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GALE A. BUCHANAN, DIRECTOR
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Alabama Farm Operator Perspectives On A Changing Structure of Agriculture

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Alabama Farm Operator Perspectives On A Changing Structure of Agriculture*

JOSEPH J. MOLNAR**

STRUCTURE REFERS TO THE organization and composition of the agricultural sector *(12)*. Reflecting a variety of features that describe the distribution of resources in the industry, structure is defined by the number, size, and organizational arrangement of farms *(7)*. Structural changes in American agriculture are of concern for several reasons, including their effect on people, on communities, and on the cost, stability, and availability of the nation's food supply.

Technological advances have reduced the need for people in farming. Mechanization expanded the acreage a single individual could capably operate, displacing laborers and tenants. As most rural areas offered no substitute for the employment lost from the transition to large-scale farming, many individuals and families migrated to find jobs and better opportunities in cities and other regions *(7)*. The availability of these opportunities also hastened the exit of labor from low-pay, low-skill, farm occupations, further increasing the pressure to mechanize.

Depopulated rural communities were affected in other ways by a concentrated structure of fewer and larger farms. Locally-owned businesses that serviced agriculture dwindled as a smaller number of large operations tended to bypass small town firms in favor of more direct sources of supply *(3)*. Because buying practices for fuel, equipment, and other farm inputs shifted away from local suppliers, many lively rural communities have disappeared and others have fewer, more tenuous ties to agriculture *(5)*.

Concentration of agricultural holdings is reflected in larger size

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**Associate Professor, Department of Agricultural Economics and Rural Sociology.

farms that focus on production of one or two crops or animal enterprises. Although not an imminent development in Alabama, concentrated structure could present a threat to public confidence in the equity and fairness of the agricultural system. If a structure with many small, privately owned farms characterized by relatively easy entry or exit is largely replaced by a narrow segment of large-scale operations, the consequent difficulty in getting started in farming may undermine the belief in an open economy guided by freely functioning processes. It also may stir public resentment toward institutional arrangements and landholding patterns that contribute to a concentrated structure *(2)*.

For the past several decades, Alabama farms have been declining in numbers and increasing in size, paralleling a national trend toward concentration *(1)*. However, the 1978 Census of Agriculture shows a slight increase in the total number, to 57,540 farms from 56,678 farms in 1974. Similarly, average farm size has decreased slightly to 201 acres from 209 acres in 1974 *(13)*. Some of the most recent changes may be attributable to supplemental estimation methods designed to more accurately count small farms, as well as definitional changes between years, rather than to a break in the actual pattern of fewer and larger farms.

Although many people, particularly blacks *(9)*, have been displaced by the trend toward concentrated holdings, it has occurred for a number of useful and positive reasons. Larger units may more readily mobilize capital and they have greater access to production efficiencies associated with mechanization of standard repetitive tasks *(3)*. Productivity gains, increases in economic efficiency, and competitive advantages that underlie the shifting structure also have had long-run social costs that have stimulated a great deal of interest and attention *(11)*.

OBJECTIVES

The purpose of the study on which this report is based was to examine selected issues and trends in the structure of agriculture from the perspective of the Alabama farmer. The report is addressed to farmers, extension personnel, and others in the agricultural community concerned with the future of farming in Alabama. The results should provide a statistical profile of Alabama farm operator opinions which may be used to anticipate policy preferences and concerns for the future.

One objective was to profile farm operator perceptions of several

central issues in the ongoing dialogue over significant changes that have occurred in the number and type of agricultural firms. These include the notion of family-operated farms and their relationship to corporate agriculture, commitment to farming, and the special needs of small farms. In addition, perceptions of entry problems for young farmers were examined. Attention was given to beliefs about the entry process and comparisons made by age of survey respondents.

A second objective was to examine sources of change or influence on farm operator plans and decision making. The perceived importance of these factors may provide some insight into the future of Alabama agriculture as an aging population of farmers nears retirement and their replacements encounter increasing difficulty in entering the business.

A third objective was to examine the relationship between attitudes and perceptions of agricultural issues and the respondents' positions on selected dimensions of agricultural structure. Multiple regression analysis was employed to address this objective.

DATA AND METHOD

Data for this study were obtained from a statewide random sample of Alabama farmers through a mail survey conducted in the spring of 1981. As a contribution to a larger regional project, the questionnaire was designed to assess farmer beliefs about various issues related to the structure of agriculture and other matters relevant to policy, decision making, and social change in the State. Questionnaire content reflected the ongoing discussion of structure issues in the professional literature as well as concerns relating to changes in agriculture as they have surfaced in Alabama and other parts of the country.

The sample was drawn from an exhaustive listing of Alabama farm operators maintained by various agencies and organizations serving the State. From a master list, a sample of 1,005 farm operators was drawn, representing 1.75 percent of the 57,540 Alabama farmers reported in the 1978 Census of Agriculture *(13)*.

In January 1981, a 10-page questionnaire and a cover letter explaining the purpose and intent of the study were mailed to each farmer in the sample. One week later, a reminder postcard was sent. Two weeks later, a replacement questionnaire was mailed to nonrespondents. In another three weeks, a third questionnaire was sent to the remaining nonrespondents *(4)*.

A total of 705 farmers returned completed, usable questionnaires, representing a 70.1 percent completion rate. At least one operator in each county returned a questionnaire. Another 15 percent of the sample returned blank questionnaires or were reported as retired, deceased, or no longer in farming.

Measurement and Analysis

Beliefs about agricultural structure, commitment to farming, small farm problems, and the entry process were assessed with fixed-format response categories, "strongly agree" to "strongly disagree." For purposes of analysis, these responses were collapsed into three categories, "agree," "undecided," and "disagree." Sets of questionnaire items were examined in terms of patterns of agreement or disagreement. Similarly, a series of factors was related as helping or hindering the farm operator's future in the business.

To measure agricultural structure dimensions, questions used in the Census of Agriculture were employed whenever possible. **Gross sales** was obtained by asking, "What was the approximate gross value of farm sales from this place in 1980?" The seven response categories ranged from "less than $2,500" to "$100,000 or more." **Land operated** was derived from responses to a sequence of questions asking for land owned, land rented from others, and land rented to others. These data were summarized in six categories ranging from "less than 49 acres" to "more than 1,000 acres."

Respondents reported their **off-farm work** status as "did not work off the farm," "worked part-time," and "worked full-time," coded as 1 to 3. Farmers were asked to indicate the **percentage of total family income from farming** in five categories ranging from "less than 19 percent" to "more than 80 percent."

Education was obtained by asking, "What is your education?" Six categories were provided ranging from "less than high school" to "completed post-graduate degree." Respondents reported their **age** in years.

To relate attitudes to position on various structural dimensions, such as size of farm, stepwise multiple regression was employed. This procedure was used to identify attitudinal patterns associated with each structural dimension.

Sample Representativeness

In order to assess the degree to which the sample represents the actual population of Alabama farmers, certain comparisons were

TABLE 1. DISTRIBUTION OF FARM OPERATORS BY GROSS FARM SALES IN 1981: ALABAMA FARMER SURVEY AND 1978 CENSUS OF AGRICULTURE STATE TOTAL

Gross farm sales in 1980	Percent		
	Sample	Alabama total	Difference
Less than $2,500	24.6	39.9	- 15.3
$2,500 to $4,999	17.7	16.5	+ 1.2
$5,000 to $9,999	16.2	13.4	+ 2.8
$10,000 to $19,999	12.0	8.9	+ 3.1
$20,000 to $39,999	9.7	6.3	+ 3.4
$40,000 to $99,999	11.5	7.8	+ 3.7
$100,000 or more	8.2	7.1	+ 1.1
(Missing)	(58)		
Number	*647*	*57,540*	

TABLE 2. DISTRIBUTION OF FARM OPERATORS BY NUMBER OF ACRES OPERATED IN 1981: ALABAMA FARMER SURVEY AND 1978 CENSUS OF AGRICULTURE STATE TOTAL

Farm acres operated in 1980	Percent		
	Sample	Alabama total	Difference
Less than 10 acres	3.1	7.8	- 4.7
10-49 acres	11.7	28.2	-16.5
50-179 acres	35.9	38.3	- 2.4
180-499 acres	27.4	17.2	10.2
500-999 acres	11.6	5.3	6.3
1,000-1,999 acres	5.1	2.2	2.9
2,000+ acres	5.2	1.0	4.1
Number	*705*	*57,540*	

made between the sample and Census of Agriculture profiles of farms. When gross farm sales were compared, it was found that the sample underrepresents small farms with less than $2,500 in sales (-15.1 percent) but closely represents all other sales categories, table 1.

In a similar comparison for farm acres operated, farms in the smaller acreage classes are underrepresented in the study, most severely in the 10-49 acre category (-16.2 percent), while the 180-499 acre category is somewhat overrepresented (10.2 percent), table 2. Thus, the sample may underrepresent small farms and slightly overrepresent middle-sized farms. Further comparisons are made in Appendix A. These data show that partnership and incorporated farms are overrepresented in the sample, as are older farmers.

FINDINGS

Agricultural Structure Issues

Responses to questions about selected agricultural structure issues revealed that most farmers (83.1 percent) saw inflated land

TABLE 3. PERCEPTIONS OF SELECTED AGRICULTURAL STRUCTURE ISSUES: ALABAMA FARMERS, 1981

Item	Response			No answer
	Agree	Undecided	Disagree	
	Pct.	*Pct.*	*Pct.*	*No.*
1. Inflated land values are a major threat to the family farm	83.1	9.0	7.9	(30)
2. We should have laws that protect the family farm	77.6	13.9	8.5	(30)
3. Large farms get more than their share of government benefits	65.8	20.5	13.7	(23)
4. Corporate farms should have stricter financial reporting requirements than individual or family-owned farms	61.5	20.7	17.8	(25)
5. Limits should be placed on the amount of farmland a nonresident of the State can own	61.0	13.2	25.8	(25)
6. The family farm should be preserved no matter the cost to consumers	43.6	26.0	30.2	(29)
7. Corporate farms should receive the same tax breaks as family farms	29.0	23.2	47.8	(29)

N=705

values as a major threat to the family farm and a similar proportion said laws should be passed to protect the family farm, table 3. Most respondents seemed to express a deep-seated concern for the long-term future of the family farm.

The belief that large farms got more than their share of government benefits was voiced by 65.8 percent of those surveyed. A majority (61.5 percent) also felt that corporate farms should have stricter financial reporting requirements. About the same proportion expressed agreement with a need for limits on the amount of farmland a nonresident of the State can own. Such limits are already in force or have been discussed in other states.

Farmers were divided over item 6, which suggested that the family farm should be preserved no matter the cost to consumers. Twenty-six percent were undecided on this question. As consumers themselves, the farmers seemed to appreciate the need for balanced approaches that would not seriously disrupt the population at large.

Most respondents did not agree that corporate farms should receive the same tax breaks as family farms. More than 26 percent

were undecided, possibly because many family farms are incorporated for tax and inheritance purposes, and because nonfamily corporate farms are relatively uncommon in the State. Although 700 farm corporations were reported in Alabama in 1978, only 7 percent were nonfamily-held organizations. In 1974, 279 farm corporations were reported in the State.

Commitment to Farming

Reasons for staying in farming and weathering the many difficulties and uncertainties of agricultural production also were explored.

TABLE 4. SELECTED SOURCES OF COMMITMENT TO FARMING: ALABAMA FARMERS, 1981

Item	Response			No answer
	Agree	Undecided	Disagree	
	Pct.	*Pct.*	*Pct.*	*No.*
1. Being my own boss is one of the major reasons I enjoy farming	86.7	4.0	9.3	(37)
2. To me, having the freedom to make my own decisions is one of the major advantages of farming	86.2	4.7	9.1	(29)
3. For me, farming is strictly a business	68.1	6.5	25.4	(30)
4. I regard myself as the kind of person who is willing to take a few more risks than the average farmer	60.0	17.0	23.0	(27)
5. Even if his income has dropped to a low point, a farmer should try to stick it out so his children can grow up on a farm	44.1	22.9	33.0	(23)
6. If I had a son growing up at present, I would like to see him become a farmer	42.5	29.3	28.2	(22)
7. There are so many good things about farming that a person should be willing to get along on a lower income to keep these advantages	41.2	14.0	44.8	(27)
8. The recognition I get from my friends and neighbors is one of the main reasons I enjoy farming	27.5	12.5	60.0	(33)

N=705

A large proportion (86.7 percent) felt that being one's own boss was one of the major reasons they enjoyed farming, table 4. Freedom to make one's own decisions expressed a similar idea and received similar support.

More than two-thirds indicated that, for them, farming was strictly a business. Many regarded themselves as willing to take more risks than the average farmer. Independence and a desire for self-regulated entrepreneurship seemed to underlie the occupational commitment of most Alabama farmers.

Nearly half the farmers thought that a farmer should stay in business simply to provide his children with a farm experience. Almost a third disagreed with this item.

Less than half the respondents wanted to see their sons become farmers. Despite their own choice of lifestyle and activity, the farmers seemed to be expressing a traditional view of upward mobility off the farm toward occupations in business, the professions, and other industries. Almost 30 percent were undecided on this item.

Farmers were not willing to sacrifice economic well-being simply for the sake of an agrarian lifestyle. More disagreed with the suggestions that the advantages of farm life could outweigh a low income, although nearly as many agreed.

Responses to item 8 indicate that most farmers are not in business for social reasons. Most disagreed that recognition from friends and neighbors was a major reason they enjoyed farming.

Small Farm Problem

Farms are small by various definitions of land holding, tenure, sales, or income. The term generally refers to a class of operations not accessible to the economies of scale and the technological and marketing advantages enjoyed by larger units. Small farms are operated by a diverse group of retirees, part-time operators, hobby farmers, and full-time low and moderate-income farmers. Four statements about conditions facing the small farmer were posed to the respondents, table 5.

Most respondents agreed that special government programs should focus on the problems of the small farmer. Along the same lines, most felt that the small farmer had not received a fair share of government benefits (69.8 percent).

Farmers were divided over whether it was advisable to encourage small farmers to stay in agriculture, but more disagreed. Over 60

TABLE 5. PERCEPTIONS OF SMALL FARMER PROBLEMS IN AGRICULTURE: ALABAMA FARMERS, 1981

Item	Response			No answer
	Agree	Undecided	Disagree	
	Pct.	*Pct.*	*Pct.*	*No.*
1. Special government programs should focus on the problems of the small farmer	75.1	12.2	12.7	(22)
2. The small farmer has not received a fair share of public services	69.8	15.4	14.8	(24)
3. Because of the realities of agriculture today, it is unwise to encourage small farmers to stay in agriculture	36.6	18.7	44.7	(22)
4. Special help for small farmers is really just another welfare program	24.0	15.8	60.2	(29)

N=705

percent disagreed with the idea that special help for small farmers is a form of welfare. Most farmers thought that small operations had a legitimate right to assistance tailored to their own special problems.

The Entry Process

The future structure of agriculture will be determined by the number and type of individuals entering the industry in the next few years. The advanced age of today's farm operators suggests that a great number of operations will become available to young operators or will be absorbed into existing farms in the near future. One section of the survey was used to determine farmer perceptions of the entry process.

Most (79.7 percent) agreed that the lack of land for sale at any price is a problem for beginning farmers, table 6. Almost as many (71.8 percent) agreed that government programs should focus on getting young people started in agriculture. Considerably fewer (51.4 percent), however, thought that we should try to get farmland into the hands of as many people as possible, and almost a third disagreed.

Eight frequently given responses to the question, "What do you think is the biggest problem the beginning farmer must overcome to be successful?" were categorized according to age of respondent,

TABLE 6. PERCEPTIONS OF THE AGRICULTURAL ENTRY PROCESS: SURVEY RESPONSES OF ALABAMA FARMERS, 1981

Item	Response			No answer
	Agree	Undecided	Disagree	
	Pct.	*Pct.*	*Pct.*	*No.*
1. The lack of land for sale at any price is a real problem for beginning farmers in this county	79.7	8.2	12.1	(21)
2. Government programs should focus on getting young people started in agriculture	71.8	14.6	13.6	(21)
3. We should try to get farmland into the hands of as many people as possible	51.4	18.8	29.8	(18)
N=705				

table 7. Since this was an open-ended question to which a respondent could give more than one answer, responses do not sum to 100 percent. Percentages are shown for the total sample and within age categories.

Of the 562 respondents noting any special obstacle for the beginning farmer, nearly a third reported money or some aspect of financial resources as an entry problem. Land, in terms of availability or price, was noted by 16.4 percent of the farmers. Similar proportions mentioned money across age categories.

Over 15 percent suggested that management, some form of the ability to coordinate equipment, personnel, and other resources to earn a profit, was the number one problem to be overcome by the

TABLE 7. FREQUENTLY MENTIONED ENTRY PROBLEMS FOR TOTAL SAMPLE AND BY AGE CATEGORY, ALABAMA FARMERS, 1981

Entry problem	Percent of total	Percentage mentioning, by age			
		Under 44	45-54	55-64	65 & over
Money	34.2	42.4	34.1	38.5	26.1
Land	16.4	17.6	16.7	15.6	17.6
Management	15.1	8.2	9.5	16.7	21.8
Equipment	13.5	17.6	16.7	8.9	14.1
Personal problems	11.7	5.9	7.9	11.5	16.2
Finance problems	5.5	7.1	5.6	6.3	3.5
Marketing	5.3	8.2	5.6	5.7	3.5
Production costs	1.8	2.4	.8	2.6	1.4
Number	*562*	*85*	*126*	*192*	*142*

beginning farmer. Older farmers mentioned this more than twice as often as the younger farmers (21.8 versus 8.2 percent).

A smaller proportion of respondents (13.5 percent) noted equipment as a problem for beginners. Younger farmers were somewhat more likely to mention this difficulty.

Personal problems of self control, personal energy, or talent were mentioned by 61, or 11.7 percent, of the farmers. Older operators were more likely to mention this type of obstacle, suggesting that the effects of such difficulties may become more apparent with experience.

Marketing was mentioned nearly twice as often by younger farmers as by the oldest group (8.2 versus 3.5 percent), but only 5.3 percent of those replying to the question saw it as a problem. Production costs were cited as an obstacle for beginning farmers by only 1.8 percent of the sample, probably because this idea was captured in the larger category of money.

PREDICTING STRUCTURAL POSITION. To demonstrate the aggregate and specific relationships between attitudes toward agricultural structural issues and location on various structural dimensions, stepwise multiple regression was employed. In table 8, selected structural dimensions are treated as dependent variables and attitudinal items as independent variables. Following stepwise procedures, only items that were statistically significant predictors are shown. The attitude variables are scored 1 to 5 so that a high score indicates "strongly agree." (Correlations among the structure variables are shown in Appendix B.)

Farm operators reporting high gross sales were less likely to agree that corporate farms should receive the same tax breaks as family farms (B=-.08), as were more educated farmers (B=-.09). Older farmers, however, were more likely to agree with this statement (B=.08).[1]

Agreement with the idea that laws should be passed to protect the family farm was a negative predictor of gross sales (B=-.08) and education (B=-.08). More educated farmers did not think that limits should be placed on nonresident ownership of farmland (B=-.12),

[1]A standardized regression coefficient (B or Beta) shows the amount of change in the dependent variable which is associated with a unit change on the independent variable (when other variables are taken into account). Normally ranging between -1 and 1, a large positive coefficient suggests a high degree of association between the attitude and the structural dimension. A negative coefficient indicates an inverse relationship. Only those variables with Beta coefficients statistically different from zero were included in the equations.

TABLE 8. STEPWISE REGRESSION OF SELECTED AGRICULTURAL STRUCTURE DIMENSIONS ON ISSUE, COMMITMENT, SMALL FARM, AND ENTRY VARIABLES, ALABAMA, 1981

Item	Standardized regression coefficients					
	Gross sales	Acres operated	Off-farm work	Percent farm income	Education	Age
Structural issues						
Corporate farms receive same tax breaks	-.08*				-.09*	.08*
Laws to protect family farm	-.08*				-.08*	
Limits on nonresident farmland					-.12*	.08*
Inflated land values a threat					.13*	-.11*
Commitment to farming						
Recognition from friends is main reason	-.08*	-.09*	.08*		-.08*	.19**
Farming is strictly a business	.18**	.08*	-.11*	-.19**		
Take lower income to keep farm advantages	-.16**					.16**
Willing to take more risks than average farmer	.15**	.10*				
Being own boss is major reason			-.14**	.08*		
Would like son to become a farmer	.10*					
Small farmer problems						
Small farmer not received fair share of services	-.23**	-.21*		-.10*		
Unwise to encourage small farmers			-.14**		-.10*	.16**
Special programs for small farmer			.11*			-.13**
Small farmer help welfare program		-.09*				
Entry process						
Get farmland to many people	-.19**	-.14*		-.14**	-.16**	.21**
Lack of land problem for farmers					-.09*	
R^2	.223	.094	.076	.077	.118	.200
F	20.2**	11.1**	9.6**	13.2**	10.9**	19.9**

*p < .05
**p < .001

but older farmers did (B=.08). In contrast, concern about inflated land values predicted educational level (B=.13), but negatively predicted age (B=-.11). Each of the structural issues predicted education, suggesting that more educated, younger farmers opposed tax breaks for corporate farms, opposed limits on nonresident owner-

ship of farmland, and saw inflated land values as a threat to family farming.

Recognition from friends was less of a source of commitment for large farmers (B=-.08, B=-.09), and more educated farmers (B=-.08). Recognition, however, was important for part-time farmers (B=.08), and older farmers (B=.19).

Operators with more sales (B=.18) and more land (B=.08) thought that farming was strictly a business. Part-time farmers (B=-.11) and those with proportionately less income from farming (B=-.19) were more likely to disagree. Similarly, farmers with more gross sales were less willing to take a lower income to keep the advantages of farm life (B=-.16), but older farmers were more ready to trade off income for their farm lifestyle (B=.16). Those with more sales and acreage saw themselves as more willing to take risks than the average farmer (B=.15, B=.10).

Being one's own boss was a main reason for farming among full-time farmers (B=-.14) and those with a high proportion of income from farming (B=.08). More operators with higher gross sales wanted their sons to be farmers (B=.10). Commitment variables were more important predictors of sales, size, and part-time status.

High gross sales operators did not think that the small farmer had failed to receive a fair share of public services (B=-.23), nor did large farm operators (B=-.21) or those with a higher proportion of their income from farming (B=-.10). Part-time farmers did not think it unwise to encourage small farmers in agriculture (B=-.14), as did those with more education (B=.10). Older farmers were more likely to agree (B=.16).

Part-time farmers were predicted by favorableness to special programs for small farmers (B=.11), while older farmers were more opposed to special help for small farmers (B=-.13). However, those farming larger acreages were less likely to view special help for small farmers as a welfare program (B=-.09).

Agreement with the idea that we should get farmland into the hands of as many people as possible was a negative predictor of sales (B=-.19), size (B=-.14), percent of income from farming (B=-.14), and education (B=-.16). Older farmers, however, tended to agree with the statement (B=.21). Better-educated farmers did not see a lack of land for sale at any price as a problem for beginning farmers (B=-.09).

The six regression equations each explained a significant proportion of variance in the structural dimensions, although the items

predicted gross sales (R^2=.223) and age (R^2=.200) better than the other measures of farm size or operator status.[2]

Prospects for the Farm

FACTORS HINDERING IN THE FUTURE. When farmers were asked to rate a series of items as helping or hindering the future survival or growth of their farm, the primary obstacle they saw was the price of fuel, cited by over 90 percent, table 9. Over three-quarters felt that the cost of new technology or machinery could be a problem, as could the cost of capital for financing their operation.

Labor was another hindrance noted by more than 70 percent of the farmers. Both price and availability were cited as problems. Minimum wage laws, the perceived undesirability of farm work, and the difficulty in locating reliable, skilled assistance when needed presented major problems for many farmers.

[2]R^2 refers to the proportion of variance in a dependent variable explained or accounted for by a set of independent variables. Ranging between zero and 1 (or 100 percent), R^2 suggests the degree to which the predictor set of attitudes is associated with different positions on each structural dimension. Unexplained variation may be attributed to attitudes or characteristics not included in the equation, as well as measurement error.

TABLE 9. FACTORS PERCEIVED AS HINDERING OWN FUTURE IN FARMING: SURVEY RESPONSES OF ALABAMA FARMERS, 1981

Item	Response			No answer
	Help	No difference	Hinder	
	Pct.	*Pct.*	*Pct.*	*No.*
1. The price of fuel	8.0	1.7	90.3	(48)
2. The cost of new technology or machinery	11.6	10.6	77.8	(57)
3. The price of money I must borrow	8.8	16.0	75.2	(72)
4. The availability of hired farm labor	12.9	15.6	71.5	(62)
5. The price of hired farm labor	8.9	20.3	70.8	(54)
6. The price of land	10.8	24.5	64.7	(59)
7. My age	19.8	20.2	60.0	(62)
8. The availability of land for sale at the going rate	11.9	28.4	59.7	(65)
9. The availability of fuel	22.7	21.1	56.2	(70)
10. The availability of money to borrow	27.4	31.1	41.5	(69)

N=705

Nearly two-thirds cited land values as an obstacle. As land values are often influenced by speculative pressures from nonfarm development, financing land purchases out of farm revenues alone becomes increasingly difficult. Land availability at going rates was also perceived as a further problem. The prospects for expansion may be severely limited for many operators.

Age was indicated as a hindrance by 60 percent of the respondents. Age places constraints on planning and certain activities, with long term horizons that may not be feasible in an older person's lifetime.

Capital and energy are primary inputs into today's agriculture. A majority of farmers cited the availability of fuel as a problem, but only 41.5 percent expected the availability of money to borrow to be a problem for them.

FACTORS HELPING IN THE FUTURE. The nine items in table 10 were perceived as helping or making no difference for the farmers' future in the business. The most frequently cited help to their future in farming was the kind of advice the Extension Service provides (78.9 percent). Extension personnel are an important source of

TABLE 10. FACTORS PERCEIVED AS HELPING OWN FUTURE FARMING: SURVEY RESPONSES OF ALABAMA FARMERS, 1981

Item	Response			No answer
	Help	No difference	Hinder	
	Pct.	*Pct.*	*Pct.*	*No.*
1. The kind of advice the Extension Service gives me	78.9	16.6	4.5	(55)
2. Foreign demand for agricultural goods	78.8	15.5	5.7	(72)
3. Tax breaks that shelter my farm income	77.8	15.6	6.6	(69)
4. My family	73.8	20.7	5.5	(72)
5. Government farm programs to support prices	63.4	21.7	14.9	(52)
6. My ability to understand and use new technology	53.6	24.8	21.6	(71)
7. My nonfarm job or business	49.0	40.1	10.9	(109)
8. Locally-produced gasohol	39.4	53.2	7.4	(96)

N=705

management information and serve as links to the larger administrative and scientific system that provides technical assistance as well as coordination in times of crisis.

Foreign demand for agricultural goods and tax breaks that shelter farm income were two potent supports cited by farmers. Both items reflect financial boosts to farm income.

Nearly three-quarters rated their family as a help to their future in farming. Farm wives, working spouses, and sons and daughters all may contribute moral support, management assistance, supplemental income, and labor to the farm operation.

Government farm programs to support prices were noted as a help by nearly two-thirds of the farmers. In recent years, however, such supports have been viewed as an absolute floor to farm income as they are generally just sufficient to meet costs of production. Furthermore, only selected crops are included in the support program.

Over half the farmers saw their ability to understand new technology as a help, but almost a third saw no difference and 21.6 percent rated their own lack of ability to understand technology as a hindrance to their future. Technical innovation in agriculture has been viewed as a competitive treadmill. Many farmers seem to be concerned about maintaining position as a rapid pace of change continues, although a majority were confident in their ability to stay abreast of new developments.

A nonfarm job or business was rated as a help by 49 percent of the respondents. Less than 11 percent saw their nonfarm job as a hindrance. Part-time farming occurs in many different ways, but an off-farm job is often necessary to sustain a growing family and provide stability to an uncertain farm income.

Finally, most farmers indicated that locally-produced gasohol would make no difference to their future in farming. However, more than a third did see it as a help to the future, possibly viewing gasohol as a safeguard against embargoes and fuel shortages.

INFLUENCES AND STRUCTURAL POSITION. Regression equations using influences on future in farming as predictors of selected structural dimensions are given in table 11. The items are coded so that a high score indicates a rating of "help a lot," and a low score "hinder a lot." Only influences that were significant predictors of at least one structural dimension are shown in the table.

"My age" was rated as a help by farmers with higher gross sales (B=.15), more acreage (B=.14), off-farm jobs (B=.11), and more

TABLE 11. STEPWISE REGRESSION OF SELECTED AGRICULTURAL STRUCTURE DIMENSIONS ON FACTORS INFLUENCING FUTURE IN FARMING, ALABAMA, 1981

Factor	Standardized regression coefficients					
	Gross sales	Acres operated	Off-farm work	Percent farm income	Education	Age
My age	.15**	.14*	.11*		.09*	-.54**
My nonfarm job or business	.18**	-.09*	.39**	-.36**	.09*	
My family	.16**		-.21**	.24**		
My ability to understand and use new technology	.16**			.13*	.22**	
Tax breaks that shelter my farm income	.09*	.11*				-.07*
Foreign demand for agricultural goods	.12**			.08*		
The price of land			-.12*			.08*
The availability of hired farm labor					-.16**	-.09*
Government farm programs to support prices	.10*				-.13*	
The availability of money to borrow		.13*				
The price of money I must borrow (interest rate)						-.17**
The availability of fuel						.11*
R^2	.155	.054	.171	.152	.102	.345
F-ratio	14.7**	8.0**	27.4**	25.2**	10.6**	48.9**

*$p < .05$
**$p < .001$

education (B=.09). Older farmers, however, tended to rate their age as hindering their future in farming (B=-.54).

A nonfarm job was viewed as a help by farmers with more sales (B=.18), but operators with more acres tended to rate it as a hindrance (B=-.09). Operators employed off the farm tended to rate their jobs as a help to their future (B=.39). However, those with a higher proportion of their income from farming tended to rate their jobs as a hindrance (B=-.36). Positive ratings of part-time work predicted education (B=.09).

Families were a help to operators of larger farms (B=.16), but rated as a hindrance by part-time farmers (B=-.21). Farmers who received more of their income from farming gave more positive evaluations of the influence their family would have on the future (B=.24).

A personal ability to understand and use new technology was a help to large farmers (B=.16), and for those with more of their

income from farming (B=.13). Better educated farmers were particularly likely to rate this item as a help (B=.22).

Tax breaks were a help for large farmers, in terms of sales (B=.09) and acreage (B=.11). Older farmers did not see tax breaks as a help to their future (B=-.07).

Foreign demand was a help for large operators (B=.12) and those with more of their income from farming (B=.08). The price of land was a hindrance for more part-time farmers (B=-.12), but a help for older farmers (B=.08). The availability of labor was a greater problem for more educated (B=-.16) and older farmers (B=-.09).

Government price support programs were a help for those with larger sales (B=.10), but a hindrance for those with more education (B=-.13). The availability of money to borrow was a help for operators with larger acreages (B=.13). These individuals may possess greater equity in land, facilitating loan transactions. Interest rates were more of a problem for younger farmers (B=-.17), but the availability of fuel was less of a hindrance for older farmers (B=.11).

Ratings of various influences on one's future in farming were best able to predict age (R^2=.345). The items also differentiated economically larger operators (R^2=.155) and those with higher proportions of their income from farming (R^2=.152).

LONG-RANGE PLANS. The long-range plans of farmers are tabulated by categories of age in table 12. The items are ordered in terms of their frequency in the total sample. Percentages do not sum to 100 because many farmers gave multiple responses to the question.

Asked what direction they thought their operation would take in the future, 57.6 percent of the farmers indicated that it would stay more or less the same. Sixty percent of the older farmers thought it would stay the same, but only 40 percent of the younger operators, age 18 to 44, thought so. The youngest group was least likely to expect to retire on the farm, and as would be expected, the oldest group was most likely (62.6 percent).

Nearly 36 percent of the producers indicated they would expand their animal herds. This represented two-thirds of the young farmers but only 18.4 percent of the older group.

More of the youngest farmers planned to keep a nonfarm job than the oldest group (45.3 versus 8.9 percent). More than half the younger farmers planned to buy or lease more land. Similarly, 45.3 percent of the younger farmers planned to construct new buildings or facilities, but only 4.7 percent of those 65 or over had such plans.

TABLE 12. PERCENT MENTIONING SELECTED LONG-RANGE PLANS, TOTAL SAMPLE, BY AGE CATEGORY, ALABAMA FARMERS, 1981

Plans	Percent of total	Percentage mentioning, by age			
		18-44	45-54	55-64	65 & over
1. Keep the farm more or less the same	57.6	40.0	62.9	59.6	60.0
2. Retire on the farm	47.9	20.0	34.4	56.4	62.6
3. Expand animal herd	35.8	65.3	43.7	33.3	18.4
4. Continue a nonfarm job	26.6	45.3	47.7	19.1	8.9
5. Buy or lease more land	16.7	51.6	23.8	8.9	4.7
6. Construct new buildings or facilities	16.1	45.3	17.9	13.3	4.7
7. Reduce animal herd	12.8	5.3	8.6	14.2	18.4
8. Lease the land to others	12.2	1.1	5.3	10.7	25.3
9. Get into new crop enterprise	6.4	21.1	6.6	4.4	1.1
10. Quit a nonfarm job and farm full-time	6.0	10.5	6.6	7.1	2.1
11. Get into new animal enterprise	4.9	12.6	4.6	4.4	1.6
12. Take a nonfarm job	4.6	7.4	5.3	3.1	4.2
Number	*670*	*96*	*152*	*227*	*199*

More older farmers planned to reduce their animal herd (18.4 percent). More than a quarter planned to lease their land to others, and few planned to get into a new crop enterprise (1.1 percent). Crop enterprises seem distinctly unpopular among the older farmers, whereas animal enterprises seemed to be of greater interest for all age categories.

Younger farmers were somewhat more likely than the oldest group to project quitting a nonfarm job and to begin farming full time (10.5 versus 2.1 percent). More young farmers, however, planned to take a nonfarm job, illustrating the pressures facing beginning operators.

PLANS AND STRUCTURAL POSITION. Given in table 13 are regression equations predicting position in agricultural structure with survey items expressing long-range plans for the farm. Planning to continue a nonfarm job was a negative predictor of gross sales (B=-.20), acres operated (B=-.10), percent of income from farming (B=-.33), and age (B=-.25). Plans to continue a nonfarm work status were associated with a current off-farm work status

TABLE 13. STEPWISE REGRESSION OF SELECTED AGRICULTURAL STRUCTURE DIMENSIONS ON LONG-RANGE FARM PLANS, ALABAMA, 1981

Long-range plans	Standardized regression coefficients					
	Gross sales	Acres operated	Off-farm work	Percent farm income	Education	Age
Continue a nonfarm job ..	-.20**	-.10*	.56**	-.33**	.10*	-.25**
Buy or lease more land ...	.14**	.08*		.08*		-.18**
Construct new buildings or facilities	.07*	.11*			.17*	-.15**
Expand my animal herd ..			.07*		.11*	.12**
Retire on the farm	.13**				-.12*	.21**
Quit a nonfarm job and farm full-time			.24**	-.13**		
Keep the farm more or less the same			-.07*			.09*
Get into a new animal enterprise					.08*	
Reduce my animal herd...					.10*	
Lease the land to others ..						.14**
Get into a new crop enterprise						-.09*
R^2	.082	.029	.399	.124	.098	.368
F-ratio	14.0**	6.9**	99.5**	30.4**	12.1**	47.6**

*$p < .05$
**$p < .001$

(B=.56). More educated farmers also planned to continue off-farm work (B=.10).

Large farm operators planned to buy or lease more land (B=.14, B=.08), as did those with higher proportions of their income from farming (B=.08). Older farmers, however, were less likely to plan in this direction (B=-.18). Along the same lines, more large farmers planned new construction (B=.07, B=.11), as did more educated (B=.17) and younger farmers (B=-.15). Plans to expand their animal herd predicted operators with part or full-time jobs off the farm (B=.07). More educated (B=.11) and older (B=.12) farmers also were more likely to plan animal herd expansions.

Reporting a plan to retire on the farm predicted gross sales (B=.13) and age (B=.21), but was a negative predictor of education (B=-.12). Planning to farm full-time predicted off-farm work status (B=.24) and proportion of income from farming (B=-.13). Full-time farmers and older farmers were differentiated by plans to keep the farm more or less the same (B=-.07, B=.09). More educated farmers planned to get into a new animal enterprise (B=.08), but planning to reduce animal herds also predicted education (B=.10). Leasing the

land to others predicted age (B=.14) and getting into a new crop enterprise was a negative predictor of age (B=-.09).

Long-range plans were better predictors of off-farm work status (R^2=.399) and age (R^2=.368), than of other structural variables. These two structural characteristics also were associated with changes in employment as well as decisions that require a greater commitment of personal time and energy. The pattern of results illustrates the different planning horizons associated with different stages in a farm operator's life cycle.

SUMMARY AND CONCLUSION

The report has examined results from a statewide survey of Alabama farmers regarding their perception of selected agricultural structure issues. Structure primarily refers to the number, size, and type of farms. The structural features of an industry have implications for control of resources, competitiveness of markets, and prospects for new operators to enter the business.

Based on comparisons with selected characteristics reported in the 1978 Census of Agriculture, the 705 sample respondents were found to be fairly representative of the farm operator population in the State. Fewer small farm operators were found in the sample. Part-time farmers, family farms, young farmers, black operators, and women were slightly underrepresented.

Most farmers were concerned with the future of the family farm and felt that some attention should be given to the greater share of government benefits being received by large-scale operations. Most felt that corporate farms should have stricter financial reporting requirements and should not receive the same tax breaks as family farms.

Many family farms are incorporated for tax and estate transfer purposes. Most attention seemed directed to nonfamily corporate farming because this form of organization suggests absentee ownership and potentially greater threats to the viability of local communities. Extensive nonlocal ownership of farmland may have significant implications for the quality of life in rural farm communities. Separation of ownership and management in farming may be a concern because of the implications this split has for traditional conceptions of the independent, land-owning farmer.

The entrepreneurial willingness to endure risk and hardship has been customarily associated with the sole proprietor farmer. When the functions of owner, manager, and laborer are combined, a

problem with a farm enterprise is known to the owner without any filtering through an intermediate managerial relay *(10)*. Thus, many farmers were concerned about the potential for large or corporate farms to overshadow the independent farm owner and operator.

Autonomy and economic freedom seemed to be fundamental sources of commitment to farming. Nevertheless, the respondents were not willing to stay with an unprofitable business solely for the sake of their children's experience, nor did most want their children to become farmers.

Most saw the small farm as justly receiving focused attention by public research and extension programs. They did not support encouraging small operators to stay in the business, but felt that those who choose to remain deserve assistance to meet their special needs.

The regression analysis showed that gross sales and farm operator age were best predicted by the attitudinal items. Reasons for being in farming and attitudes toward small farmers were the major factors differentiating farmers with different levels of gross sales. Similarly, social reasons for being in farming, such as recognition from friends, seemed to increase in importance with age.

Rating their future in farming, most saw fuel costs, machinery costs, interest, labor availability and cost, land prices, and their age as obstacles to remaining in business. Extension assistance, foreign demand, tax breaks, and family support were evaluated as helping them to maintain their operation. Regression analysis showed the relative importance of age, nonfarm jobs, the family, and ability to use technology as influences predicting structural characteristics.

The most frequently mentioned plan for the future was to retire on the farm. Younger farmers were more oriented toward buying or leasing more land. Regression analysis showed nonfarm jobs, land acquisition, and building construction as plans differentiating many of the structural dimensions.

The lack of land for sale at any price and the need for government programs to help people get started in farming were perceptions of the entry process held by most farmers. Money, land, management skills, and equipment were most frequently mentioned as entry problems for young farmers.

The problems of young farmers entering the business of agriculture is a coming crisis to the industry. As the current cohort of farm operators continues to age, seek retirement, and pass on their farms,

high interest rates, high land prices, and low profit margins will divert many of their successors to other lines of work. The ability of young entrepreneurs to take positions as independent operators will have a significant impact on the future of Alabama agriculture.

One of the key questions is who will emerge as owners of the assets in agriculture and who will make the investment decisions determining the pace and direction of future agricultural advances *(10)*. Some maintain that the high price of land and the great capital investment required will allow only wealthy persons with easy access to money to both own and operate farms *(6)*.

One review concluded that the real problem is one of losing farmers to other occupations. Thus, programs should be designed to keep or make farming a sufficiently attractive and profitable way of life to keep farmers farming *(8)*. The results suggest that Alabama farmers have similar perceptions of the situation.

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APPENDIX A

COMPARISON OF SELECTED SAMPLE CHARACTERISTICS IN 1981 STATEWIDE SURVEY OF ALABAMA FARMERS WITH 1978 CENSUS OF AGRICULTURE

Characteristic	1981 farm survey		1978 agriculture census	
	Number	Percent	Number	Percent
Business organization				
Family or individual	443	70.2	52,434	91.4
Partnership	79	12.5	4,227	7.4
Incorporated	109	17.3	700	1.2
(Missing)	(64)			
Off-farm employment				
100 days or more	319	54.4	32,115	55.8
Less than 100 days	43	7.3	4,684	8.1
Not employed off the farm	224	38.3	20,741	36.1
(Missing)	(96)			
Percent of family income from farming				
0-19 percent	286	43.5	(NA)	
20 to 39 percent	108	16.4		
40 to 79 percent	114	17.4		
80 to 100 percent	149	22.7		
(Missing)	(48)			
Education				
Some high school or less	253	37.0	(NA)	
High school graduate	207	30.3		
Some college	110	16.0		
College graduate	114	16.7		
(Missing)	(21)			
Age				
18 to 44 years	96	14.2	19,218	33.4
45 to 54 years	152	22.6	14,150	24.6
55 to 64 years	227	33.7	13,869	24.1
65 years and older	199	29.5	10,266	17.9
(Missing)	(31)			
Race				
Black	40	5.7	4,880	8.5
White	656	94.3	52,589	91.5
(Missing)	(9)			
Sex				
Male	676	97.1	54,018	93.9
Female	20	2.9	3,522	6.1
(Missing)	(9)			

APPENDIX B

INTERCORRELATIONS, MEANS, AND STANDARD DEVIATIONS FOR AGRICULTURAL STRUCTURE VARIABLES, ALABAMA, 1981

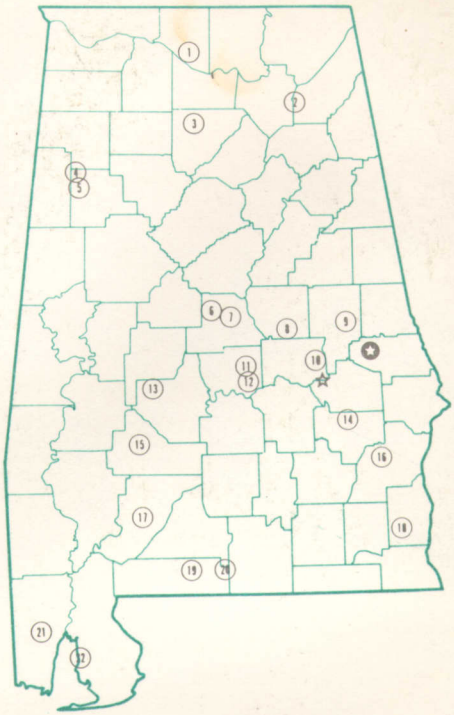
Variable	1.	2.	3.	4.	5.	6.
1. Gross sales	--					
2. Land operated	.61*	--				
3. Off-farm work	-.25*	-.09*	--			
4. Percent income from farm	.53*	.30*	.53*	--		
5. Education	.22*	.29*	.19*	-.12*	--	
6. Age	-.24*	-.16*	-.29*	-.04	-.25*	--
Mean	3.32	3.49	2.07	2.44	2.99	57.5
Standard Deviation	1.98	1.68	.92	1.62	1.41	12.34

N=705

*$p < .01$

Alabama's Agricultural Experiment Station System
AUBURN UNIVERSITY

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the State has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



Research Unit Identification

★ Main Agricultural Experiment Station, Auburn.
☆ E. V. Smith Research Center, Shorter.

1. Tennessee Valley Substation, Belle Mina.
2. Sand Mountain Substation, Crossville.
3. North Alabama Horticulture Substation, Cullman.
4. Upper Coastal Plain Substation, Winfield.
5. Forestry Unit, Fayette County.
6. Foundation Seed Stocks Farm, Thorsby.
7. Chilton Area Horticulture Substation, Clanton.
8. Forestry Unit, Coosa County.
9. Piedmont Substation, Camp Hill.
10. Plant Breeding Unit, Tallassee.
11. Forestry Unit, Autauga County.
12. Prattville Experiment Field, Prattville.
13. Black Belt Substation, Marion Junction.
14. The Turnipseed-Ikenberry Place, Union Springs.
15. Lower Coastal Plain Substation, Camden.
16. Forestry Unit, Barbour County.
17. Monroeville Experiment Field, Monroeville.
18. Wiregrass Substation, Headland.
19. Brewton Experiment Field, Brewton.
20. Solon Dixon Forestry Education Center, Covington and Escambia counties.
21. Ornamental Horticulture Field Station, Spring Hill.
22. Gulf Coast Substation, Fairhope.