86)	74.8 (110)	64.2 (95)
High property taxes*	46.4	12.1 (17)	53.1 (78)	72.3 (107)
Weather uncertainty*	34.2	55.7 (78)	27.2 (40)	20.9 (31)
High land prices	30.8	32.9 (46)	37.4 (55)	22.3 (33)
Unpredictable market prices	30.1	37.9 (53)	28.6 (42)	24.3 (36)
Fuel shortages*	28.7	43.6 (61)	17.7 (26)	25.7 (38)
Low market prices*	27.8	39.3 (55)	19.0 (28)	25.7 (38)
High income taxes*	10.3	1.4 (2)	10.2 (15)	20.3 (30)
Purchases of farmland by non-farmers*	5.7	.1 (1)	13.6 (19)	3.4 (5)
Lack of sufficient credit	3.2	0 (0)	4.1 (6)	5.4 (8)
Lack of rural facilities	2.1	1.4 (2)	.7 (1)	4.1 (6)
Other ^d	13.4			

^aPercentage of farmers at each location listing the item as one of the three most pressing problems. Frequencies are listed in parentheses below each percentage.

^bCounties sampled included Obion, Henderson and Haywood (West Tennessee), Robertson, Rutherford and Lawrence (Middle Tennessee), and Greene, McMinn and Morgan (East Tennessee).

^cThe chi-square was used for each item to test the Ho: There are no differences in response among categories. An asterisk indicates rejection of Ho: at the 0.01 level.

^dFrequencies by Location are not included for the "other" category since this item consisted of a broad range of responses suggested by respondents.

less interested in buying more land and become more concerned with fixed costs such as property taxes. Older farmers also indicated less concern about purchase of farmland by non-farmers and high input costs.

Table 9. Percentage Frequency Distributions^a of Farmer Opinions on Obstacles to Long-Run Farm Prosperity—By Farm Size, Nine Selected Tennessee Counties, 1979.

Obstacles to Long-Run Farm Prosperity ^b	Total sample (N=435)	Farm Size			
		Less than 30 acres (N=52)	30-99 acres (N=177)	100-400 acres (N=146)	More than 400 acres (N=60)
		----- percent -----			
High input costs	66.9	69.2 (36)	75.1 (133)	60.3 (88)	56.7 (34)
High property taxes	46.4	65.4 (34)	47.4 (84)	42.5 (62)	36.7 (22)
Weather uncertainty	34.2	21.1 (11)	34.5 (61)	34.9 (51)	43.3 (26)
High land prices	30.8	38.5 (20)	27.7 (49)	28.8 (42)	38.3 (23)
Unpredictable market prices	30.1	34.6 (18)	27.1 (48)	32.9 (48)	28.3 (17)
Fuel shortages	28.7	19.2 (10)	30.5 (54)	30.1 (44)	28.3 (17)
Low market prices	27.8	15.4 (8)	27.7 (49)	34.2 (50)	23.3 (17)
High income taxes	10.3	7.7 (4)	9.6 (17)	11.0 (16)	13.3 (8)
Purchases of farmland by non-farmers	5.7	3.8 (2)	4.0 (7)	5.5 (8)	13.3 (8)
Lack of sufficient credit	3.2	3.8 (2)	1.7 (3)	5.5 (8)	1.7 (1)
Lack of rural facilities	2.1	0 (0)	2.8 (5)	2.0 (3)	1.7 (1)
Other ^c	13.4				

^aPercentage of farmers at each location listing the item as one of the three most pressing problems. Frequencies are listed in parentheses below each percentage.

^bThe chi-square was used for each item to test the H_0 : There are no differences in response among categories. An asterisk indicates rejection of H_0 : at the 0.01 level.

^cFrequencies by Farm size are not reported for the "other" category since this item consisted of a broad range of responses suggested by the respondent.

Farmer Preferences

The final section of the questionnaire asked respondents to rank the three most important items according to their opinions concerning what should be the goals of government expenditures on agriculture. The seven suggested items listed were:

1. keeping the family farm unit intact;
2. production efficiency;
3. minimizing labor costs;

Table 10. Percentage Frequency Distributions^a of Farmer Opinions on Obstacles to Long-Run Farm Prosperity—By Education, Nine Selected Tennessee Counties, 1979.

Obstacles to Long-Run Farm Prosperity ^b	Total sample (N=435)	Education		
		Less than 12 years (N=210)	12 years (N=159)	More than 12 years (N=66)
		----- percent -----		
High input costs	66.9	67.6 (142)	64.1 (102)	71.2 (47)
High property taxes*	46.4	63.3 (133)	30.8 (49)	30.3 (20)
Weather uncertainty*	34.2	34.3 (72)	37.7 (60)	25.8 (17)
High land prices	30.8	23.3 (49)	37.7 (60)	37.9 (25)
Unpredictable market prices	30.1	27.1 (57)	34.0 (54)	30.3 (20)
Fuel shortages	28.7	24.8 (52)	30.8 (49)	36.4 (24)
Low market prices	27.8	22.9 (48)	35.2 (56)	25.8 (17)
High income taxes	10.3	11.0 (23)	7.5 (12)	15.1 (10)
Purchases of farmland by non-farmers	5.7	4.3 (9)	5.7 (9)	10.6 (7)
Lack of sufficient credit	3.2	3.3 (7)	4.4 (7)	0 (0)
Lack of rural facilities	2.1	2.4 (5)	1.3 (2)	3.0 (2)
Other ^c	13.4			

^aPercentage of farmers in each education category listing the item as one of the three most pressing problems. Frequencies are listed in parentheses below each percentage.

^bThe chi-square was used for each item to test the H₀: There are no differences in response among categories. An asterisk indicates rejection of H₀: at the 0.01 level.

^cFrequencies by Education are not included for the "other" category since this item consisted of a broad range of largely unrelated items suggested by respondents.

4. energy conservation;
5. higher prices for agricultural products;
6. higher living standards for *all* rural people; and
7. new technological developments.

Percentage frequency distributions (total and by category) of farmer responses are presented in Tables 12 through 16.

Table 11. Percentage Frequency Distributions^a of Farmer Opinions on Obstacles to Long-Run Farm Prosperity, Nine Selected Tennessee Counties, 1979.

Obstacles to Long-Run Farm Prosperity ^b	Total sample (N=435)	Age		
		Less than 35 years (N=59)	35-55 years (N=182)	More than 55 years (N=194)
		----- percent -----		
High input costs	66.9	71.2 (42)	69.2 (126)	63.4 (123)
High property taxes*	46.4	16.9 (10)	34.1 (62)	67.0 (130)
Weather uncertainty	34.2	33.9 (20)	35.7 (65)	33.0 (64)
High land prices*	30.8	59.3 (35)	37.4 (68)	16.0 (31)
Unpredictable market prices	30.1	23.7 (14)	33.5 (61)	28.9 (56)
Fuel shortages	28.7	22.0 (13)	33.5 (60)	26.8 (52)
Low market prices	27.8	37.3 (22)	25.8 (47)	26.8 (52)
High income taxes	10.3	8.5 (5)	7.7 (14)	13.4 (26)
Purchases of farmland by non-farmers	5.7	10.2 (6)	6.0 (11)	4.1 (8)
Lack of sufficient credit	3.2	0 (0)	2.7 (5)	4.6 (9)
Lack of rural facilities	2.1	1.7 (1)	1.6 (3)	2.6 (5)
Other ^c	13.4			

^aPercentage of farmers in each age category listing the item as one of the three most pressing problems. Frequencies are listed in parentheses below each percentage.

^bThe chi-square was used for each item to test the Ho: There are no differences in response among categories. An asterisk indicates rejection of Ho: at the 0.01 level.

^cFrequencies by Age are not reported for the "other" category since this item consisted of a broad range of largely unrelated items suggested by respondents.

For the sample as a whole, the priority of government expenditures on agriculture was considered to be obtaining higher prices for agricultural products. Forty-six percent of all farmers questioned thought that higher prices should be the first priority of government programs and more than 82 percent of all farmers considered it to be one of the three major goals. Keeping the family farm unit intact received most of the remaining votes for the

Table 12. Percentage Frequency Distributions of Farmer Opinions on Major Goals of Government Expenditures on Agriculture, Nine Selected Tennessee Counties, 1979

Goals	All Farmers			Total ^a
	First goal	Second goal	Third goal	
	----- percent -----			
Higher prices for agricultural products	46.0	24.7	11.7	82.4
Keeping the family farm unit intact	29.9	24.2	11.3	65.4
Higher living standards for all rural people	5.7	14.1	23.9	43.7
Energy conservation	4.1	10.2	20.0	34.3
Production efficiency	5.5	11.3	10.3	27.1
New technological developments	3.2	6.0	12.2	21.4
Minimizing labor costs	3.9	8.3	8.0	20.2
Other	1.7	1.2	2.6	5.5

^aTotals listed on this table and equivalent numbers listed on Tables 13, 14, 15, and 16 may differ slightly due to rounding.

number-one goal of government programs (29.9 percent) and was considered as being one of the three major goals by 65.4 percent of respondents. Higher living standards for *all* rural people, energy conservation, and production efficiency were seen as secondary and/or tertiary goals by many farmers. Minimizing labor costs and development of new technology were not viewed as major goals of government programs by most farmers. However there was considerable diversity of opinion among groups of farmers concerning the relative importance of various goals. Major departures from the overall pattern are discussed below.

Location. In general, the patterns of responses for farmers in Middle and East Tennessee were similar to those for all farmers; *i.e.*, the three top priority goals for government expenditures were keeping the family farm unit intact, higher prices for agricultural products, and higher living standards for *all* rural people. In West Tennessee, farmers rated higher prices for agricultural products and higher living standards for *all* rural people as major goals of government programs, but rated keeping the family farm unit intact as being about even in importance with production efficiency, and energy conservation only slightly lower in their opinions. The relatively high rating of production efficiency by West Tennessee farmers is reflective of the commercial nature of farming in that area. Development of new technology also rated relatively high as a government program goal for West Tennessee farmers. There was only one statistically significant difference in farmer response due to location. The goal of keeping the family farm unit intact

Table 13. Percentage Frequency Distributions^a of Farmer Opinions on Major Goals of Government Expenditures on Agriculture — By Location, Nine Selected Counties, Tennessee, 1979.

Goals ^c	Total sample (N=435)	Location ^b		
		West Tennessee (N=140)	Middle Tennessee (N=147)	East Tennessee (N=148)
		-----percent-----		
Higher prices for agricultural products	82.3	89.3 (125)	83.7 (123)	74.3 (110)
Keeping the family farm unit intact*	65.3	38.6 (54)	76.9 (113)	79.0 (47)
Higher living standards for all rural people	43.7	50.7 (71)	38.1 (56)	42.6 (63)
Energy conservation	34.2	34.3 (48)	36.7 (54)	31.8 (47)
Production efficiency	27.1	37.9 (53)	21.1 (31)	23.0 (34)
New technological developments	21.4	26.4 (37)	19.7 (29)	18.2 (27)
Minimizing labor costs	20.2	18.6 (26)	21.8 (32)	20.3 (30)
Other ^d	5.5			

^aPercentage of farmers at each location listing the item as one of the three major goals of government expenditure on agriculture. Frequencies are listed in parentheses below each percentage.

^bCounties sampled included Obion, Henderson and Haywood (West Tennessee), Robertson, Rutherford and Lawrence (Middle Tennessee), and Greene, McMinn, and Morgan (East Tennessee).

^cThe chi-square was used for each item to test the H_0 : There are no differences in response among categories. An asterisk indicates rejection of H_0 : at the 0.01 level.

^dFrequencies by Location are not included for the "other" category since this item consisted of a broad range of responses suggested by respondents.

received greater support moving from West to East Tennessee, where farms are smaller and less commercial in nature.

Farm Size. As expected, as farm size increased, operators gave significantly less emphasis on higher living standards for *all* rural people, appeared to give less emphasis to keeping the family farm unit intact and higher prices for agricultural products; and placed more importance on production efficiency and development of new technology. Operators of large farms (more than 400 acres) indicated strong support for production efficiency as an important goal. This result reflects the increasingly commercialized nature of larger farms.

Table 14. Percentage Frequency Distributions^a of Farmer Opinions on Major Goals of Government Expenditures on Agriculture — by Farm Size, Nine Selected Tennessee Counties, 1979.

Goals ^b	Farm Size				
	Total sample (N=435)	Less than 30 acres (N=52)	30-99 acres (N=177)	100-400 acres (N=146)	More than 400 acres (N=60)
	-----percent-----				
Higher prices for agricultural products	82.3	86.5 (45)	86.4 (153)	82.9 (121)	65.0 (39)
Keeping the family farm unit intact*	65.3	86.5 (45)	65.5 (116)	59.6 (87)	60.0 (36)
Higher living standards for all rural people	43.7	53.8 (28)	57.1 (101)	34.9 (51)	16.7 (10)
Energy conservation*	34.2	19.2 (10)	37.8 (67)	36.3 (53)	31.7 (19)
Production efficiency	27.1	7.7 (4)	17.5 (31)	32.2 (47)	60.0 (36)
New technological developments*	21.4	17.3 (9)	13.6 (24)	26.0 (38)	36.7 (22)
Minimizing labor costs	20.2	23.1 (12)	17.5 (31)	24.7 (36)	15.0 (9)
Other ^c	5.5				

^aPercentage of farmers in each size category listing the item as one of the three major goals of government expenditure on agriculture. Frequencies are listed in parentheses below each percentage.

^bThe chi-square was used for each item to test the H₀: There are no differences in response among categories. An asterisk indicates rejection of H₀: at the 0.01 level.

^cFrequencies by Farm size are not reported for the "other" category since this item consisted of a broad range of responses suggested by the respondent.

Education. As education levels increased, the importance of keeping the family farm unit intact, minimizing labor costs, higher prices for agricultural products, and higher living standards for *all* rural people appeared to decrease; while the importance of production efficiency, energy conservation, and development of new technology increased by a significant degree. For farm operators with more than 12 years of education, energy conservation was considered almost as important a goal as keeping the family farm unit intact.

Age. Trends in farmer opinions related to age were, to a considerable extent, opposite those related to education. For older operators, keeping the family farm unit intact, minimizing labor costs, and higher living standards

Table 15. Percentage Frequency Distributions^a of Farmer Opinions on Major Goals of Government Expenditures on Agriculture — by Education, Nine Selected Tennessee Counties, 1979.

Goals ^b	Education			
	Total sample (N=435)	Less than 12 years (N=210)	12 years (N=159)	More than 12 years (N=66)
	----- percent -----			
Higher prices for agricultural products*	82.3	85.2 (179)	84.3 (134)	68.2 (45)
Keeping the family farm unit intact*	65.3	73.8 (155)	57.9 (92)	56.1 (37)
Higher living standards for all rural people*	43.7	51.9 (109)	42.1 (67)	21.2 (14)
Energy conservation	34.2	26.7 (56)	36.5 (58)	53.0 (35)
Production efficiency	27.1	18.1 (38)	30.8 (49)	47.0 (31)
New technological developments	21.4	15.2 (32)	23.3 (37)	36.4 (24)
Minimizing labor costs*	20.2	22.4 (47)	21.4 (34)	10.6 (7)
Other ^c				

^aPercentage of farmers in each education category listing the item as one of the three major goals of government expenditure on agriculture. Frequencies are listed in parentheses below each percentage.

^bThe chi-square was used for each item to test the Ho: There are no differences in response among categories. An asterisk indicates rejection of Ho: at the 0.01 level.

^cFrequencies by Education are not reported for the "other" category since this item consisted of a broad range of largely unrelated items suggested by the respondent.

for *all* rural people received increased emphasis; while higher prices for agricultural products, and development of new technology decreased in importance. Significant differences among the age categories occurred only in the value placed upon the goals of higher living standards for all rural people and of new technological developments with younger farmers placing a higher priority on new technological developments and less priority on higher living standards for all rural people.

Response Inconsistencies

There were a number of inconsistencies in farmer responses to questions. These inconsistencies appeared both within specific segments of the

Table 16. Percentage Frequency Distributions^a of Farmer Opinions on Major Goals of Government Expenditures on Agriculture — by Age, Nine Selected Tennessee Counties, 1979.

Goals ^b	Total sample (N=435)	Age		
		Less than 35 years (N=59)	35-55 years (N=182)	More than 55 years (N=194)
		----- percent -----		
Higher prices for agricultural products*	82.3	89.8 (53)	85.0 (159)	75.3 (146)
Keeping the family farm unit intact*	65.3	45.8 (27)	64.2 (120)	70.6 (137)
Higher living standards for all rural people*	43.7	39.0 (23)	31.6 (59)	55.7 (108)
Energy conservation*	34.2	33.9 (20)	37.4 (70)	30.4 (59)
Production efficiency*	27.1	30.5 (18)	30.5 (57)	22.2 (43)
New technological developments*	21.4	40.7 (24)	20.9 (39)	15.5 (30)
Minimizing labor costs*	20.2	11.9 (7)	17.6 (33)	24.7 (48)
Other ^c	5.5			

^aPercentage of farmers in each age category listing the item as one of the three major goals of government expenditure on agriculture. Frequencies are listed in parentheses below each percentage.

^bThe chi-square was used for each item to test the H₀: There are no differences in response among categories. An asterisk indicates rejection of H₀: at the 0.01 level.

^cFrequencies by Age are not reported for the "other" category since this item consisted of a broad range of largely unrelated items suggested by respondents.

questionnaire and between questionnaire sections. The more obvious inconsistencies are discussed below.

Farmer responses indicated that the priority goal of government expenditures in agriculture should be to obtain higher prices for agricultural products (Table 12). Both price supports and import quotas were indicated as needing increased emphasis in government programs (Table 2). Yet only 27.9 percent of those polled considered existence of low market prices to be a significant problem to long-term farm prosperity and less than one-third considered unpredictable market prices to be a problem (Table 7). Also, while farmers wanted increased emphasis placed on price supports and import quotas, they wanted less emphasis placed on production quotas, allotments and supply control (Table 2). These responses suggest that many farmers

want an agricultural sector which is subsidized by the remainder of the economy.

Efforts to assist small farms and rural services received top priority from respondents as areas in which the government should place increased emphasis (Table 2). Further, keeping the family farm unit intact and higher living standards for *all* rural people were deemed important goals for future government expenditures (Table 12). Yet lack of rural facilities, lack of sufficient credit, and purchase of farmland by non-farmers — items which might be expected to impact on small, family oriented farms — were considered to be relatively minor problems (Table 7).

Weather uncertainty and unpredictable market prices were rated as the third and fifth most important obstacles to long-term farm prosperity (Table 7), but USDA price forecasts and USDA production forecasts were not among government programs deemed to be most in need of increased emphasis (Table 2). This result suggests that many farmers make little use of USDA forecasting activities.

Experiment Station research was rated fifth as a program that should receive increased emphasis (Table 2), but energy conservation, production efficiency, minimizing labor costs, and development of new technology were not rated highly as goals of government programs (Table 12). Such responses call to question exactly what should be (in farmers' opinions) the output of Experiment Station research.

Response inconsistencies such as those discussed above may indicate something about the reasoning process of farmers, or they may call to question the reliability of survey methods employed. This survey was undertaken at a time when the small family farming system was receiving a great deal of attention from USDA and the public media. Farmer responses to specific survey questions may have been biased by the use of terms such as "the family farm."

A second objection (which is related to the above) to the survey method involves a fundamental question of determining felt needs and aspirations. Respondents to this survey were asked to express opinions on rather short notice. Had they been given more time to deliberate — perhaps several days — their answers might have been different. Spur-of-the-moment answers may be more reflective of immediate pressures and circumstances than of deeply-held feelings.

SUMMARY AND CONCLUSIONS

A survey of 450 Tennessee farmers during the summer of 1979 elicited farmer opinions on farm and rural problems, and the role of government expenditures on agriculture in alleviating these problems. In general, survey results were logical — farmers approved of programs which they envisage as directly benefiting themselves and disapproved of programs which restrict their activities for some larger or long-run benefit. Respondents indicated that government programs should place more emphasis on assistance to small

farms, provision of rural services, import quotas and price supports for agricultural products (in that order) and less emphasis on minimum tillage regulations, USDA production forecasts, research into synthetic substitutes and production quotas. Major obstacles to long-run farm prosperity were seen as high input costs, high property taxes, weather uncertainty and high land prices (in that order). Relatively few farmers viewed high income taxes or lack of sufficient credit as being significant problems in the long run. Major goals of future agricultural programs were seen as obtaining higher prices for agricultural products, keeping the family farm unit intact, and higher living standards for *all* rural people. Minimizing labor costs, development of new technology, and production efficiency were deemed to be relatively unimportant as goals of future agricultural programs.

The total sample was categorized by location, farm size, education and age. In general, operators of large farms, the well-educated, and farmers in West Tennessee have a higher rating to items directly related to commercial agriculture than did the sample as a whole. These farmers indicated more concern about energy conservation, production efficiency, high income taxes, and development of new technology, and were relatively less concerned about keeping the family farm unit intact, higher living standards for *all* rural people, and high property taxes.

There were some inconsistencies in responses to similar questions in different parts of the questionnaire. These inconsistencies may have resulted from a lack of detailed consideration to responses and/or from USDA and public media emphasis on certain rural problems. A followup survey to determine the stability of response patterns would indicate much about the consistency of the results of this survey and the stability of these results over time.

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