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ABSTRACT

Changes in farming and agribusiness influence rural community and rural education. This paper reports on Kentucky-farmer surveys that focused on farm characteristics and adaptive strategies. The survey, when first conducted in 1986, yielded responses from 1,000 farmers. The second survey, in 1988, drew responses from 830 members from the first group, 11.7% of whom had quit farming. The report is divided into seven sections, each comparing the 1986 and 1988 surveys. The first section offers general survey highlights. Section 2 discusses farm structure and demographics, examining the scale of operations, types of commodities, and farm family characteristics. Section 3 examines farmers' point of view concerning the farm economy, rural industrialization, and government policy, showing little change between surveys, but some diversity among farmers. Section 4 discusses employment trends, examining farmers' links with other economic sectors. The figures show an increasing dependency by farmers on off-farm jobs. Section 5 discusses debt and the financial changes for farms, broken down into four categories by dependence on off-farm income and total household income. With some exceptions, there appeared to be an overall improvement in farms' financial conditions between 1986 and 1988. Section 6 offers a long discussion of factors affecting burley tobacco, Kentucky's largest cash crop. Farmers were surveyed on major changes brought about in 1986 by the federal Tobacco Improvement Act. Section 7 examines the views of those who quit farming, most of whom did so because they found more lucrative off-farm employment. Social and demographic characteristics of these ex-farmers also are examined. (TES)

The Farmer Speaks: Kentucky Farm Change, 1986-1988

Kentucky Agricultural Survey
Departments of Agricultural Economics and Sociology
College of Agriculture, University of Kentucky
Lexington, Kentucky

Special Extension Publication — April 1990

The Farmer Speaks: Kentucky Farm Change, 1986-1988

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Introduction

This publication presents highlights and analysis of two comprehensive surveys of Kentucky farmers. These surveys, conducted in both 1986 and 1988, are part of a six-year joint research project sponsored by the University of Kentucky Departments of Agricultural Economics and Sociology. Funding for the project comes from both the University of Kentucky College of Agriculture and a grant from the United States Department of Agriculture, Economic Research Service.

The first survey, conducted in spring, 1986, yielded responses from more than 1,000 respondents who considered themselves farmers and had more than $1,000 in gross farm sales annually. In 1988, we conducted a second mail survey of those who responded in 1986 and received about 830 responses; of these, about 11.7 percent were no longer farming. The results presented here, with the exception of the section on those who have quit farming, are based on responses from nearly 450 current farmers.

Figures for 1986 presented in this section may vary from those presented in earlier papers on Kentucky farm change published during 1987 and 1988 (KFC#1-KFC#12, Special Extension Series). In surveys of this type, there are a certain number of persons who replied to the earlier survey, but did not answer later questionnaires. Also, some respondents did not answer all of the same questions in both years. In addition, there are respondents who are no longer farming; this group will be discussed in the last section of this report.

Objectives

Kentucky farmers constantly adjust their farm operations because of the difficult and changing nature of agriculture. The College of Agriculture and the general public need better information on Kentucky farms in order to better understand these adjustments. The U.S. Census of Agriculture and the Kentucky gricultural Statistical Service both provide valuable data, and this project is no substitute for that information. But those data sources do not address many questions which are important for understanding how individual farmers make decisions.

In addition to providing descriptive information, this project will aid in understanding which adjustment strategies are most successful. Research to identify characteristics and strategies which contribute to survival can help future generations of farmers who may face similar conditions.

The objectives of this study are:

1) To monitor socioeconomic changes in the organization of Kentucky farming during a period of rapid market, structural, and federal policy changes.

2) To compare how farm operator and farmland owner attitudes and perceptions of agricultural issues vary across individuals, across farm operations, and over time.

3) To estimate how the debt/asset position varies across farm operations and to analyze methods various farmers use to service their debt load and spread their risks in an attempt to assure farm survivability.

4) To analyze how various farm operators alter their farm production practices in response to changes in farm commodity prices, input prices, and government programs.

5) To evaluate how changes in goverment programs (primarily tobacco) affect the value of farmland across the state and to assess the implications of such changes in farm structure.

The publication is divided into seven sections that compare the 1986 and 1988 surveys. They are: Highlights of the Survey; Structure and Demographic Characteristics of Kentucky Farms; Farmers' Point of View; Off-Farm Employment; Farm Debt; Burley Tobacco Production; and Kentuckians Who Have Left Farming.

SECTION ONE

The Farmer Speaks: Survey Highlights

Introduction

In this section, we give an overview of highlights from the Kentucky Agricultural Survey, comparing results from 1986 and 1988. There are several subsections: Kentucky Farm Structure and Demographics; Farmers' Point of View; Off-farm Employment; Farmland Price Movements; Farm Debt; Burley Tobacco; and Kentuckians Who Are No Longer Farming.

Kentucky Farm Structure and Demographics

Farm structure refers to characteristics used to compare farm operations, such as types of commodities grown or raised, amount of annual gross farm sales, whether a farm is considered commercial or subcommercial, and acres owned or rented. Demographic characteristics describe members of the farm community. These characteristics include age and gender of farm operator and household education and income.

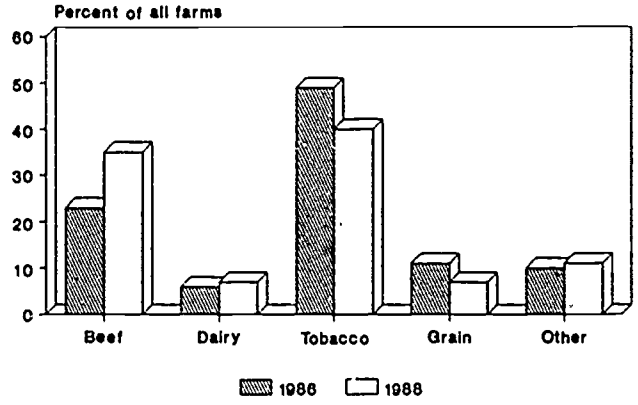
* Kentucky remains a state of diversified agriculture, as shown in Figure 1.1. In fact, farms may have become slightly more diversified since the 1986 survey. Tobacco, the state's major crop, declined in importance, with almost 40 percent of farms reporting it as principal income source (more than 50 percent of total farm sales) in 1988, compared with 49 percent in 1986. Beef cattle became much more important and were reported as the principal source of income on nearly 35 percent of the state's farms in 1988, compared with just over 23 percent in 1986. Cash grain also declined in importance.

* The percentage of commercial farms declined to about 16 percent from just over 19 percent in 1986. A commercial farm has more than $40,000 in annual gross sales. In the sub-commercial category, about 47 percent of the farms had annual gross sales of less than $10,000 in 1988, compared with nearly 44 percent in 1986.

* Despite the declining percentage, commercial farms claimed 72 percent of total sales in both 1986 and 1988. In other words, commercial farms continued to grow larger.

* When divided by commodity type, 39 percent of grain farmers were considered commercial in both surveys. The percentage of dairy farmers considered commercial declined to about 65 percent

Figure 1.1: Distribution of Farm Types by Commodity, 1986 and 1988.



Over 50 percent of all farm sales must be from the farm type

from about 78 percent in 1986; beef showed a decline to just under 10 percent from just over 12 percent; tobacco declined to nearly 4 percent from nearly 8 percent.

* It would appear farmers are sticking with traditional agricultural products. The percentage of farmers reporting more than 50 percent of their annual gross sales from alternative crops remained the same in both surveys, just under 4 percent.

* Statewide, farm size was unchanged, averaging 177.75 acres.

* The average age of farm men was 53 and farm women, 51. On the average farm, men did not quite complete high school, but women did.

* The percentage of farms operated by males declined slightly from about 96 percent to just under 94 percent.

* Average household income increased about 9 percent, from $31,786 in 1986 to $34,717.

* About a third of Kentucky farmers reported total family income before taxes of $40,000 or more, compared with 28 percent in 1986. And 35 percent had incomes of less than $20,000, compared with 37 percent in 1986.

Kentucky Farmers' Point of View

We asked for farmers' opinions in four areas, farm economy; farm and rural development; government involvement; and farm opera-

tions. Overall, farmers have become more optimistic about the future of the farm economy than they were in 1986. There was a major decline in the percentage of farmers backing industrial development for rural areas. The percentage of farmers supporting mandatory production controls declined. In addition, there seemed to be more interest in expanding farm operations.

Farm Economy

* In 1986, about 72 percent of the farmers agreed Kentucky has a farm crisis, compared with nearly 64 percent in 1988. This was still a high percentage in agreement, however

* In 1986, almost 67 percent of the farmers agreed times in farming were the worst since the Depression, compared with about 44 percent in 1988.

* In 1986, 24 percent of the respondents agreed that farmers who lose their operations are to blame, compared with 27 percent in 1988.

* In 1986, almost 54 percent of the farmers agreed that small farms would disappear, compared with about 44 percent in 1988.

* In both years, about 15 percent of the farmers agreed that only inefficient farmers were having problems.

Farm and Rural Development

* Only 15 percent of the farmers responding agreed that rural manufacturing is more important than high farm prices, about the same as in 1986.

* The percentage of farmers agreeing that the best way to develop rural areas is to attract new industry declined from 46 percent in 1986 to about 39 percent in 1988.

* In both years, about 58 percent of the farmers agreed that rural well-being is less dependent on farming than it used to be.

* In 1986, just over 80 percent of the farmers agreed they accepted lower wages for their on-farm work than they could get off-farm, compared with close to 77 percent in 1988.

Government Involvement

* In both years, about 71 percent of the farmers agreed there should be an upper limit on government commodity payments.

* In 1986, just over 48 percent of the farmers agreed there should be mandatory production controls in order to raise farm prices, compared with just under 44 percent in 1988.

* There was a slight increase in those agreeing that farmers would benefit from a balanced federal budget, from about 57 percent in 1986 to about 59 percent in 1988.

* Those agreeing that only full-time farmers should receive government help was essentially unchanged in both years, remaining at about 34 percent.

Farm Operations

* There was a small increase among those agreeing that the success of farming hinges on expansion of the farm operation, from just over 29 percent in 1986 to just under 32 percent in 1988.

* In both years, about 41 percent of the farmers agreed that soil conservation helps short-term profits.

Off-farm Employment

Over the years, rural areas have become less dependent on agriculture as the principal source of family income. In Kentucky and across the rest of the nation, more and more farm families have seen members go to work off the farm while continuing to run the farm operation. This trend of an increasing number of part-time farmers means major changes for farm families, rural communities, and farming itself.

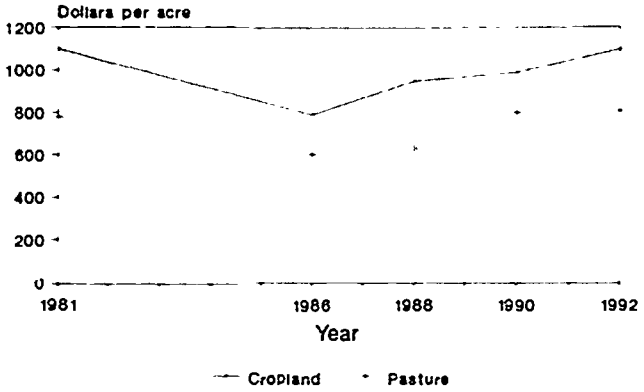
* The percentage of farms where both the operator and the spouse were employed off-farm increased from over 28 percent in 1986 to about 33 percent in 1988. Farms where neither the operator nor the spouse had off-farm employment decreased from just over 37 percent to more than 35 percent.

* In 1988, farms where neither the operator nor spouse had off-farm employment had substantially higher annual gross sales, an

average of $57,830, compared with operations where both the operator and spouse had jobs ($11,718); the operator worked off farm ($25,143); and the spouse worked off farm ($36,711).

* Part-time farmers tended to concentrate on beef and tobacco, while full-time farmers tended to concentrate on grain and dairy. Those part-time farmers depending on beef cattle for more than half of their annual gross sales increased from more than 28 percent in 1986 to about 38 percent in 1988, while those depending on cash grain declined from over 9 percent to under 3 percent.

Figure 1.2: Farmers' Estimates of Land Values, 1981-1992.



Farmland Price Movements

In the 1980s, farmland prices plummeted as interest rates soared and commodity exports plunged. They have since increased as the farm economy has become relatively more prosperous. Land values are of critical importance to farmers because so much of their capital is tied up in this basic factor of production.

* Farmland prices have rebounded from lows hit during 1986, according to estimates from farmers, shown in Figure 1.2.

* For 1981, farmers estimated county cropland values at $1,092 per acre. By 1986, this had declined to $783, nearly a 28-percent decline. But the price was back up to $948 in 1988, close to a 21-percent gain.

* The pattern was similar for pasture. Farmers pegged the 1981 value of pasture at $781 an acre. By 1986, this had declined to $603, nearly a 23-percent loss. But the price had climbed back to $631 for 1988, a gain of just under 5 percent, considerably less than the rebound for cropland.

* Farmers generally expected land values to continue their increases. By 1992, they expected land values to have reached 1981 levels.

Farm Debt

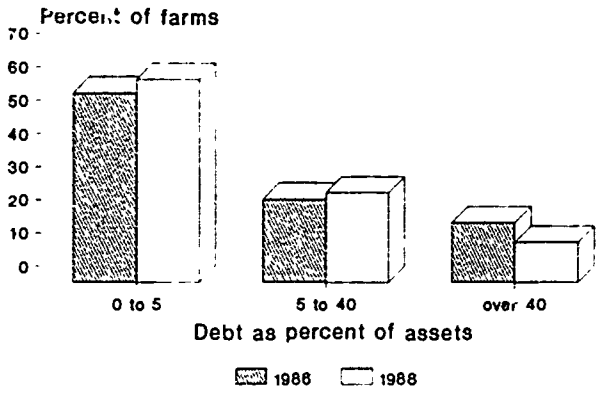
During most of the mid 1980s, media coverage focused on the critical debt situation some farmers faced. These farmers had bought land during the inflationary 1970s, expecting land values to increase even more. When land values dropped and interest rates rose in the first half of the 1980s, these farmers found themselves in a precarious debt/asset position. The situation improved between 1986 and 1988.

* The financial health of Kentucky farmers, as measured by the debt/asset ratio, improved between 1986 and 1988, as Figure 1.3 shows. Part of the recovery can be attributed to increased land values.

* There were not as many farms with high debt/asset ratios (40 cents or more of debt for every dollar of farm assets) -- about 18 percent in 1986, compared with nearly 13 percent in 1988.

* Western Kentucky had the greatest proportion of farms with a high debt/asset ratio. In 1986, more than 28 percent of the farms there were in this condition. This declined to between 25 and 26 percent in 1988. Central Kentucky saw the largest decrease of farms showing

Figure 1.3: Changes in Farm Debt/Asset Ratios, 1986 and 1988.



economic distress, dropping from just over 24 percent in 1986 to just over 16 percent in 1988.

* Debt and age of the male in the farm family are closely related. Families with males under age 45 had the highest debt load. In 1986, about 44 percent of this group had high debt/asset ratios; in 1988, the figure declined to nearly 34 percent, far above those 45 and over.

* Cash grain farmers tended to carry the heaviest debt load. In 1986, nearly 39 percent of these farmers were in the high category, compared with more than 27 percent in 1988. Beef farmers tended to have the least problem with high debt, with about 7 percent reporting themselves in that category in both survey years.

* Dairy farmers showed the largest decline in high debt, moving from about 27 percent in 1986 to a little over 14 percent of the farmers in 1988. The percentage for tobacco farmers declined from about 20 percent to more than 15 percent during the period.

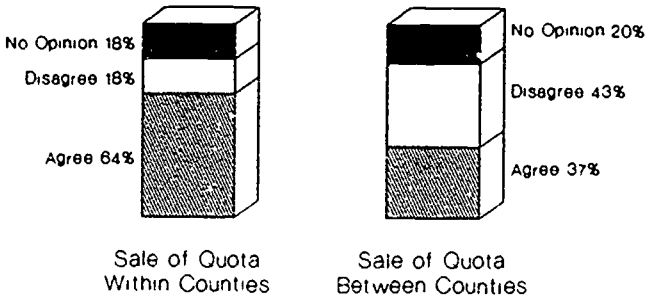
* Debt loads fell for both commercial and subcommercial operations. About 21 percent of the commercial farms had high debt in 1986, compared with over 19 percent in 1988. Among noncommercial farms, about 18 percent were in the high category in 1986, compared with nearly 12 percent in 1988.

* Where both the operator and the spouse worked off farm, the high debt/asset situation improved from more than 25 percent of these farms in 1986 to almost 21 percent in 1988. Where only one person worked off farm, the improvement was even more marked, declining from over 24 percent of the operations to nearly 14 percent. Where both the operator and spouse stayed on the farm, there was essentially no change in the high debt/asset ratio picture.

Burley Tobacco

Tobacco continues to be an extremely important part of the financial well-being of Kentucky farmers. Although there was a decline in the percentage of farmers reporting it as their principal commodity (more than 50 percent of sales) between 1986 and 1988, tobacco still provides a key component of farm income and helps keep many farmers in business.

Figure 1.4: Farmers' Attitudes Concerning Sales of Burley Tobacco Quota, 1988.



Tobacco policy has been undergoing major re-evaluation because of changing market conditions. In the 1986 and 1988 surveys, we asked farmers a number of questions regarding tobacco policy in order to assess their opinions about possible program modifications.

* There was overwhelming agreement that tobacco quotas should remain in place. In 1986, 79 percent of the farmers said there should be a tobacco quota, compared with about 81 percent in 1988.

* In 1986, 59 percent of the tobacco farmers agreed quota sales should be allowed within the same county; 64 percent agreed in 1988, as shown in Figure 1.4.

* Sales of quota between counties was not a popular idea; in both surveys, only about 37 percent agreed with this idea, while about 43 percent disagreed. About 20 percent were undecided.

* In both surveys, farmers were consistent in estimating lease prices based on various support levels. On average, they thought it would cost slightly more to lease tobacco at each price support level than in 1986. Table 1.1 shows the proposed support levels and the estimated lease.

Kentuckians Who Are No Longer Farming

There are a number of reasons why people leave farming, including retirement and better-paying work off the farm. Among Kentuckians,

Table 1.1: Proposed Support Levels and Lease Costs per Pound of Tobacco Estimated by Farmers, 1986 and 1988.

Proposed Support Levels	Mean Estimate by Farmers (Cents per Pound of Tobacco)	
	1986	1988
$1.80	60.1	61.1
$1.45	42.2	44.6
$1.15	27.2	30.0

only a relatively small percentage of farmers cited bankruptcy as the reason for leaving farming.

* About 12 percent of those farming in the 1986 survey were no longer farming in 1988.

* Of those who said they were no longer farming, nearly 61 percent said the farm operator had retired.

* Those no longer farming often gave more than one reason for quitting. Among the most common reasons: Earn more money off the farm, cited by 85.7 percent of respondents; and not enough income, unstable income, and increase standard of living, cited by 69 percent of the respondents for each category.

* Bankruptcy or being forced out of farming by the bank was a factor for only about 16 percent of those responding.

* Most respondents (over 56 percent) reported that total household income in 1988 was less than $20,000. In 1986, just over 55 percent of those who later quit farming reported total income that was less than $20,000.

* In 1986, average size of these farms was just over 101 acres, considerably smaller than the state average. In 1988, repondents held an average of 64 acres.

* For men, the average age was 62; for women, it was 58. This average age considerably above the age for those still farming.

* On average, men had been farming more than 28 years, women, nearly 23 years.

SECTION TWO

The Farmer Speaks:
Farm Structure & Demographics

Introduction

Kentucky's agriculture continued to be diversified in the late 1980s, but the latest survey of farmers in the Commonwealth shows that, like the rest of the nation, there were changes between 1986 and 1988. Small farms still dominated numerically, as they have historically, and the mixture of farm products was still varied. But even over the two-year period, there were alterations to the state's agricultural picture. This section describes these changes.

Farm Structure

Farm structure includes both individual and production factors that characterize a farm. This concept permits someone interested in the organization of agriculture to focus on major characteristics that are critical to understanding farming in the Commonwealth. There are four key components of farm structure that present a more complete picture of Kentucky farming:

1) Scale of farm operations.

2) Type of agricultural commodity produced.

3) If the farm family has nonfarm income.

4) Demographic characteristics of farm families.

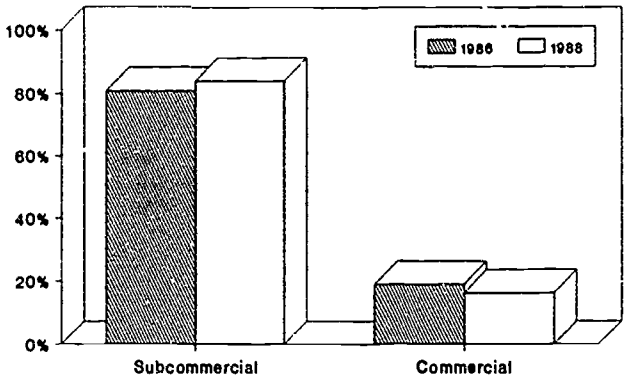
Alone, each of these dimensions of Kentucky farming provides an incomplete picture. Together, they can help us develop a broader understanding of farming in the state.

Scale of Farm Operations

There are two common methods for classifying farm scale -- annual gross farm sales and total number of acres farmed. The preferred measure is gross sales, because the economic return to an acre of land can vary quite a bit, depending on the type of product raised. This is particularly true for a state such as Kentucky, where cash crops and pasture are important. The economic return from an acre of tobacco is much more than the return from an acre of pasture. Therefore, we will use annual gross sales for comparisons of farm scale in this section, even though we also will provide data on acreage to help fill in the picture.

Figure 2.1 shows a comparison of the distribution of farms by annual gross farm sales for both 1986 and 1988. The U.S. Department of Agriculture proposes that, as a rule of thumb, farms with less than $40,000 in annual gross sales are sub-commercial. Generally, sub-commercial

Figure 2.1: Changes in the Distribution of Commercial and Subcommercial Farms, 1986 and 1988.



operations are unlikely to provide an adequate income for an average family. In the 1986 survey, almost 81 percent of the state's farms fell within the sub-commercial category. By 1988, this figure had increased to about 84 percent. This occured at a time when agricultural prices were increasing.

To help in analyzing survey responses, we developed three annual gross sales categories. Two of these are sub-commercial: under $10,000 and $10,000 to $39,999. The other is commercial, $40,000 and up. Figure 2.2 shows that farms with sales under $10,000 increased from nearly 44 percent of the farms statewide to almost 47 percent. The percentage of farms with gross sales in the middle range remained about the same, and the percentage of commercial farms with gross sales over $40,000 declined from about 19 percent in 1986 to just over 16 percent in 1988.

Figure 2.3 shows comparisons of annual gross sales for all farms across the Commonwealth between 1986 and 1988. Gross sales for all of the smallest farms jumped 49 percent between the

Figure 2.2: Changes in the Distribution of Farm Size as Measured by Annual Gross Sales, 1986 and 1988.

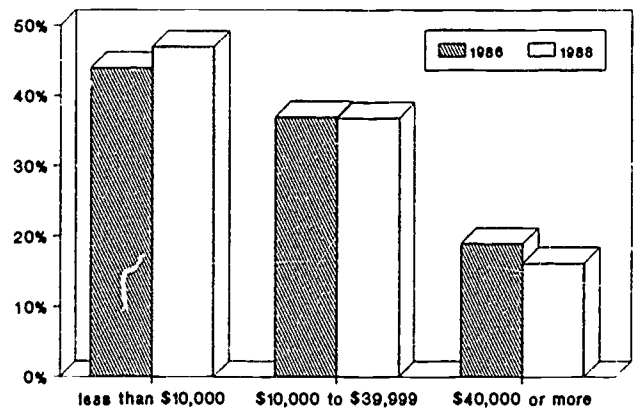
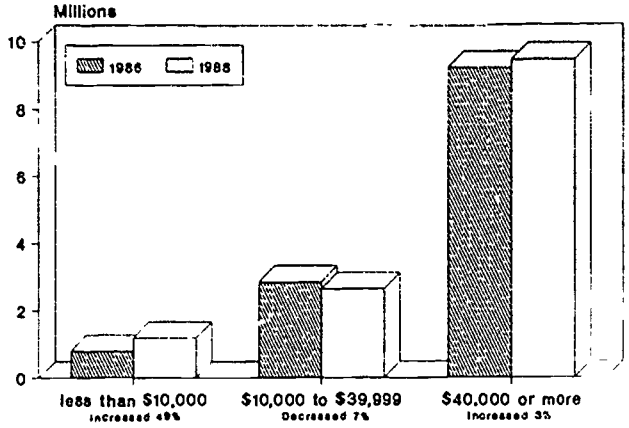


Figure 2.3: How Annual Gross Sales Categories Changed, 1986 and 1988.



two surveys, while gross sales for all mid-sized farms decreased by 7 percent. Sales for all commercial farms inched up by 3 percent. The increase in sales for commercial farms came despite a decline in the numbers of these operations. This suggests that the overall size of commercial farms, as measured by gross sales, increased slightly.

Table 2.1 suggests a contradictory trend for commercial farms. Note the decline in acres of land owned in Western Kentucky, where most commercial farms are located. Between 1986 and 1988, Western Kentucky farm size declined from an average 242 acres to an average 206 acres, a 14.9-percent loss. This was reflected in figures showing declines of both cropland and pasture owned in Western Kentucky. In addition, the region registered losses in land rented, especially pasture. These smaller farms appeared to be generating higher gross sales. The reason for this is unclear, but it is probably the result of higher commodity prices, not reductions in acreage or changes in productivity. This trend bears watching, because the declines in both overall numbers and size of commercial farms are indicators of structural changes in the state's agricultural pattern.

Table 2.1: Kentucky Acreage Figures by Region, 1986 and 1988.

ACRES	Western	Central	Bluegrass	Eastern	State
TOTAL OWNED					
1986	242	146	155	198	178
1988	206	141	165	212	178
PASTURE OWNED					
1986	69	43	82	63	69
1988	50	44	88	50	61
PASTURE RENTED					
1986	48	13	32	8	25
1988	19	8	26	11	17
CROPLAND OWNED					
1986	158	70	83	68	91
1988	150	68	78	54	85
CROPLAND RENTED					
1986	162	22	39	25	56
1988	156	13	18	21	42

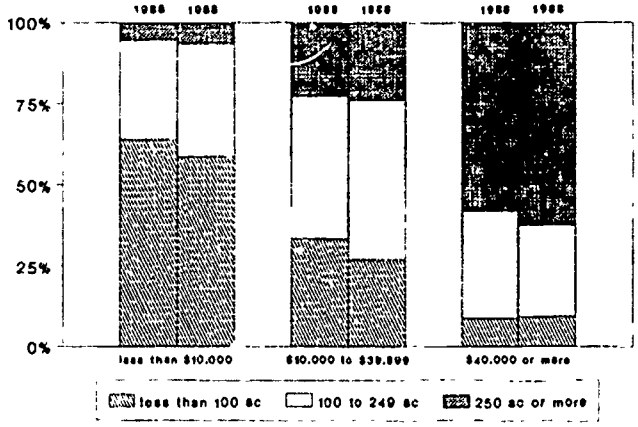
In Central Kentucky, acres owned declined slightly, and there were declines in both pasture and cropland rented. Farm size actually increased somewhat in the Bluegrass area, posting a 6-percent gain from 155 acres on average to 165 acres. Pasture ownership increased, while cropland ownership declined. Demand for rented land dropped off also. For Eastern Kentucky, acres owned jumped about 7 percent from 198 acres to 212 acres. This came despite 21-percent losses in both pasture and cropland owned. The amount of pasture and cropland rented also declined.

During the period, the average statewide farm size of about 178 acres was essentially constant. But there were across-the-board declines in both pasture and cropland owned and pasture and cropland rented.

Figure 2.4 compares total acres owned and annual gross sales as reported in the two surveys. In 1986, about 64 percent of farms with less than $10,000 in annual gross sales were under 100 acres; in 1988, nearly 59 percent of these farms were in this category. The percentage of farms with more than 250 acres was up slightly, while those in the middle acreage category -- 100 to 249 acres -- increased about 4 percent.

In the middle annual gross sales group -- those between $10,000 and $39,999 -- farms in the smallest acreage category decreased from a third of this group to about 27 percent. Farms in the middle acreage category increased from just shy of 44 percent in 1986 to almost 49 percent in 1988. There was also a small percentage increase for farms 250 acres and up.

Figure 2.4: Total Acres Owned and Annual Gross Sales, 1986 and 1988.



The percentage of commercial farms with annual gross sales of more than $40,000 and 250 or more acres increased from about 58 percent in 1986 to just over 62 percent in 1988. But in the 100-249-acre category, there was a decline from nearly 33 percent to about 28 percent of the commercial farms. Despite the overall decline of farm acreage in Western Kentucky, where most of the state's commercial farms are located, the percentage of the largest commercial farms, (250 acres and up) increased somewhat.[1]

Principal Type of Commodity Raised

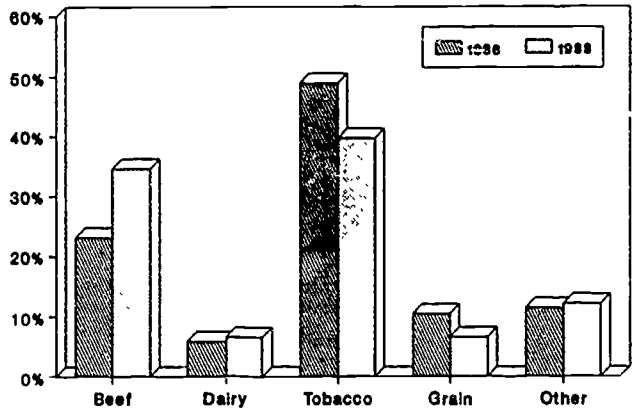
In order to boost our knowledge of Kentucky agriculture, it also is important to understand the type of farming system and the commodity mix. Analysis of changes in commodity production between the two surveys gives us an even clearer picture of how Kentucky farmers are adapting to changing times.

In this study, we identify five general commodity categories consistent with national farm statistics. Following the Standard Industrial Code (SIC), we classify farms according to the commodity that accounted for more than 50 percent of total annual gross sales. The five commodity categories are: 1) tobacco, 2) beef, 3) grain, 4) dairy, and 5) "other", which includes specialty crops or highly diversified farms.

The biggest change in Kentucky commodity production between 1986 and 1988 appears to have been a major shift away from tobacco as the principal income-producing commodity.

Figure 2.5 shows that overall, almost 49 percent of the farmers reported tobacco as their principal commodity in 1986; by 1988, this had declined to only about 40 percent. About 23 percent of the farmers reported beef as their principal commodity in 1986, compared with almost 35 percent in 1988; this category showed the largest increase. The overall percentage of

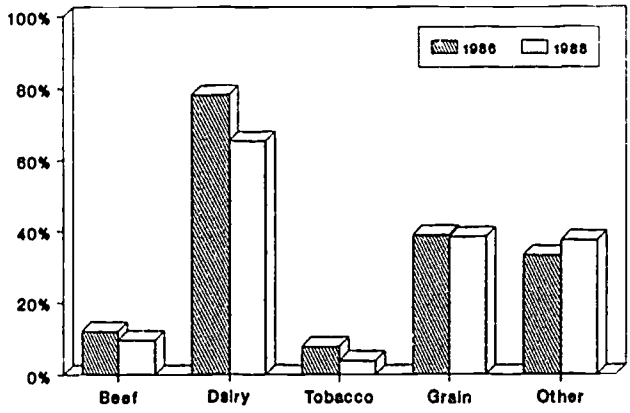
Figure 2.5: Distribution of Farms by Commodity Classification, 1986 and 1988.



grain farms statewide declined from over 10 percent in 1986 to under 7 percent in 1988. Overall, the percentage of dairy farms (about 6 percent) and "other" operations (about 12 percent) showed little change.

Figure 2.6 shows the percentage of commercial farms within the commodity classifications. For example, among all farmers considering tobacco as their main commodity, commercial farmers -- those with annual gross sales over $40,000 -- declined from about 8 percent to less than 4 percent between the 1986 and 1988 surveys. Commercial beef farms also declined from about 12 percent of these operations in 1986 to under 10 percent in 1988; dairy followed the same pattern, declining from about 78 percent of the total to about 65 percent. The percentage of commercial grain operations was essentially unchanged at about 39 percent in both surveys, while the percentage of commercial farms in the "other" category increased slightly from about a third of the farms in 1986 to about 37 percent in 1988.

Figure 2.6: Percentage of Commercial Farms within Commodity Classifications, 1986 and 1988.



[1]Given the increases shown here, it appears that Kentuckians have continued to increase the size of their farms. While statewide data presented above suggested that farm size remained unchanged between 1986 and 1988, the findings presented here were consistent with national trends. The overall average presented is based on all respondents who supplied acreage information. The data presented here were provided by respondents who answered both annual gross sales and acreage questions in both surveys. This may explain the difference.

These data help unmask a vital fact about agriculture in the Commonwealth -- the importance of both beef and tobacco production to subcommercial farm operations. In fact, beef and tobacco seem to have become even more important as sources of income for these farmers. The mainstays of commercial farms tended to be grain and dairy, but note that the percentage of commercial farms declined to some extent in all categories except "other" between the 1986 and 1988 surveys.

Part-time Farming

Part-time farming refers to operations where at least part of the family's total net income is from a nonfarm source. Since World War II, there has been a steady increase in U.S. farm families depending on nonfarm income to some degree. While we discuss off-farm employment trends in detail in Section Four of this publication, we need to talk about off-farm jobs here.

In terms of farm structure, off-farm income permits a wider variety of farming operations than might have been possible fifty years ago. These operations include hobby farmers as well as financially pressed farmers who attempt to offset sagging farm incomes with off-farm employment. Part-time farming, then, also represents a way in which the viability of the local nonfarm economy might favorably influence the economic condition of local family farms.

Table 2.2 presents a picture of how part-time farming in the Commonwealth changed between 1986 and 1988. Besides full-time operations, there are three types of farms depending on the nature of off-farm employment: Type 1) family operations where the primary operator worked on the farm full-time, but the spouse had off-farm work; Type 2) family operations where the spouse worked on the farm, but the primary operator had an off-farm job; Type 3) family farms where both adults had off-farm employment. In about 96 percent of the cases, the farm operator was male in the 1986 survey, compared with about 95 percent in 1988.

Table 2.2: Farmers and Employment in Kentucky, 1986 and 1988.

		1986	1988
Full-time family farms		34.1%	34.9%
Type 1:	Primary operator worked on farm Spouse worked off farm	12.9	10.4
Type 2:	Primary operator worked off farm Spouse worked on farm	24.2	21.2
Type 3:	Both adults worked off farm	28.8	33.5

Earlier University of Kentucky studies using this model for part-time farming found that where the man was a full-time farmer, the operation tended to be significantly larger than where the man had an off-farm job. While there was no similar association for women, there was a tendency for farms where the man farmed full time and the woman worked off farm (Type 1) to have higher levels of personal income.

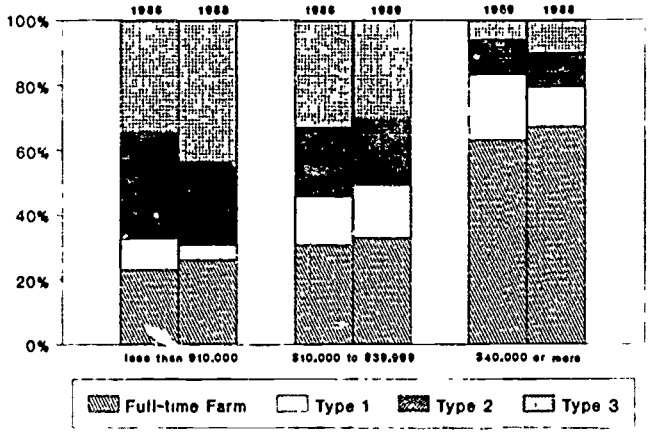
Among Kentucky's family farms with two adults, the percentage of full-time family farms hovered between 34 and 35 percent between 1986 and 1988. Improvements in the farm economy during those years probably slowed the trend toward off-farm employment temporarily, but among the nearly two-thirds of Kentucky farms where there was off-farm employment, there was one notable trend. The percentage of operations where both adults worked off farm jumped from almost 29 percent in 1986 to just under 34 percent in 1988.

Figure 2.7 provides a picture of the distribution of part-time farms by annual gross sales, showing differences between 1986 and 1988. Among farms with less than $10,000 annual gross sales, the percentage with both spouses working off farm jumped from about 35 percent to 44 percent. In this category, the percentage of full-time operations also increased from just over 23 percent to 26 percent between the two surveys.

In the middle gross sales category, the percentage of full-time operations increased slightly, up 2 percent to about 3[illegible] percent, while operations with both spouses working off farm declined from just over 33 percent to about 30 percent.

Among commercial farms, those with annual gross sales $40,000 and up, the share of full-time farms increased from about 63 percent

Figure 2.7: Comparison of Off-farm Employment and Annual Gross Sales, 1986 and 1988.



in 1986 to about 67 percent in 1988. There also was a 4-percent gain in these operations where both spouses worked off farm, from about 6 percent to more than 10 percent.

Figure 2.8 gives another view of part-time farming and gross sales, showing the distribution of the various farm types across gross sales categories. Note that there was a 5-percent increase in full-time operations with annual gross sales of less than $10,000, while there was a similar percentage decline in the $40,000-and-up category.

Among Type 1 farms, where the operator worked on the farm and the spouse worked off farm, there was a 17-percent increase in the middle sales category. There was little change among operations where the operator worked off farm. There was, however, a substantial change among operations where both the spouse and operator had off-farm employment (Type 3). Operations with less than $10,000 in annual gross sales increased almost 9 percent, while those in the middle category decreased by a similar amount.

There are strong ties between part-time farming and tobacco and beef production. Table 2.3 shows the relationship of farm type to the commodity raised. Because of the low numbers of respondents in some categories, we only offer information for 1988; the low numbers magnify changes between the two survey years. But the figures appear to give an accurate representation of the relationship between off-farm employment status and the commodity raised. Previous studies support the overall suggestion of the table: Tobacco and beef are the principal commodities of part-time operations. Dairy, on the other hand, tends to be a full-time endeavor. This is not surprising, given the amount of labor required to maintain such an operation.

Figure 2.8: Comparison of Gross Farm Sales and Off-farm Employment, 1986 and 1988.

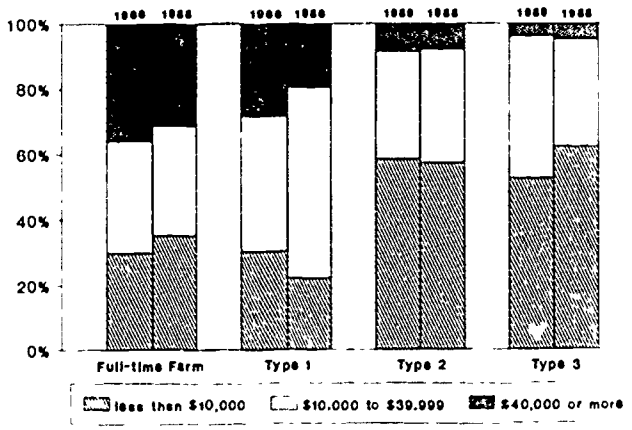


Table 2.3: Part-time Farming by Type of Commodity, 1988.

Farm Type	Tobacco	Beef	Grain	Dairy	Other
	%	%	%	%	%
Full-time	26.1	26.4	55.0	72.7	40.0
Type 1	15.5	10.7	20.0	18.2	5.0
Type 2	24.6	33.1	0.0	4.6	30.0
Type 3	33.8	29.8	25.0	4.6	25.0

Individual Farm Family Characteristics

Up until now, we have focused on the scale of operation, commodities raised, and off-farm employment. But the structure of a farm also is shaped by characteristics of those who work on it. These characteristics include age, education, income status, and personal data, such as whether a person grew up on a farm, ever left a farm and returned later, whether the person considers himself or herself to be a farmer, and number of years farming as an adult. Even though there is no "typical" Kentucky farm, it is helpful to give a brief sketch of Kentucky farmers. Here are some characteristics:

* *Age*

The average age of the male/husband was almost 52 years, and for the female/wife, it was almost 50 years.

* *Education*

On average, men had 11.8 years of education, while women had 12.2 years. This suggests women have a tendency to finish high school, while men do not.

* *Household Income*

Household income from all sources went up from an average $31,786 in 1986 to $34,717 in 1988, up 9.2 percent.

* *Grew Up on Farm*

Almost nine out of ten men grew up on a farm, compared with just over two-thirds of the women. This follows the national trend of "internal recruitment" for farmers. Most farmers are raised on farms.

* *Ever Left Farming*

There are two major reasons for leaving the farm and then returning -- for the military and for education. About 42 percent of the men surveyed had left for the military, compared with under 2

percent of the women. Also, more men had left the farm for education, about 28 percent, compared with about 23 percent of the women.

* *Considers Self Farmer*

Almost 88 percent of the men consider themselves to be farmers, compared with about 56 percent of the women.

* *Years Farming*

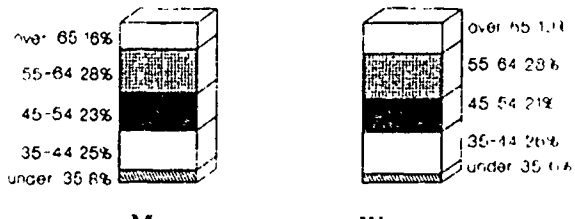
The "typical" Kentucky male had been farming as an adult for just over 27 years; for a woman, it was about 21 years. This would indicate an impressive amount of on-the-job experience but, on the other hand, could be a source of concern if the farm population is aging at a rate faster than the working population as a whole. The high number of retirements among those who left farming between 1986 and 1988 suggests this is a possibility.

Figure 2.9 provides the age distribution for men and women in Kentucky agriculture who considered themselves farmers. Note there was little percentage difference by gender among the age groups. But also note the skewed age distribution -- for both men and women, about 70 percent of the respondents were over age 45.

Summary

There really is no "typical" Kentucky farm. The structure of agriculture in the Commonwealth is characterized by a tremendous diversity in scale of operation and types of commodities produced. And yet, some trends are readily apparent between 1986 and 1988:

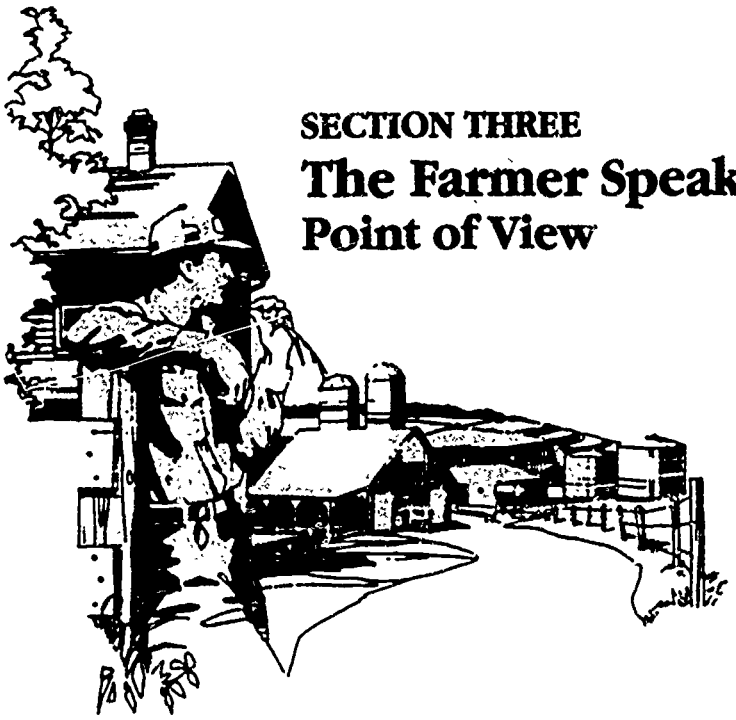
Figure 2.9: Age Distributions of Those Who Considered Themselves Farmers.



- There was a slight decline in the percentage of commercial farms.
- The squeeze on mid-sized operations was reflected in declining sales.
- There was a decline in the average number of acres owned in Western Kentucky, and generally a slackening of demand for rented land statewide.
- Despite some lessening of importance, tobacco remained the most important commodity, followed by beef. Tobacco and beef continued to be closely linked with the viability of Kentucky's small farms.
- Dairy, and to some extent, grain, were the major commodities of the largest operations.
- While the percentage of full-time family farms remained essentially the same, the percentage of operations with both spouses holding jobs increased noticeably.

This section suggests the importance of Kentucky's current farm structure for rural communities and suggests that changes in that structure could have substantial impacts. The large number of small farms producing tobacco and beef throughout the state has a positive economic impact on communities. These profits are dispersed among various rural businesses so that their impact is multiplied as the money is used again and again.

On the other side of the ledger, the dependence on off-farm income points out the importance of a stable non-farm economy for those times when farm income is down. While rural communities are no longer as dependent on agriculture as they were 50 years ago, the well-being of the farm economy and the characteristics of farm structure continue to both influence and be influenced by the larger community.



SECTION THREE

The Farmer Speaks: Point of View

Introduction

Changing agricultural conditions may have an obvious effect on how farmers view their life situations. One measure of the extent of these changes is to see how attitudes of farmers vary over time. In this section, we examine attitudes of Kentucky farmers toward various issues, including the farm economy, rural industrialization, and government policies. Overall, it appears farmers were more optimistic about farm conditions in the 1988 survey, when compared with results obtained in 1986.

In both surveys, we asked Kentucky farmers a variety of questions and measured their responses by whether they strongly disagreed, agreed, disagreed, or strongly disagreed with a number of statements. To make interpretation easier, we combined strongly agreed and agreed into one category and strongly disagreed and disagreed into another.

Farm Economy

Responses to the 1988 survey, when compared with those of 1986, reflect better farm economic conditions. Table 3.1 shows that farmers' perceptions of their situation improved somewhat between the two surveys.

For example, while a large majority of farmers still believed there was a farm crisis in Kentucky, the number of those holding this position declined from about seven in 10 in 1986 to less than two-thirds in 1988. The decline among those believing these were the worst times in farming since the great Depression was even sharper, plunging from more than two-thirds of the farmers to well below half.

In reaction to a statement that only inefficient farmers were having problems, the percentage agreeing changed minimally. But fewer farmers disagreed with the statement, and it appears there was more uncertainty about this point. In 1986, about 12 percent of the farmers were unsure about this statement, but in 1988, 17 percent were unsure.

The improvement in the agricultural economy yielded a slight change concerning who was to blame for farmers' problems. In 1986, 24 percent of the farmers agreed farmers had no one to blame but themselves; in 1988, this figure increased to 27 percent.

More respondents became optimistic about the future of small farms between the two survey periods. In fact, there was a 10-point decline among those who believed small farms would disappear, from 54 percent to 44 percent. But there was a slight increase in uncertainty about this point, up from 13 percent to 15 percent.

As might be expected, scale of farm operation has some effect on the opinions farmers hold. For this analysis, we have chosen to look at differences of attitudes between commercial farmers -- those who had annual gross sales of $40,000 and more -- and subcommercial farmers, who make up the bulk of Kentucky's farmers. Table 3.2 points out some of these differences.

A wide majority (more than 60 percent) of Kentucky's farmers believed there was still a farm crisis in the state, and there was little difference between commercial and subcommercial farmers holding this opinion. The difference laid in those who were unsure about this statement -- 20 percent of the commercial operators and 16 percent of the subcommercial operators.

Table 3.1: State of the Farm Economy, 1986 and 1988.

STATEMENT		1986 (%)	1988 (%)
Kentucky has a farm crisis.	A*	73	64
	D	10	15
	U	13	16
Times have not been this bad in farming since the Great Depression.	A	67	44
	D	13	27
	U	14	18
Only inefficient farmers are having financial problems.	A	15	16
	D	69	62
	U	12	17
Most farmers who have lost their farms have no one to blame but themselves.	A	24	27
	D	56	50
	U	16	17
Small farms will eventually disappear.	A	54	44
	D	31	38
	U	13	15

*A - Agree D - Disagree U - Unsure. Totals do not add up to 100 percent because category of no opinion is not included.

Table 3.2: State of the Farm Economy, Commercial Versus Subcommercial Farms, 1988.

STATEMENT		Agree (%)	Disagree (%)	Unsure* (%)
Kentucky has a farm crisis.	COMMERCIAL	61	14	20
	SUBCOMMERCIAL	63	15	16
Times have not been this bad in farming since the Great Depression.	COMMERCIAL	49	30	14
	SUBCOMMERCIAL	43	26	20
Only inefficient farmers are having financial problems.	COMMERCIAL	22	59	16
	SUBCOMMERCIAL	14	64	17
Most farmers who have lost their farms have no one to blame but themselves.	COMMERCIAL	19	58	21
	SUBCOMMERCIAL	28	49	16
Small farms will eventually disappear.	COMMERCIAL	30	46	19
	SUBCOMMERCIAL	45	37	15

*Totals do not add up to 100% because category of no opinion is not included.

This perception of a farm crisis was borne out at least in part by responses to the statement that times have not been this bad in farming since the Depression. Nearly half of the commercial operators agreed with this statement, compared with just over four in ten of the subcommercial farmers. But 30 percent of the commercial farmers disagreed with this statement, compared with 26 percent of the subcommercial farmers. Note, however, that there was more uncertainty among subcommercial farmers. Commercial farms tend to be much more dependent on agricultural income, and therefore are more likely to feel the impact of a depressed agricultural sector. This may be one explanation for why commercial operators have the increased perception of a farm crisis.

There was fairly strong disagreement in both groups with the statement that only inefficient farmers are having financial problems; nearly six out of 10 farmers in both groups disagreed, but the percentage of subcommercial farmers in this category was somewhat larger.

Disagreement also was fairly strong with the statement that farmers who lose their farms have no one to blame but themselves. Nearly six out of 10 commercial farmers disagreed with the statement, compared with only about half of the subcommercial farmers. There also was more uncertainty among commercial operators.

One particularly fascinating difference appears in reactions to the statement that small farms will eventually disappear. Commercial farmers actually have more faith in the persistence of small farms than subcommercial farmers. Among commercial operators, only about three in 10 agreed with this statement, compared with more than 45 percent of the subcommercial operators. To some extent, subcommercial farmers see themselves as a vanishing breed, although this is certainly not a view held by all operators in this group.

Rural Industrialization

More and more rural residents are employed in the non-farm sector, and, while the percentage of full-time farms remained about the same between the two survey periods, there were more part-time farms where both of the spouses worked. This suggests that the need for rural economic development has become increasingly important. The rural population needs adequate employment opportunities, schools, roads, and other infrastructure. In order for rural development to work, however, it is important to have support from rural residents. Many farmers have mixed emotions about one form of rural development -- industrial development -- as shown in Table 3.3.

Table 3.3: Views of Rural Industrialization, 1986 and 1988.

STATEMENT		1986	1988
		%	
Rural economic well-being is now less dependent on farming than it used to be.	A*	58	58
	D	21	19
	U	15	17
Manufacturing is more important for rural areas than higher farm prices.	A	16	16
	D	59	59
	U	15	20
The best way to develop rural areas is to attract new industry.	A	47	39
	D	24	26
	U	22	25

*A -- Agree D -- Disagree U -- Unsure. Totals do not add up to 100 percent because category of no opinion is not included.

Most farmers surveyed in both years agreed that rural economic well-being is now less dependent on farming than it used to be. Almost six out of ten farmers agreed with this statement in both years. The percent disagreeing declined slightly, while there was a small increase among those who were unsure.

When given the statement that manufacturing is more important for rural areas than high farm prices, only 16 percent of the farmers agreed in both years. Note here, however that the percentage of farmers unsure about the statement rose somewhat jumping from 15 percent to 20 percent. The percentage of farmers expressing no opinion declined between 1986 and 1988, so some of these farmers may have come from the ranks of those who had no opinion in 1986.

The percentage supporting rural industrialization as the best way to develop rural areas declined markedly, from nearly half the farmers in 1986 to a little under four in 10 in 1988. While the percentage of those in disagreement with the statement rose slightly between the two surveys, the percentage of farmers unsure about this question also increased somewhat.

Another way of tallying the mixed emotions farmers have about rural industrialization is to look at similarities and differences between full-time and part-time operations in the 1988 survey, as shown in Table 3.4.

Both full-time and part-time farmers tended to agree that rural areas are less dependent on farming than they used to be; 61 percent of the part-time farmers agreed with this statement, compared with 56 percent of the full-time farmers.

Only a small percentage agreed with the statement that manufacturing is more important for rural areas than higher farm prices; 16 percent of part-time farmers believed this is true,

Table 3.4: Rural Industrialization -- Part-time Versus Full-time Farmers, 1988.

STATEMENT		% Agree	% Disagree	% Unsure*
Rural economic well-being is now less dependent on farming than it used to be.	PART-TIME	61	18	17
	FULL-TIME	56	21	14
Manufacturing is more important for rural areas than higher farm prices.	PART-TIME	16	56	22
	FULL-TIME	15	65	15
The best way to develop rural areas is to attract new industry.	PART-TIME	39	28	25
	FULL-TIME	38	23	26

*Totals do not add up to 100% because category of no opinion is not included.

compared with 15 percent of the full-time farmers. While the percentage of those agreeing with the statement was fairly close for both groups, there was a fairly wide difference among those in disagreement -- 56 percent for part-time farmers and 65 percent for full-time farmers, and those who are unsure -- 22 percent for part-time farmers and 15 percent for full-timers.

The mixed feelings stand out particularly well among respondents to the statement that attracting new industry is the best way to develop rural areas. About a fourth of both full- and part-time farmers said they were unsure about the statememt. In addition, neither group was a particularly strong supporter of rural industrialization, with less than four out of ten of the respondents agreeing with the statement. But opposition was not particularly strong either. The reasons for this are not particularly clear, but it is apparent that this option for rural development does not excite farmers.

Government Policies

Although government payments to farmers have declined somewhat in the past couple of years, they are still substantially above what they were in the 1970s. The dramatic increase in government intervention in the farm sector has become a major political issue as both farmers and non-farmers have attacked the extent and cost of many farm programs. We employed several statements to determine the attitudes of Kentucky farmers toward various aspects of government policies and involvement in the agricultural sector. In this section, we do not include attitudes about the tobacco program. These are included in Section Six. Table 3.5 shows farmers' reactions to selected government policies.

Since farm prices have risen in the past couple of years, there has been a decline in the percentage of farmers supporting mandatory production controls, from 49 percent in 1986 to 44 percent in 1988. The percentage of farmers believing there should be an upper limit on commodity payments to individual farmers increased slightly, from 70 percent to 72 percent, an overwhelming majority of those surveyed.

While about one-third of the farmers agreed that only full-time farmers should receive government support in both surveys, the percentage disagreeing declined from 55 percent to 50 percent. Apparently, there was some more indecision on this point; the percentage of those undecided increased from 8 percent to 12 percent between the two surveys.

There seemed to be a continuing sense that a balanced federal budget would be good for agriculture. The federal deficit has caused much concern because of the pressure it has put on interest rates. Those affirming the statement that a balanced federal budget would help farmers increased slightly, from 58 percent of respondents in 1986 to 60 percent in 1988.

There were some interesting differences if we compare reactions of commercial farmers with subcommercial farmers, as shown in Table 3.6. Although just over four in 10 commercial and subcommercial farmers agreed there should be mandatory production controls, a slightly smaller block of three in 10 disagreed. The percentage of commercial farmers disagreeing was greater than subcommercial farmers. Almost two in 10 of the farmers were unsure about this statement.

A vast majority of the farmers agreed there should be an upper limit on government commodity payments to individual farmers. Nearly 78 percent of the commercial farmers favored this statement, compared with 70 percent of the subcommercial farmers.

Table 3.5: Views of Government Policy, 1986 and 1988.

STATEMENT		1986 %	1988 %
Mandatory production controls are needed to achieve higher farm prices.	A*	49	44
	D	26	30
	U	18	18
There should be an upper limit on all government commodity payments to individual farmers.	A	70	72
	D	10	10
	U	11	9
Only full-time farmers should receive government support.	A	34	34
	D	55	50
	U	8	12
Farmers would benefit from a balanced Federal budget.	A	58	60
	D	12	8
	U	15	15

*A - Agree D - Disagree U - Unsure. Totals do not add up to 100 percent because category of no opinion is not included

Table 3.6: Views of Government Policy, Commercial Versus Subcommercial, 1988.

STATEMENT	% Agree	% Disagree	% Unsure*
Mandatory production controls are needed to achieve higher farm prices.			
COMMERCIAL	42	35	18
SUBCOMMERCIAL	43	30	18
There should be an upper limit on all government commodity payments to individual farmers.			
COMMERCIAL	78	8	9
SUBCOMMERCIAL	70	9	11
Only full-time farmers should receive government support.			
COMMERCIAL	49	23	21
SUBCOMMERCIAL	29	56	10
Farmers would benefit from a balanced federal budget.			
COMMERCIAL	68	4	18
SUBCOMMERCIAL	58	9	16

*Totals do not add up to 100% because category of no opinion is not included in table.

The greatest difference between commercial and subcommercial operators came with the statement that only full-time farmers should receive government support. Almost half of the commercial farmers agreed with the statement, while well over half of the subcommercial farmers disagreed. Subcommercial farmers seemed to be fairly certain about their position. Only about one in 10 was unsure about how to react, compared with about two in 10 of the commercial farmers.

A substantial majority of both groups agreed farmers would benefit from a balanced federal budget. Commercial farmers were particularly strong in their agreement, with nearly 68 percent holding this view; among subcommercial operators, about 58 percent were in agreement. There was very little disagreement with this statement.

Summary

This section has examined the point of view of farmers in three areas: the farm economy, rural industrialization, and government policy. In general, it shows little change in the attitudes of Kentucky's farmers between the 1986 and 1988 surveys. But it also shows some diversity of opinion among farmers in the Commonwealth and points out some similarities and differences between both full- and part-time operators and commercial and subcommercial operators. Several points are clear:

* Farmers generally appear to have become a little bit more opitimistic about their lot. Changes in attitudes between the 1986 and 1988 surveys appear in part to reflect improvements in the overall farm economy. But there still was widespread agreement that the farm economy was in trouble. This held true for both commercial and subcommercial operators.

* While farmers generally agreed that rural areas are less dependent on farming than they used to be, they seemed to have mixed feelings about rural industrialization. But it does appear that part-time farmers were more apt to agree with the statement that there was less dependence on agriculture in rural areas. There did not, however, seem to be any strong desire among Kentucky farmers to industrialize rural areas.

* Views on government policies were diverse. Most farmers tended to agree there should be a cap on commodity payments and that farmers would benefit from a balanced federal budget. There also was agreement that all farmers -- both full- and part-time -- should receive federal support. But there seemed to be a fairly large split between commercial and subcommercial opinions when it came to the notion of supporting only full-time operations. The idea of mandatory production controls received only weak support.

SECTION FOUR

The Farmer Speaks: Off-farm Employment

Introduction

Since World War II, there has been a steady increase in U.S. farm families depending to some degree on nonfarm income. In part, this trend is the result of increased availability of off-farm jobs in rural areas and easier access to urban jobs because of improved highways. It also is related to the so-called "cost-price squeeze" -- production costs have increased more rapidly than commodity prices, so many farmers must choose between farm expansion or off-farm work in order to support their families.

In terms of farm structure, off-farm income permits a wider variety of farming operations than might have been possible fifty years ago. These operations include hobby farmers, as well as financially pressed farmers who attempt to offset sagging farm incomes with off-farm employment. So, part-time farming also represents a way in which the health of the local nonfarm economy favorably influences the economic viability of local family farms.

Many people view part-time farming as a transition period for farmers. For some, that may be true. But since World War II, part-time farming has become more prevalent both in Kentucky and across the rest of the United States. In fact, it appears to be a permanent facet of the agricultural economy.

Part-time farming, also called multiple job-holding, is the result of at least three factors -- some transitional, some not -- that cause farmers to seek or keep off-farm jobs. These factors include:

1) A gradual transition out of agriculture. An extreme result may be quitting farming altogether and moving away from the farm or working full time off the farm.

2) The need for additional income to assist the farm's cash flow in order to keep the farm operation afloat.

3) A gradual transition into agriculture. Individuals may have off-farm jobs first and then may enter farming because they wish to become full-time farmers, as a way of supplementing household income, as a hobby, as an investment, or because they enjoy living in rural areas and associate farming with a particular lifestyle.

In this section, we examine off-farm employment supplied by about 350 Kentucky farmers who were employed in both 1985 and 1987. In the text, we refer to the survey years, 1986 and 1988.

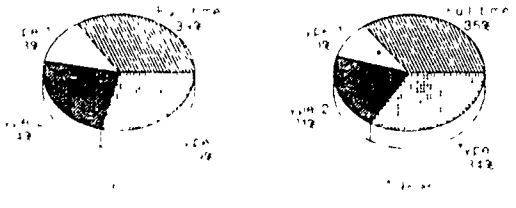
Part-time Farming

Multiple job holding for farm households involves employment of both the primary farm operator and the spouse. In order to distinguish among types of part-time operations, we list three types, distinct from full-time farms. These are: Type 1) family operations where the primary operator works on the farm full-time, but the spouse has off-farm work; Type 2) family operations where the primary operator has an off-farm job, but the spouse stays on the farm; Type 3) family farms where both adults have off-farm employment. In about 96 percent of the cases in these surveys, the farm operator was male.

Earlier University of Kentucky studies have used this model for part-time farming. They found that when the man worked full-time on the farm, operations tended to be much larger in scale than those where the man worked off farm. While this was not the case for women operators, there was a tendency for farms where the man worked on the farm and the woman worked off farm to have higher levels of personal income.

Figure 4.1 suggests how part-time farming in the Commonwealth changed between 1986 and 1988. Among Kentucky's family farms with two adults, the percentage of full-time family farms hovered between 34 and 35 percent in the 1986 and 1988 surveys. Improvements in the farm economy over the past couple of years probably have slowed the trend toward off-farm employment temporarily, but among the nearly two-thirds of Kentucky farms where there was off-farm employment, there was one notable trend: The percentage of operations where both adults worked off farm jumped markedly, from almost 29 percent in 1986 to about 34 percent in 1988.

Figure 4.1: Percentage and Types of Farms with Off-farm Work, 1986 and 1988.



Characteristics of Part-Time Farmers

In this subsection, we will outline some basic characteristics of part-time farmers and will offer comparisons with full-time farmers. These characteristics include income, time spent off the farm at work, distance from work, and some demographic information.

Table 4.1 points out income characteristics in a comparison of full-time operations with the three types of part-time farms.

The first comparison, household income, suggests that full-time farmers were correct in their perception that they could make more money working off farm. Note that these farmers had less household income than part-time farmers, and that the difference between full-time farmers and other types of operations in 1986 ran from about $2,000 for farms where the operator had another job (Type 2) to almost $12,600 for farms where both the operator and the spouse held off-farm jobs (Type 3).

In 1988, the household income gap between full-time operations and Type 2 farms widened to about $3,800, but narrowed to about $9,700 with Type 3 farms. The gap between full-time farms and farms where the operator's spouse had an off-farm job (Type 1) narrowed slightly. Between 1986 and 1988, the largest gain in household income -- 17.1 percent -- went to Type 2 farms. Full-time operations showed an 11.5-percent gain in household income as a result of increased commodity prices. Type 1 farms showed a 7.1-percent increase.

Household income for Type 3 farms, where both spouses worked off farm, was essentially the same in 1986 and 1988. As we indicated earlier, the percentage of this farm type increased noticeably between the two survey periods, but the data presented here suggests that this group, as a whole, did not have much growth in income.

Table 4.1: Average Income Characteristics 1986 and 1988.

CHARACTERISTIC	Full-Time	Type 1	Type 2	Type 3*
Household Income				
1986	$27,097	$31,812	$29,065	$ 9 03
1988	30,225	34,079	34,041	39 896
Change 1986-1988	+11.5%	+7.1%	+17 1%	+0 4%
Gross Farm Sales				
1986	$52,222	$41,432	$20 497	7 4,704
1988	60,934	40,488	25,766	11,770
Change 1986 1988	+16.8%	- 2 3%	+25 7%	-15 8%
Total Off-farm Income				
Men 1986	---	---	$22,914	$22,534
1988	---	---	23,849	24,277
Change 1986-1988	---	---	+ 4 1%	+ 8 2%
Women 1986	-	$12,150	---	$12,718
1988	---	14,076	---	13,145
Change 1986-1988	---	+15 8%	---	+ 3.4%

*Type 1: Operator works on farm, spouse works off farm, Type 2: Operator works off farm, spouse works on farm, Type 3: Both operator and spouse work off farm.

Figures for average gross farm sales help clarify the household income picture. As might be expected, full-time farmers had by far and away the largest gross farm sales, topping $52,000 in 1986, and jumping almost 17 percent to nearly $61,000 in 1988. Operations where the spouse had off-farm employment showed a slight decline in sales, but these still were the second largest operations in terms of sales.

The largest increase in gross farm sales, nearly 26 percent, went to Type 2 farms, where the operator worked off farm. Farms where both spouses worked showed the largest decline in gross farm sales, about 19 percent. There was a fairly large increase in the number of farms in this category, as we showed above.

With both spouses in the job market, these operators probably placed less emphasis on whatever additional income they could garner from their farms. This could, in part, reflect a trend where both spouses on financially stressed operations seek off-farm employment in order to stabilize their income.

Income for men was only slightly different when Type 2 and Type 3 farms are compared. The increase between 1986 and 1988 was largest for men in families where both spouses worked. The magnitude of increase put these men, on average, in a higher earnings category than working male operators; this was the opposite of the situation in 1986.

The story was different for women. First, the difference in earnings between farm types was much wider than for men. In addition, women from Type 1 farms showed a nearly 16-percent increase in earnings between 1986 and 1988, by far the largest jump for either gender. This large gain meant these women, on average, earned more than women on Type 3 farms in 1988; they had generally earned less in 1986.

Table 4.2 suggests the reason why women's earnings increased so much for Type 1 farms and compares time worked for men and women. Women on Type 1 farms actually increased the number of days worked off farm, from almost 211 in 1986 to 229 in 1988. This suggests that about half of the pay increase for women actually came as a result of increased time spent on the job, rather than increased wages.

Table 4.2: Average Days and Hours of Off-farm Work, 1986 and 1988.

CHARACTERISTIC	Full-time	Type 1	Type 2	Type 3*
Days Worked/Year				
Men 1986	---	---	235.6	239.7
1988	---	---	220.4	239.6
% Change	---	---	- 6.5	---
Women 1986	---	210.7	---	221.6
1988	---	229.0	---	222.1
% Change	---	+ 8.7	---	---
Hours Worked/Week				
Men 1986	---	---	39.5	42.0
1988	---	---	35.8	42.1
% Change	---	---	- 9.4	---
Women 1986	---	33.8	---	33.4
1988	---	36.5	---	34.8
% Change	---	+ 8.0	---	+ 4.2

*Type 1: Operator works on farm, spouse works off farm; Type 2: Operator works off farm, spouse works on farm; Type 3: Both operator and spouse work off farm.

While pay for men working off farm increased, male farm operators worked fewer days off farm in 1988. On Type 2 farms, these men worked an average of just over 235 days a year in 1986 and about 220 days in 1988. For Type 3 farms, the figures were essentially unchanged, averaging about 240 days for men and about 222 for women; yet, as we pointed out above, pay for men increased slightly more than pay for women.

A look at hours worked each week offers another glimpse at some characteristics of off-farm employment. On Type 2 farms, not only did male farm operators work fewer days between 1986 and 1988, they also worked fewer hours, down from 39.5 hours in 1986 to 35.8 hours in 1988. For women, not only did the number of days spent working off farm increase, but the hours worked also went up from about 34 in 1986 to 36.5 in 1988. Men on Type 3 farms worked the most hours, about 42 in both 1986 and 1988. The figure for women on these farms increased slightly, from over 33 hours in 1986 to just under 35 hours in 1988.

Across Kentucky, like the rest of the nation, more and more women are participating in the work force. And, their pay still tends to lag behind that of men.

In the introduction, we pointed out that part-time farming has become a persistent phenomenon, not merely a transitional affair. Table 4.3 demonstrates this point. Figures on length of time respondents have held off-farm jobs indicate that off-farm employment has been important for some time in Kentucky. For example, men on Type 2 farms averaged more than 22 years of multiple jobholding. On Type 3 farms, where both spouses work, men worked an average of nearly 20 years.

Table 4.3: Average Years Worked Off Farm, Years on Current Job, 1988.

CHARACTERISTIC	Full-time	Type 1	Type 2	Type 3*
Off-farm Work (years)				
Men	---	---	22.5	19.7
Woman	---	18.0	---	12.8
Years on Current Job				
Men	---	---	17.6	15.4
Women	---	13.6	---	10.2

*Type 1: Operator works on farm, spouse works off farm; Type 2: Operator works off farm, spouse works on farm; Type 3: Both operator and spouse work off farm.

Women also had a lot of experience with off-farm employment; as spouses, they averaged 18 years of employment. As we will show later, Type 3 farmers tended to be younger; this is reflected in the figure of just about 13 years of employment for women.

In addition, off-farm workers tended to stay on their jobs for a long time. Women who have worked off farm on Type 1 farms averaged about 14 years in their current position. For men of Type 2 farms, the average was nearly 18 years. In cases where both the operator and spouse work off farm, men averaged more than 15 years, while women averaged just over 10 years.

Table 4.4 shows distances farm operators and their spouses had to drive in order to work. Overall, workers from farms dependent on off-farm income drove varying distances to work, but none of the averages was below 10 miles. Women tended to drive the shortest distances, ranging from around 11 miles for those on Type 1 farms to more than 16 miles for women on Type 3 farms. Men on Type 3 farms drove the longest distance, averaging almost 23 miles.

Figure 4.2 shows some general demographic characteristics of all types of farmers in the Commonwealth, divided into farm types. Full-time farmers tended to be most experienced, with almost 36 years in farming as adults for men and more than 29 years for women (Figure 4.2a). The least experienced group was Type 3, with about 21 years in farming for men and 14 years for women. This lends some credence to the argument that younger farmers may have to hold

Table 4.4: Average Daily Drive to Work, 1988.

CHARACTERISTIC	Full-Time	Type 1	Type 2	Type 3*
Miles Driven to Work/Day				
Men	---	---	22.6	13.0
Women	---	10.8	---	16.2

*Type 1: Operator works on farm, spouse works off farm; Type 2: Operator works off farm, spouse works on farm; Type 3: Both operator and spouse work off farm.

jobs during their transition into farming. Average age parallels the average for years farming as an adult.

The oldest group was full-time farm families (Figure 4.2b), where both men and women averaged 59 years of age. The next oldest group was Type 1 farm families, about age 55 for men and just over age 52 for women. The average age of Type 2 farmers was about 51 for men and a little over 48 for women. The youngest group was Type 3, averaging just under 45 for men and just under 42 for women.

Average education information (Figure 4.2c) indicates that people in Type 3 operations had the most education. In Type 1 operations, where the woman works off farm, the woman was the most educated. In Type 2 operations, where the male operator works off farm, the male was the most educated. One implication of this finding is the tie between education and jobholding; the higher education level of the spouse holding the job suggests the importance of education for workers.

Table 4.5 shows regional characteristics of off-farm employment across the Commonwealth and delineates some possible shifts between 1986 and 1988. In order to simplify the analysis and avoid problems caused by small sample size in each region, we have divided the groups into full- and part-time farmers, instead of using the farm typology. Eastern Kentucky showed a fairly large change, as the percentage of full-time operations increased almost 5 percent.

Regional variations in commodity mix may partly explain some differences in part-time farming, as presented in the section on farm structure. But there also is another important factor --availability of off-farm employment. While many rural areas offer limited job opportunities, the situation in Eastern Kentucky has been even more limited historically. The mountain region continued to have essentially the lowest percentages of farms with off-farm employment.

Table 4.5: Off-farm Employment Changes within Regions, 1986-1988.

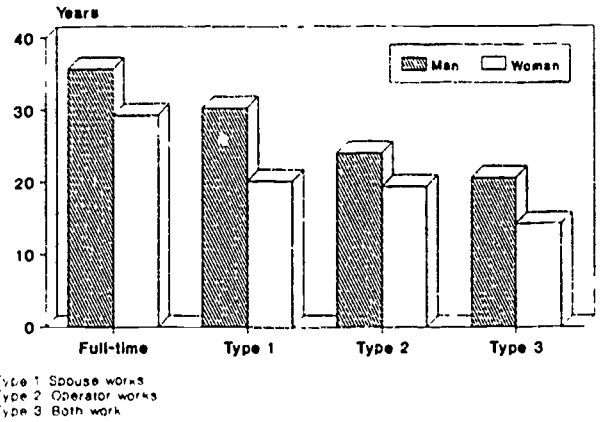
Farm Type	Western 1986	Western 1988	Central 1986	Central 1988	Bluegrass 1986	Bluegrass 1988	Eastern 1986	Eastern 1988
	%		%		%		%	
Full-time	38.2	36.8	29.5	30.5	34.6	34.6	34.8	39.4
Part-time	61.8	63.2	70.5	69.5	65.4	65.4	65.2	60.6

Farm Structure Characteristics

While personal characteristics of the farm family affect decisions made about multiple jobholding, farm structure, discussed at length in

Figure 4.2: Demographic Characteristics, Full- and Part-time Farmers, 1988.

Figure 4.2a: Average Years Farming.



Type 1 Spouse works
Type 2 Operator works
Type 3 Both work

Figure 4.2b: Average Years of Education.

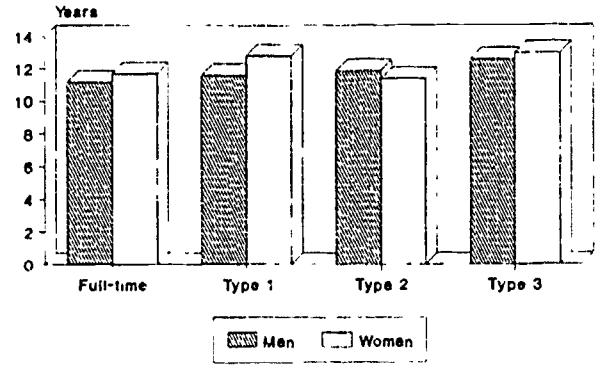
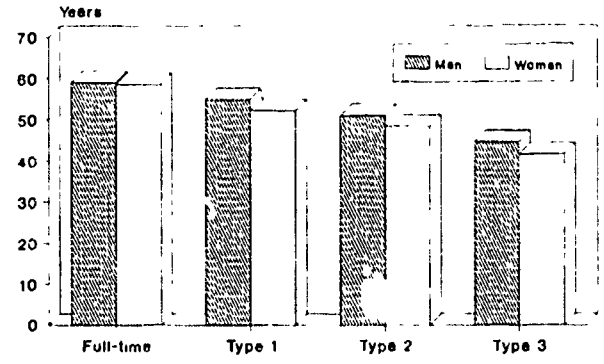


Figure 4.2c: Average Age.



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Section 2, also is an important factor. Vital components of farm structure include commodities raised, gross farm sales, and debt load. Some farm operations, such as dairy, may require intensive management or labor to be economically profitable; these farms require the full-time attention of the primary operator. Other operations, such as beef or tobacco, can be profitable at a smaller or less intensive scale. Enterprises with higher gross farm sales may provide sufficient household income, while farms with lower gross farm sales may need the extra income that off-farm employment offers to support the household or farm operation. High debt may increase the need for additional income to meet financial obligations.

Commodities

Part-time farming is tied closely to tobacco and beef production. Table 4 6 reflects the commodity mix for different farm operations in 1988. Previous studies support the overall thrust of the table: Tobacco and beef are the main commodities of part-time farms. Dairy, however, tends to be a full-time endeavor. This is not surprising, given the labor required for such an operation.

Gross Farm Sales

Figure 4.3 shows how part-time farms were distributed by annual gross sales between 1986 and 1988. For subcommercial farms with under $10,000 annual gross sales, the percentage of Type 3 farms increased from about 35 percent to 44 percent. In this sales category, the percentage of full-time operations also increased from just over 23 percent to 26 percent.

In the other category of subcommercial operations, full-time farms increased about 2 percent to nearly 33 percent, while operations with both spouses working off farm declined from just over 33 percent to around 30 percent. Among commercial farms, those with annual gross sales $40,000 and up, the share of full-time farms increased from about 63 percent in 1986 to about 67 percent in 1988. There also was a 4-percent gain in operations where both spouses worked off farm, from about 6 percent to more than 10 percent.

Table 4.6: Part-time Farming by Type of Commodity, 1988.

FARM TYPE	Tobacco	Beef	Grain	Dairy	Other
	%	%	%	%	%
Full-time	26.1	26.4	55.0	72.7	40.0
Type 1	15.5	10.7	20.0	18.2	5.0
Type 2	24.6	33.1	---	4.6	30.0
Type 3	33.8	29.8	25.0	4.6	25.0

Figure 4.3: Off-farm Employment and Annual Gross Farm Sales, 1986 and 1988.

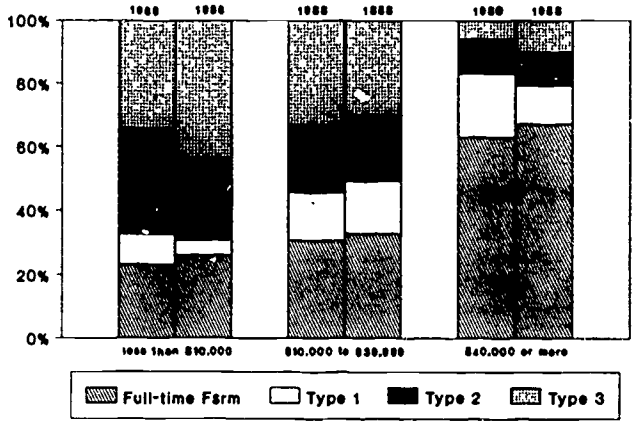
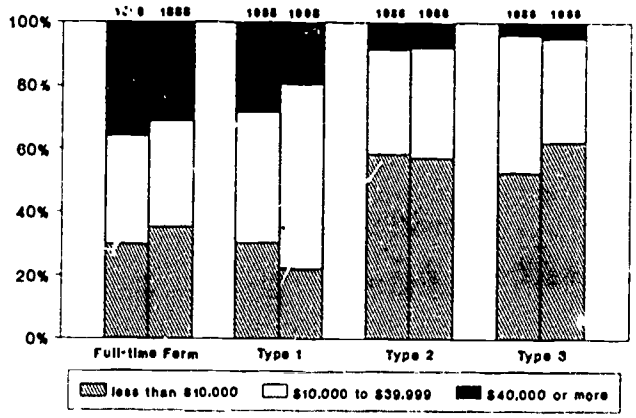


Figure 4.4 shows how various farm types were distributed across gross sales categories. Full-time operations with annual gross sales of less than $10,000 increased about 5 percent, while the $40,000-and-up category showed a similar percentage decline. Among Type 1 farms, there was a 17-percent jump in the middle grouping; the other two categories decline by about the same percentage. There was little change among Type 2 farms. There was however, a substantial change among operations where both the spouse and operator worked off farm. Operations with less than $10,000 in annual gross sales increased almost 9 percent, while those in the middle category decreased by a similar percentage.

This picture does not put the Commonwealth's agriculture in a very flattering light. In the 1986 survey, almost 64 percent of Kentucky's full-time operations reported gross sales below $40,000. By 1988, this category had increased to almost 69 percent, despite a nationwide increase in farm income during the period. Since net farm income is a relatively small fraction of gross sales, family income for many subcommercial

Figure 4.4: Annual Gross Farm Sales and Off-farm Employment, 1986 and 1988.



farms was at or near the poverty level. This is especially evident for family farms with under $10,000 in gross sales. Many of these families probably receive some support from government programs and other sources. Nonetheless, poverty was a characteristic of many family farmers in the state.

Off-farm employment is important to Kentucky farmers. It can provide some financial stability to financially hard-pressed farm families. In the long run, there is evidence that the decline in full-time family farms is followed by a situation in which both adults have to work to keep the farm family viable.

Farm Debt

Generally, the farm debt situation improved between the 1986 and 1988 surveys. Table 4.7 reflects this trend and breaks it down in a comparison of full- and part-time farmers.

A debt/asset ratio of less than $5 (.05) for every $100 of assets means a farm operation is virtually debt free. Debt/asset ratios of between $5 and $40 (.05-.4) for every $100 of assets mean a farm operation is not overloaded with debt. A debt/asset ratio of more than $40 (.4) for every $100 of assets means a farm operation could be facing financial difficulty.

For both full-time and Type 2 operations, the percentage of virtually debt-free operations increased between the 1986 and 1988 surveys. But for Type 1 farms, those where the spouse works off farm, the debt load actually increased somewhat. Among Type 3 farms, there was little change. One note of caution about this table and the one that follows: Numbers of respondents were small for Type 1 farms in the middle and upper debt/asset categories and full-time farms in the upper debt category, so changes between 1986 and 1988 should be considered as tentative measures.

Table 4.8 shows changes in the distribution of debt among the various farm types. The most striking point about this table was the large increase in Type 3 farms with high debt/asset ratio between 1986 and 1988. In 1986, only about four in 10 of the high debt/asset ratio farms were Type 3; by the 1988 survey, slightly more than half of these farms were Type 3. In addition, Type 3 farms increased their share of the middle debt/asset category. This movement occurred while full-time operations and the other two off-farm types were generally decreasing their share of the debt.

Table 4.7: Changes in Farm Debt, 1986 and 1988.

FARM TYPE	Full Time		Type 1		Type 2		Type 3*	
Debt/Asset Ratio	1986	1988	1986	1988	1986	1988	1986	1988
	%		%		%		%	
<.05	69.3	73.8	53.6	48.1	53.8	57.7	35.2	35.0
.05-.4	18.7	16.7	21.4	25.9	21.2	25.0	39.4	39.2
>.4	12.0	9.5	25.0	25.9	25.0	17.3	25.3	25.8

*Type 1: Operator works on farm, spouse works off farm; Type 2: Operator works off farm, spouse works on farm; Type 3: Both operator and spouse work off farm.

Table 4.8: Changes in the Distribution of Farm Debt, 1986 and 1988.

FARM TYPE	Full Time		Type 1		Type 2		Type 3*	
Debt/Asset Ratio	1986	1988	1986	1988	1986	1988	1986	1988
	%		%		%		%	
<.05	43.3	44.6	12.5	9.4	23.3	21.6	20.8	24.5
.05-.4	23.7	19.4	10.2	9.7	18.6	18.1	47.5	52.8
>.4	19.2	16.3	14.9	14.3	27.7	18.4	38.3	51.0

*Type 1: Operator works on farm, spouse works off farm; Type 2: Operator works off farm, spouse works on farm; Type 3: Both operator and spouse work off farm.

While the incidence of farm stress, as measured by debt/asset ratio, has declined in the Commonwealth overall, it would appear that some farm operations are struggling harder against their debt by having both the operator and spouse work off farm. Given the minimal increases in household income that we pointed out earlier, we can see that this group of farmers was facing the possibility of more financial stress.

Off-farm Employment Characteristics

As we have suggested already, the condition of the local labor market also influences whether farmers can obtain off-farm employment. The condition of a labor market depends not only on the number of jobs available, but also types of jobs and wage rates. Here, we examine the types of jobs residents of farms in the Commonwealth held when surveyed early in 1988.

Among those who held off-farm jobs during 1987, more than 18 percent of the men and more than 17 percent of the women reported they had retired from their jobs when surveyed in early 1988. This is another indication of the aging process occurring among Kentucky's farmers.

Table 4.9 gives the statewide occupational breakdown of men and women who reported that they remained in the labor force in the 1988 survey. Occupations are divided by the Standard Industrial Code (SIC) devised by the U.S. Dept. of Labor to standardize both industrial and occupational definitions. Using SIC codes, the occupations respondents reported are broken into six areas: administrative, professional, clerical, service, manufacturing, and transportation.

Table 4.9: Occupations of Part-time Farm Men and Women, 1988.

OCCUPATION	Man %	Women %
Administration	6.9	3.5
Professional	13.8	21.3
Clerical	12.6	34.0
Service	8.2	20.6
Manufacturing	44.7	19.9
Transportation	13.8	0.7

Manufacturing was by far the dominant occupation for men, including nearly 45 percent of the respondents employed off farm. Only about 20 percent of the women were engaged in this occupation. The dominant occupation for women was clerical, including more than a third of those responding; this compared with only about 13 percent of the men. On the other end of the spectrum, the percentages of farmers involved in administration was relatively low, only about 7 percent of the men and about 4 percent of the women.

Males also dominated transportation, with about 14 percent of the respondents in this field; this compared with less than 1 percent of the women. There was a higher percentage of women professionals -- over 21 percent of the respondents -- compared with about 14 percent of the men. Women also had higher percentages employed in services -- almost 21 percent, compared with under just over 8 percent for men.

Benefits

Table 4.10 shows differences between men and women related to on-the-job insurance and retirement benefits. More than 70 percent of the men have insurance, compared with about 60 percent of the women. About 61 percent of the men have retirement benefits, compared with just over 56 percent of the women. The difference in insurance coverage can be attributed to at least two factors: 1) Women may be covered under their husbands' policies. 2) The types of jobs women have may not offer coverage.

Table 4.10: On-the-job Benefits for Part-time Farm Men and Women, 1988.

BENEFIT	Man %	Women %
Insurance	70.1	59.9
Retirement	60.9	56.2

Summary

Over the years, farmers have become increasingly dependent on off farm jobs. In this section, we have examined some of the links between Kentucky's farmers and other economic sectors. There are several important points:

* The overall health of the farm sector is closely tied to the health of the nonfarm economy. Only about one-third of Kentucky's farms can now be considered full time; this in itself is powerful evidence of how farmers have become at least partially dependent on off-farm employment.

* Between 1986 and 1988, there was a marked jump in the percentage of farms where both spouses worked off farm. Given the small increases in overall household income and the nearly 19-percent decline in annual gross sales, this group bears watching. Figures strongly suggest that this group has not decreased its debt load as much as other types of farms. This group may be facing continued financial stress.

* A major concern in the Commonwealth is the persistence of rural poverty, linked to small farm size and low farm income, along with lack of off-farm employment opportunities. Clearly, if Kentuckians desire to maintain their long tradition of family farms, a diversified rural economy is important. Off-farm jobs help Kentucky farm families stay in farming.

SECTION FIVE

The Farmer Speaks: Farm Debt

Introduction

The continuing farm crisis of the 1980s has spurred renewed interest in understanding the financial structure and conditions of the farming community. Adequate understanding of the nature and scope of the problem is critical in developing policies to address farm financial problems.

Financial stress can be defined as occurring when a farm household does not have sufficient cash available to meet cash expenses, including farm operation, *family living*, and scheduled debt service. This section will introduce debt/asset (D/A) ratios in conjunction with measures of household income to identify which segments of Kentucky's farm population are likely to be experiencing financial stress.

D/A ratios are simply the amount of debt compared with the amount of assets. They are commonly expressed as decimals, such as .05, but can be translated into dollars. For example, a farmer having a D/A ratio of less than .05 has less than $5 of debt for every $100 of assets and is considered to have no stress from debt. A farmer having a D/A ratio greater than of 0.4 has more than $40 of debts for every $100 in assets and could well be suffering stress related to indebtedness.

Debts include money owed for livestock, machinery and equipment, production items, land, and buildings (house included), and any other debts a family might have. Assets include the value of livestock, equipment, crop inventories, land, and buildings. Household income is defined as the total yearly income of a household before taxes; it includes all farm and off-farm sources.

Taken together, D/A ratios and household income should convey a reliable and reasonably complete understanding of the financial condition of Kentucky's farm operations. Taken separately, neither measure is likely to provide a complete financial picture. For instance, a subsistence farmer may have a very low debt/asset ratio, but also may have little cash available to meet family living expenses. No one is likely to quarrel that this farm is under financial stress. This section also suggests how the finanical composition of the farm sector has changed by using survey data from the 1986 and 1988 Kentucky Agricultural Survey.[1]

Farm Financial Types

As noted above, financial stress can be understood by a combination of debt/asset ratios and household income. Figure 5.1 breaks down farm sector into four financial farm types. Horizontially, farms are delineated as having either high or low debt/asset positions. We classified a D/A ratio of greater than 0.4 as high.

Figure 5.1: Types of Farm Financial Situations.

	Low D/A Ratio (less than .40)	High D/A Ratio (.40 or higher)
Low Household Income Less than $20,000	TYPE I	TYPE II
High Household Income $20,000 or more	TYPE III	TYPE IV

Vertically, farms are separated into high and low household income categories. Household income was the farm family's total annual income before taxes. We defined low income as less than $20,000 a year. This is considerably lower than the median household income in Kentucky, estimated at $24,200 by the Kentucky Commerce Cabinet in 1988. A family is likely to be near or at the poverty level with total annual income of less than $20,000.

The four financial types will help identify which groups are experiencing financial stress and the nature of the stress. Type I is defined by a low debt/asset ratio and a low level of household income. These farm families constitute part of the rural poor. Financial stress is likely. Type I farm families are also likely to be overlooked in many financial analyses because of their relatively "healthy" D/A position.

Type II farms are characterized by their high D/A ratios. Type II farms also have a low level household income and may be the most stressed farms in the state.

Type III farms have relatively high income levels and low D/A ratios, and financial stress is unlikely.

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[1]Many respondents to the 1988 Kentucky Agricultural Survey did not answer what they may have considered personal questions regarding debts and income. The results presented here are based on responses from nearly 200 farmers.

Type IV farms have high levels of income and high D/A. The scope of financial stress for this group will depend to a large degree on the relationship between income and the D/A ratio.

Figure 5.2 presents the distribution of Kentucky farm families by these four financial types for 1986 and 1988. While there appeared to have been an overall improvement in the financial status of Kentucky farmers, it is equally apparent that a large number of families still suffered from financial stress. Nearly 30 percent of all farms in Kentucky fell into the Type I category. These farm families can be described as the poor or "near poor." Furthermore, there was little improvement in their lot between 1986 and 1988.

The percentage of farm types with high D/A positions (Type II and Type IV) decreased between 1986 and 1988. About 22 percent of these farm operators reported high D/A positions in 1986, while only 16 percent reported similar problems in 1988. Type II farms, which potentially are the most stressed farms in the state, only constituted 3 percent of all farm families, down from 7 percent in 1986.

Type III farms dominated the Kentucky farm landscape, and their percentage of all farms increased from 49 percent in 1986 to 56 percent in 1988.

Dependence on Earned Off-farm Income

More than 60 percent of Kentucky farm families had some off-farm employment in 1988. Although every respondent who returned a survey had gross farm sales of over $1,000, not all should be thought of strictly as farmers. Farm families were considered dependent on earned off-farm income if income from off-farm work constituted at least half of total household income. This delineation should be helpful in distinguishing between those who are dependent on farm income and those who are not.

Figure 5.2: Distribution of Farm Types in Kentucky, 1986 and 1988.

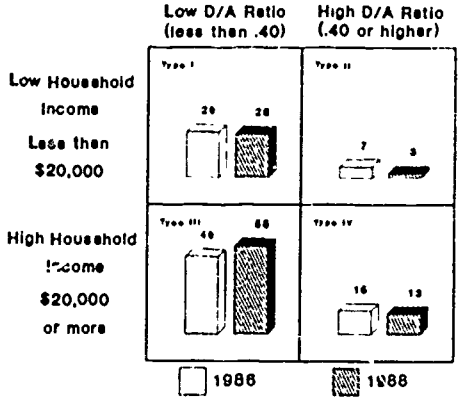
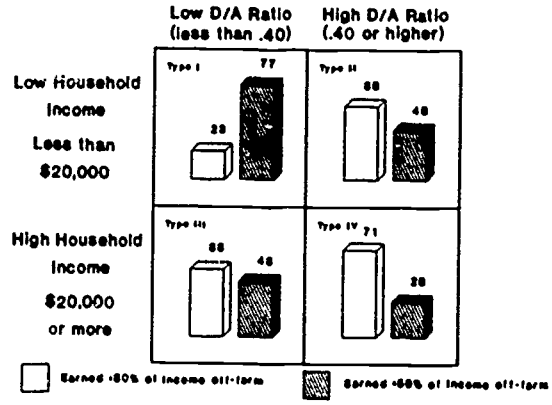


Figure 5.3: Dependency of Farm Types on Earned Off-farm Income.



Those who rely on off-farm employment are likely to be different from those dependent on farming. Those who are dependent on off-farm income could view farming as either a hobby or land investment, income supplement (second job), or a means to support a financially struggling farm operation.

Figure 5.3 shows the dependency on off-farm income for each of the four financial farm types. Type I farms, which have low levels of household income, were also the group least dependent on earned off-farm income. The slight majority of Type II and Type III farms were dependent on off-farm income. Type IV farms had the highest dependence on earned off-farm income, with over 70 percent of these farms having at least half of their total household income earned off the farm.

Financial and Demographic Characteristics

In the rest of this section, we will examine specfic financial and demographic characteristics by breaking each financial farm type into those with high and low dependence on earned off-farm income. We will not examine Type II farms because of the small number of respondents in this category.

Type I Farms

Type I farms, which had low levels of household income and low debt/asset positions, made up the second largest group of farms in Kentucky (Figure 5.2). Table 5.1 presents financial, demographic, and farm characteristics.

Low dependence on earned off-farm income

More than three-quarters of all Type I farms fell into the "low dependence" on earned off farm-income category. Farming appeared to be

Table 5.1: Characteristics of Type I Farms, 1988.

	DEPENDENCE ON EARNED OFF-FARM INCOME	
	HIGH*	LOW
Percentage of Total Sample	7	20
Percentage of Farm Type	23	77
FINANCIAL CHARACTERISTICS		
Total Assets	$81,000	$185,000
Total Liabilities	$1,800	$13,000
Total Household Income	$13,600	$11,800
Income Earned Off Farm	$11,400	$600
Annual Gross Farm Sales	$6,800	$23,000
DEMOGRAPHICS		
Age of Operator	57	62
Years of Education -- Men	11	10
Years of Education -- Women	12	
10		
FARM CHARACTERISTICS		
Acres Owned	85	173
Cropland Owned	31	93
Value of Land/Acre	$350	$575

*Dependance on off-farm income is considered "high" if at least 50 percent of total household income was earned off farm.

the primary occupation for this group. The D/A position was favorable. On average, these farms owned $185,000 in assets and had only $13,000 in total liablities for a D/A ratio of .07.

Most assets stemmed from substantial land holdings, but these farms tended to be small in terms of annual gross sales. The average age of these farm operators may help explain the seemingly large disparity between farm size and farm sales. Many appeared to be reaching retirement age. In fact, one-third of the respondents stated they planned to retire or quit farming by 1991. They probably were scaling back farm operations in preparation for retirement. These older farmers have already acquired and paid for their assets. The financial status of these farm operations is unclear.

Although the sample size prohibits further breakdown of these data with any confidence, it appeared that this group was composed of two distinct subgroups:

In one subgroup, farmers appeared to be nearing retirement; they seemed to have more assets and income than a younger subgroup. In general, it thus appeared that many planned to retire and had a relatively low level of income, reflecting that stage of life.

The other subgroup could be labeled as the subcommercial farming poor. This subgroup tended to be younger and with substantially lower total assets than their older counterparts. We stress that this is only a tentative conclusion.

Changes between 1986 and 1988

* As expected with a group nearing retirement age, total assets, total acres owned, and household income declined between 1986 and 1988. Annual gross farm sales remained constant.

High Dependence on Earned Off-farm Income

Farm families represented here may well be some of the most financially stressed in Kentucky (Table 5.1). Total assets were valued at $81,000. Although total liablities were low, a total average annual household income of less than $14,000 was unlikely to provide the family with an adequate income to meet living expenses. In addition, the farming operation was small, with annual gross farm sales of less than $7,000. The farms were also small in terms of total acres owned; land owned was likely to be marginal, judging by land values.

As the above discussion suggests, farming for this group was likely to be used as an income supplement. While off-farm income constituted most of the household income, the total amount earned off farm also was small. The group tended to be middle aged, with relatively low education levels. This group could be best characterized as the rural working poor. These families were likely to be financially stressed.

Changes between 1986 and 1988

* The position of these farm families also seems to have deteriorated between 1986 and 1988. Average asset values, gross farm sales, and household income all declined between 1986 and 1988.

Type III Farms

From the model constructed above (Figure 5.2), Type III farms were characterized by high levels of household income and a low D/A position. More than half of Kentucky's farms fit this description. Table 5.2 presents an overview of this group. As expected, these farms were unlikely to be experiencing any type of financial stress.

Low Dependence on Earned Off-Farm Income

These were mostly well-established commercial farms. In fact, nearly 60 percent of all commercial farms in the state can be classified as Type III farms with a low dependence on off-farm income.[2] On average, the group held

[2]Following USDA's definition, commercial farms were considered to have annual gross farm sales in excess of $40,000. These represented about 18 percent of all Kentucky farmers surveyed in 1988.

Table 5.2: Characteristics of Type III Farms, 1988.

	DEPENDENCE ON EARNED OFF-FARM INCOME HIGH*	LOW
Percentage of Total Sample	30	26
Percentage of Farm Type	55	45
FINANCIAL CHARACTERISTICS		
Total Assets	$148,000	$286,000
Total Liabilities	$19,200	$14,500
Total Household Income	$49,500	$42,500
Income Earned Off Farm	$41,000	$2,200
Annual Gross Farm Sales	$12,500	$55,000
DEMOGRAPHICS		
Age of Operator	46	55
Years of Education -- Men	13	12
Years of Education -- Women	14	13
FARM CHARACTERISTICS		
Acres Owned	152	248
Cropland Owned	51	110
Value of Land/Acre	$830	$800

*Dependence on off-farm income is considered "high" if at least 50 percent of total household income was earned off farm.

$286,000 in assets and $14,500 in total liabilities, for a D/A ratio of .05. Average household income was more than $42,000. Farmers averaged 55 years of age, had relatively high levels of education, and had substantial land holdings. There was no evidence of financial stress.

Changes between 1986 and 1988

* These farm operations experienced marginal declines in both the value of total assets and total debts owned. Average annual household income and gross farm sales, however, both increased during the time period.

High Dependence on Earned Off-Farm Income

This group represented 30 percent of the state's farms and appeared to rely only minimally on farm income. Annual gross farm sales averaged $12,500. These farm families also had a high levels of household income, averaging around $50,000. Nearly 83 percent of this total came from off-farm employment.

Total assets were valued at close to $150,000, while liabilities were only estimated to be $19,200, for a D/A ratio of .13. The operations also tended to be large in terms of total acres owned. The farm operators were younger than the average farmer (age 53 statewide) and also had higher education levels (about 12 years statewide). It appeared farming was considered as either a hobby or investment or income supplement. Assets (mostly land) were also likely to be viewed as a non-farm investment. These were the affluent, financially stable rural families.

Changes between 1986 and 1988

* There was an overall improvement in financial position between 1986 and 1988. Total value of assets and household income were up from 1986. Total liabilities declined slightly.

Type IV Farms

Type IV farms have high levels of total household income and high D/A positions (Figure 5.2). These farms constituted over 82 percent of all operations with high D/A ratios. Farms with high D/A positions are also the ones usually examined for farm financial stress, but most of these farms are *unlikely* to be financially stressed. Table 5.3 summarizes characteristics of this group.

Low Dependence on Earned Off-farm Income

Those likely to depend on farm income constituted only 29 percent of the Type IV farms. These farmers tended to be young, with expanding commercial farm operations. This was the youngest cross-section in the sample and also the one with the highest education levels. On average, they also owned more total land, more total cropland, and the highest-valued land.

These farm operations on average had over a half a million dollars in total assets and $400,000 in total liabilities, with D/A ratios of .67. Eighty percent of the debt held was in land and buildings. These farmers carried a considerable debt load, but given the size of their farm operations, this debt load does not necessarily mean that the

Table 5.3: Characteristics of Type IV Farms, 1988.

	DEPENDENCE ON EARNED OFF-FARM INCOME HIGH*	LOW
Percentage of Total Sample	10	3.5
Percentage of Farm Type	71	29
FINANCIAL CHARACTERISTICS		
Total Assets	$102,000	$600,000
Total Liabilities	$76,000	$400,000
Total Household Income	$47,000	$48,000
Income Earned Off farm	$40,000	$8,000
Annual Gross Farm Sales	$13,000	$340,000
DEMOGRAPHICS		
Age of Operator	41	38
Years of Education -- Men	12.6	13.8
Years of Education -- Women	12.4	14.6
FARM CHARACTERISTICS		
Acres Owned	77	280
Cropland Owned	33	248
Value of Land/Acre	$600	$1,100

*Dependence on off-farm income is considered "high" if at least 50 percent of total household income was earned off farm.

farm operation was financially stressed. The farms averaged just under $350,000 in annual gross farm sales, and had an annual household income approaching $50,000. A more detailed financial analysis would be necessary to determine the extent of stress.

Changes between 1986 and 1988

* The data suggest that finanical stress has declined for these farm operations, and their financial position improved during the two years. Overall debt levels fell 17 percent, while asset values increased substantially. Furthermore, the large debt loads seem to have been adequately serviced.

* Annual gross sales increased roughly $100,000. These gains were an indication that farm operations were expanding or that commodity prices had increased. Total acres rented in also increased over 10 percent.

* Earned off-farm income declined from over $17,000 in 1986 to $8,000 in 1988, even though household income was up. The average household income was also high. Apparently this group became less reliant on off-farm income.

High Dependence on Earned Off-farm Income

Respondents were also young and had high education levels, but were unlikely to view farming as their primary occupation. The farming operations were small both in terms of gross farm sales ($13,000) and in total acres owned (77). Total household income was high ($47,000), and over 85 percent of this total was earned off farm.

Although this group had high debt/asset ratios, the total average debt owed was relatively small ($76,000). This was unlikely to be a financially stressful debt load, given their substantial household income. This group was likely to view farming as a hobby or as an investment. Debt loads seem normal for younger respondents building their equity. Financial stress was unlikely.

Changes between 1986 and 1988

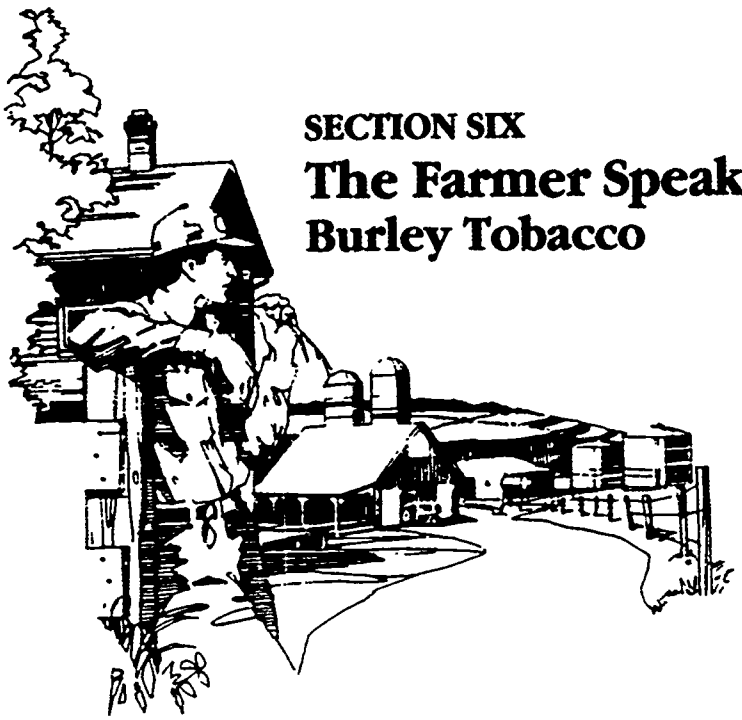
* This group noted the largest percentage increase in household income. As expected, the increase came mostly from off-farm work. Total assets and debts also fell. The decrease in asset values seems to have stemmed in large part from decreasing land values for this group. Average acres owned remained constant.

Summary

There appeared to be an overall improvement in the financial condition of most Kentucky farmers between 1986 and 1988. But there were some exceptions. In general:

* There were fewer farms with high debt/-asset positions, and there also appeared to be a general improvement in annual household income.

* We found substantial evidence that many Kentucky farm families were still financially stressed. The stress seemed most prevalent among subcommercial farm operations that had little apparent income available to meet normal "family living expenses." For these farms, financial stress did not stem from high levels of debt, but rather from low farm income.



SECTION SIX

The Farmer Speaks: Burley Tobacco

By Orlando D. Chambers
and William H. Snell[1]

Introduction

In the early 1980s, the United States' share of the burley export market was declining, along with U.S. cigarette production, consumption, and exports. In addition, U.S. burley imports had increased drastically, as had government loan stocks. Large stocks, coupled with increased imports, resulted in large decreases in the marketing quota. The effective quota fell from 841.9 million pounds in 1981 to 488.2 million pounds in 1986. Since burley tobacco is Kentucky's largest cash crop, and economically, Kentucky is highly dependent on burley tobacco, it was evident that major changes in the tobacco program were in order.

In January, 1986, the Tobacco Improvement Act of 1985 was passed to remedy the ailing tobacco program. It included drastic revisions of quotas and support prices. Obviously, such major legislative changes should affect farmers' perceptions of the burley industry. One measure of the extent of these changes is to see how attitudes of farmers change over time. In this paper, we examine farmers' attitudes about the burley tobacco program since the passage of the Tobacco Improvement Act of 1985. The purpose of this section is to investigate how Kentucky farmers have reacted to changes in the tobacco program since 1986, when new legislation was passed. Since the enactment of this legislation, farmers seem to be more optimistic about the program.[2]

Farmers' Attitudes

In both years of the Kentucky Agricultural Survey, Kentucky farmers were given a number of statements, asking whether they strongly agreed, agreed, disagreed, or strongly disagreed with a statement. To make interpretation easier, strongly agreed and agreed were combined into one category, and strongly disagreed and disagreed into another.

As mentioned above, the 1986 survey was developed when it appeared that the burley tobacco program was in danger of not receiving the necessary two-thirds vote for continuation. Escalating government stocks and the proposed no-net-cost fee of 30 cents at the time left many farmers dissatisfied. Therefore, a series of questions on the survey dealt with the possibility of ending the program. Figure 6.1 shows farmers' reactions to various statements, comparing 1986 and 1988 responses.

Although many farmers were unhappy with the program in spring, 1986, there was little difference in 1986 and 1988 responses to the statement that the burley tobacco quota system should be done away with (Figure 6.1a). In 1986, more than 80 percent of the farmers disagreed with the statement. There was little change in 1988.

One reason farmers apparently want the program to survive is because they believe it helps bid up land prices. In 1986, more than 78 percent of the farmers agreed that ending the program would result in lower farmland values (Figure 6.1b); this compared with 70 percent of the farmers in the 1988 survey.

In both 1986 and 1988, more than 50 percent of the respondents agreed that if the program ended, most farmers would stop growing tobacco (Figure 6.1c), but there was a slight decline in those agreeing with the statement betweeen the two surveys. In addition, the percentage of those unsure about the statement showed a 5-percent increase. The tobacco program provides many farmers the opportunity to grow burley by allotting quota among numerous farmers. Without the program, it is possible that many small producers would be driven out.

A farm is defined as a tobacco operation if more than 50 percent of gross farm sales come from tobacco. The 1988 survey results suggest that 94 percent of burley tobacco farms were classified as subcommercial or small farms, with less than $40,000 in gross farm sales. The percentage of farmers who agreed that small farms will eventually disappear fell substantially from 54 percent in 1986 to 44 percent in 1988 (Figure 6.1d). Since so many tobacco farms are considered subcommercial, changes in the burley tobacco legislation may have reinforced the opinion that the burley tobacco program will continue, and thus small tobacco farms will not disappear. In addition, improvements in the overall farm economy between 1986 and 1988 have contributed to a greater sense of well-being.

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[1]Orlando D. Chambers is a Research Associate and William M. Snell is an Assistant Extension Professor in the Department of Agricultural Economics at the University of Kentucky.

[2]A similar comparison of respondents to the 1986 and 1988 surveys can be found in a paper by Vantreese amd Reed in the 1989 Current Issues in Tobacco Economics.

Figure 6.1: Attitudes of Tobacco Farmers

Figure 6.1a: Do Away with Burley Tobacco Quota System.

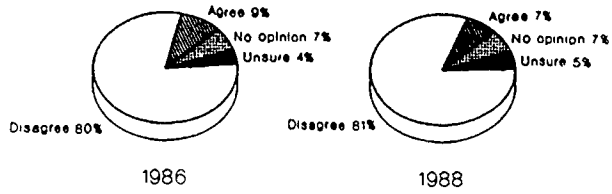


Figure 6.1b: If the Tobacco Program Ends, Farmland Values Will Decline.

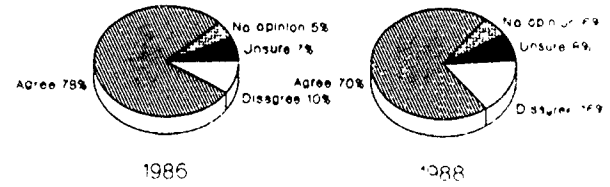


Figure 6.1c: If the Tobacco Program Ends, Most Farmers Will Stop Growing Tobacco.

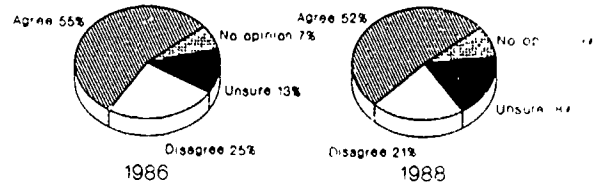
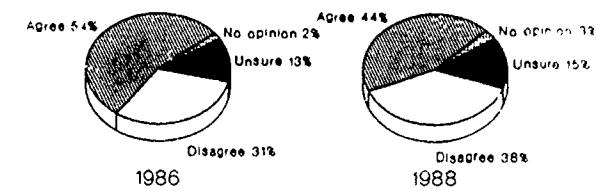


Figure 6.1d: Small Farms Will Eventually Disappear.



We also asked farmers: "If the burley tobacco program was eliminated, would you produce burley tobacco? If you answered yes, how much would you grow?"

Between 1986 and 1988, there was little difference in responses. Almost the same percentage said they would produce, would not produce, or were uncertain about production decisions. But a smaller percentage (27 percent in 1986 compared with 19 percent in 1988) said they would grow more, while a larger percentage (61 percent in 1986 compared with 67 percent in 1988) said they would grow about the same amount. A larger effective quota in 1988 compared with 1986, coupled with limited barn capacity and other fixed inputs, may have contributed to this change.

In order to make analysis easier, we divided burley tobacco farms into two groups based on gross sales from tobacco (Figure 6.2a). Small farms are those with less than $3,500 in annual burley tobacco sales and made up just under 50 percent of the sample. The $3,500 figure represents an estimate of gross sales received from the production and sale of one acre of burley tobacco. Large farms had gross sales greater than $3,500.

In both 1986 and 1988, a higher percentage of large burley farmers said they would definitely produce burley tobacco if the program were eliminated. In 1986, 26 percent of large farmers compared to 13 percent of small farmers said they would produce, while in 1988, 29 percent of large farmers compared to 12 percent of small farmers said they would produce.

Of those who said they would produce if the program were eliminated, a higher percentage of the large burley farmers said they would produce more burley tobacco (Figure 6.2b). This gap narrowed in 1988, however, with 21 percent of the large burley farmers indicating they would produce more, compared with 17 percent of the small burley farmers.

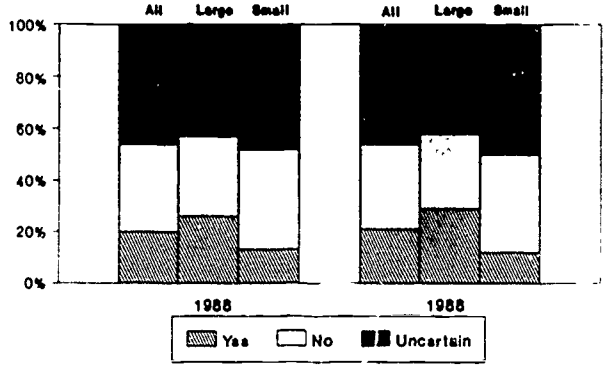
Policy Changes

Underproduction of burley effective quota has become a serious problem in the U.S., with an estimated 17 percent of the burley effective quota not used over the past four years.[3] Several policy changes have been proposed to

[3]See Snell, Chambers and Gray "Analyzing the Underproduction of Burley Tobacco Quota" University of Kentucky College of Agriculture, Department of Agricultural Economics, August, 1989.

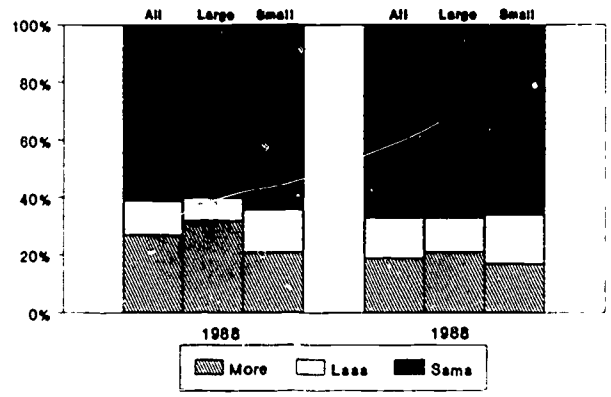
Figure 6.2: Effects If Tobacco Program Ended

Figure 6.2a: . . . Would You Produce Burley Tobacco?



Large farms-gross sales > $3500
Small farms-gross sales < $3500

Figure 6.2b: . . . How Much Would You Grow?



Large farms-gross sales > $3500
Small farms-gross sales < $3500

address this problem. The attitudes section of the survey solicited farmers' opinions on three such policy changes: sales of burley quotas within county boundaries, sales of burley quotas across county boundaries, and leasing across county boundaries. As before, strongly agreed and agreed were combined into one category, and disagreed and strongly disagreed were combined into another.

Sales of Quotas

In general, support for within-county quota sales was high, as Table 6.1 illustrates. According to the Kentucky Agricultural survey, the percentage of farmers who agreed that sales of burley quotas should be allowed within county boundaries increased from 59 percent in 1986 to 64 percent in 1988. Eastern Kentucky showed the least support for within-county sales, while the Bluegrass, Central and Western regions were highly supportive.[4]

[4] Survey results from Eastern Kentucky should be viewed with caution because of the small number of responses from that region.

Table 6.1: Allow Sales of Burley Tobacco Quota within Same County.

	% Agree		% Disagree	
	1986	1988	1986	1988
State Average	59	64	22	19
Eastern	49	48	37	36
Bluegrass	64	68	21	18
Central	64	68	17	17
Western	53	68	13	10
Quota Holders	61	67	24	21
Lease-out	60	76	23	10
Lease-in	65	63	25	24
Small farms	58	69	15	15
Large farms	61	60	27	23

Substantial increases for the support of within-county quota sales between 1986 and 1988 occurred in Western Kentucky and for small farms. Of the farmers who leased out burley quota, the percentage of those who agreed that sales of quotas within county boundaries should be allowed increased substantially, from 60 to 76 percent. Increases in the quota have made it more difficult to find farmers willing to lease in quota. Apparently, many quota owners who leased out burley quota would like the opportunity to sell their quota to avoid the burden of finding someone to lease their quota each year. Quota sales would reduce the uncertainty for those who leased out quota by limiting lease price variability.

The figures suggest that many Kentucky farmers favored within-county sales of burley quota, and that, in general, their support increased between 1986 and 1988. But Kentucky farmers' attitudes toward quota sales across county lines were less unified. There was more variation, with support increasing in some categories and decreasing in others, as shown in Table 6.2.

Statewide, there was little support for cross-county sales (37 percent in 1988), with essentially no change between the 1986 and 1988 surveys. The percentage disagreeing across the state also stayed about the same. Among quota holders, those who lease out quota showed a large

Table 6.2: Allow Sales of Burley Tobacco Quota across County Lines.

	% Agree		% Disagree	
	1986	1988	1986	1988
State Average	36	37	45	44
Eastern	31	44	61	48
Bluegrass	38	38	45	43
Central	36	34	44	47
Western	39	30	30	40
Quota Holders	37	40	47	45
Lease out	38	53	43	32
Lease in	38	40	48	45
Small	33	36	39	41
Large	40	38	50	47

increase in percentage agreeing with the statement, jumping from 38 percent in 1986 to 53 percent in 1988. As with the findings for sales within counties, these quota holders may want to sell their quota rather than having to find someone to lease it each year.

There was considerable variation in the other categories, with the percentage who agreed increasing for some categories and decreasing for others. There were no obvious trends in support or opposition of sales across county lines. Many people associated with the burley tobacco industry argue that such a policy change would eventually concentrate a large percentage of burley production into the hands of a few large burley producers in Central Kentucky, depleting the political base needed to sustain the burley tobacco program. Whether or not this is true, in general, a larger percentage of allotment holders within the burley belt oppose the sale of quota across county lines than those who favor it.

Cross-County Leasing

As with cross-county sales of quota, many people argue that cross-county leasing would concentrate burley production into certain areas of Kentucky. Kentucky farmers, however, seem to be more in favor of cross-county leasing of quota than cross-county sales of quotas, as shown in Table 6.3.

Statewide, 44 percent of the farmers surveyed in 1986 and 47 percent in 1988 agreed with the statement, "A farmer should be able to lease quota in one county and grow it in another." This was higher than the 40 percent who disagreed in 1986 and 1988, suggesting there was slightly more support for cross-county leasing. Notice that the percentage agreeing and disagreeing each year totaled between 90 and 100 percent. Few farmers were unsure about this issue, and they apparently were firm in their positions. Western Kentucky was the only region showing considerable opposition to cross-county leasing, with the percentage agreeing falling from 42 percent in 1986 to 37 percent in 1988, and the percentage disagreeing increasing from 30 percent in 1986 to 42 percent in 1988. The other regions showed differing rates of increased support.

Differences in Perspective

As might be expected, this analysis shows some differences in attitudes between those who lease out and those who lease in burley tobacco quota. Between the two surveys, quota holders who lease out have become much more inclined to favor sales of quota either between counties or within counties. Meanwhile, there has been little change in the attitudes of those who lease in. While there is overwhelming agreement that the tobacco program should be kept, differences discussed here suggest the shape of the program will continue to be the subject of much debate.

Value of Quota

In addition to obtaining farmers' attitudes toward specific policy changes, a section of the Kentucky Agricultural Survey was designed to discover current lease prices across the state with the question: "If the sale of burley quota were allowed, how much would you sell a pound of your tobacco quota for today?" As Table 6.4 reveals, lease rates increased slightly between 1986 and 1988, with the state average increasing from 42 cents a pound to 43 cents a pound.

In 1988, Central Kentucky had the highest lease rates, averaging 49 cents a pound, compared with 45 cents for the Bluegrass region, 39 cents for the Eastern region, and 36 cents for the Western region. Given that lease rates are considerably lower in the Eastern and Western regions of Kentucky, if leasing were allowed to occur across county lines, quota could be moved from the Eastern and Western parts of the state to the Bluegrass and Central regions. This finding lends support to those who contend that leasing across county lines would concentrate burley production.

Although the attitude questions suggested that a majority of Kentuckians favored within-county sales of quotas, the high sell per pound

Table 6.3: Allow Leasing of Burley Tobacco Quota across County Lines.

	% Agree		% Disagree	
	1986	1988	1986	1988
State Avg.	44	47	40	40
Eastern	48	51	46	47
Bluegrass	43	50	44	38
Central	47	48	39	37
Western	42	37	30	42
Quota Holders	46	49	42	39
Lease out	42	52	38	32
Lease in	49	54	42	33
Small	42	45	37	40
Large	49	48	44	39

Table 6.4: Lease Rates of Burley Quota, 1986 and 1988.

	Lease Rates ($/lb)		Sell/lb ($/lb)	
	1986	1988	1986	1988
State Avg.	.42	.43	3.34	3.52
Eastern	.37	.39	3.99	4.00
Bluegrass	.44	.45	3.39	3.30
Central	.49	.49	3.21	3.09
Western	.35	.36	2.66	3.51
Lease in	.42	.42	3.40	4.15
Lease out	.48	.49	2.81	3.20
Small	.44	.47	2.86	2.75
Large	.42	.42	3.75	4.22

prices for both 1986 and 1988 raises the question of whether quota sales would greatly redistribute quota. The 1988 survey suggested that farmers would only be willing to pay $1.77 a pound on average for burley quota. Given the large differential between this price and the selling prices in Table 6.4, it appears that initially, quota market transactions would be limited. But as market forces come into play, these prices should tend toward each other.

Also, note that the median values for the sell per pound variable were lower than the averages in Table 6.4 because a few large responses skewed the averages upward. However, the averages illustrate the differences in the value of quota for different areas and types of producers. Notice that the Eastern region reported the highest value for sell per pound in both 1986 and 1988. This may be the result of the lack of alternative enterprises there.

There was a large differential in the sell per pound variable reported by those producers who lease in burley quota and those who lease out burley quota. Farmers who lease out quota do not value quota as high as those who are willing to pay for the right to grow burley tobacco. Again, this indicates that people who lease out quota would like the opportunity to sell quota rather than find someone to lease it each year. Large producers seemed to value quota higher than small producers, with a large price differential ($1.47 a pound) in their 1988 responses. This also suggests that quota sales may concentrate the quota in the hands of the larger producers.

Labor Rates

The production of burley tobacco is highly labor intensive. Farmers were asked to report labor expenses for planting, harvesting, and stripping tobacco. Responses are shown in Figure 6.3.

The state average for planting increased 8 cents an hour between 1986 and 1988 to $3.72 an hour (Figure 6.3a). Harvesting wages showed the largest increases between 1986 and 1988, with the state average going from $4.65 to $4.95 an hour (Figure 6.3b). Stripping increased 7 cents an hour to $3.34 an hour (Figure 6.3c).

The Bluegrass region reported the highest labor rates for harvesting, with wages of $5.56 an hour in 1988. Given that this region of the state possesses over 50 percent of the burley quota in Kentucky, it is obvious that the demand for tobacco labor in this region is greater than in other regions. Thus, labor wages for harvesting were higher. In addition, the area, with its

Figure 6.3: Tobacco Wage Rates across Kentucky

Figure 6.3a: Planting.

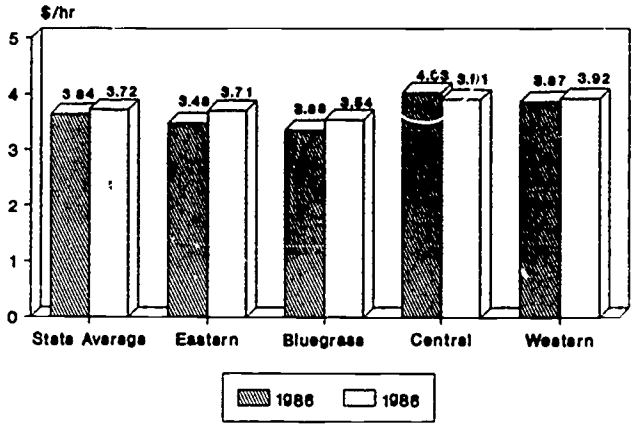


Figure 6.3b: Harvesting.

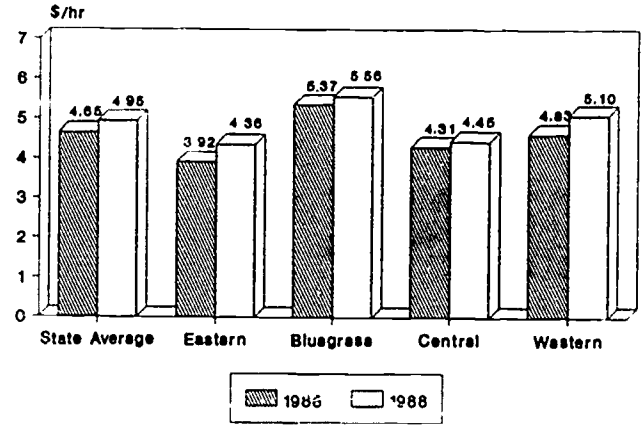
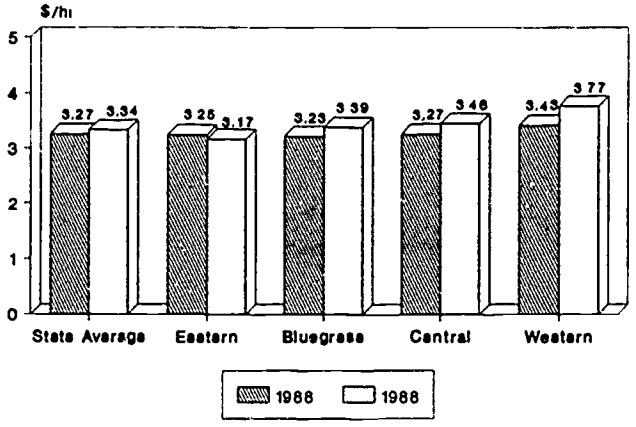


Figure 6.3c: Stripping.



relatively high levels of urbanization, faces competition from other sectors of the labor market.

Labor shortages are identified as one cause of recent problems with underproduction. Many farmers complain about the availability and quality of farm labor. With the 24-percent increase in quota in 1989, the labor situation has worsened; farmers have paid wages of $8 to $10 an hour or more for harvesting in some major production areas. Given indications of additional quota increases in the immediate future, the labor problem may worsen. Thus, alternatives such as migrant labor and mechanization of production are under consideration.

Summary

When the first Kentucky Agricultural Survey was conducted in spring, 1986, there were major changes occurring in the burley tobacco program as a result of the recently passed Tobacco Improvement Act.

In spite of these changes, survey results suggest that in both 1986 and 1988, farmers definitely did not favor ending the burley tobacco program. But there also may be support for further changes in the program. As the tobacco policy debate continues, several points need to be taken into consideration:

- The majority of Kentucky farmers surveyed favored sales of quota within county lines, with support increasing between 1986 and 1988.

- Most farmers surveyed were opposed to quota sales across county lines, while there was a slight increase in support for leasing across county lines.

The 24-percent increase in quota in 1989 and indications of possible increases in quota in the near future, along with current labor and lease market activities, may force farmers and farm organizations to consider adopting new or revised policies if the U.S. is serious about reducing the current underproduction problem.

SECTION SEVEN

The Farmer Speaks: Kentuckians Who Have Left Farming

Introduction

The decline in farm numbers is not news to anyone. The number of farms in the United States has fallen from about 6 million at the end of World War II to just over 2 million now. The trend is no different in Kentucky. At the end of the war, there were about a quarter-million farms in the Commonwealth. The 1987 Census of Agriculture found about 91,000 farms, a decline of almost 64 percent.

There are many reasons for the decline. First, over the years, many Kentucky farmers have left farming because constant technological improvements made it difficult for small-farm operators to make a profit. Farm equipment was designed for larger-scale operations and required increasing cash outlays, so better-off farmers began to buy out their less-prosperous neighbors. This history of constant changes in farming practices, called the "technological treadmill," meant that farmers had to constantly invest large sums of cash in upgrading and enlarging their operations; some farmers simply could not afford to remain in farming. In addition, new machinery, which increased agricultural output, required less farm labor.

There are other factors involved in the loss of farmers, including:

* *Farm policy.* Although the stated goal of official federal farm policy has been to preserve the family farm, the effect of the policy often has been the opposite. Government support of farm prices and income has inflated land prices, presenting a barrier to entry by new farmers.

* *Cost-price squeeze.* Given the overproduction of many commodities because of new machinery and more productive plants and animals, and the constant increase in prices of agricultural inputs, such as equipment and chemicals, commodity prices have not been high enough to support many farmers. This factor is closely related to the "technological treadmill."

* *Industrialization.* The lure of higher-paying jobs, mostly in cities, drew people out of farming into other occupations during the immediate post-war period. Rural industrialization in the late 1960s and '70s also provided work for former farmers who wished to remain in the country.

* *Urbanization.* In many cases, expanding cities took over farmland.

* *Market structures.* As with many areas of the U.S. economy, there has been a concentration of power among buyers of agricultural commodities. Concentration has affected both agricultural prices farmers receive and access to outlets for farmers needing to sell products.

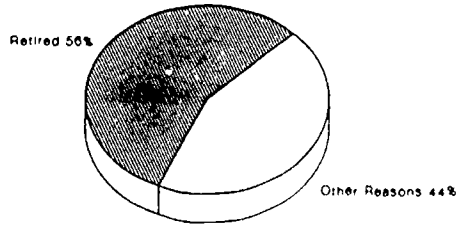
* *Geography.* In the Appalachian region especially, but also in other areas of the state, land countour simply does not allow farmers to use the large equipment being adopted elsewhere, so they cannot effectively compete.

Farmers who leave agriculture have been caught up in a variety of social forces, such as the ones listed above. Even though these forces may be powerful, farmers often list their own reasons for leaving agriculture. Some of these personal reasons directly result from the larger factors; others flow from individual circumstances. These personal reasons include: retirement, better income off the farm, insufficient or unstable income, need to improve standard of living, no longer enjoy farming, fed up with financial stress, or forced out by debt.

The purpose of this section is to study those who left farming in Kentucky between 1986 and 1988, when we conducted two statewide surveys of farmers. The first survey, conducted in spring, 1986, yielded responses from more than 1,000 farmers. In 1988, we conducted a second mail survey of those who responded in 1986 and received about 830 responses; of these, about 11.7 percent were no longer farming. In addition, we received reports that 1.3 percent of the 1986 respondents were deceased.

Those who left farming between 1986 and 1988 can be broken down into two groups -- retirees and those who quit for other reasons. As Figure 7.1 shows, about 56 percent of the sample retired, and 44 percent left farming for other reasons. We will compare and contrast these two groups throughout the section, since each had somewhat different motivations for leaving

Figure 7.1: Reasons Kentuckians Gave for Leaving Farming.



farming. In addition, we will provide overall survey data in order to show differences between those who were no longer farming and those still farming.

Farm Characteristics

Table 7.1 contains a profile of Kentuckians who left farming between the 1986 and 1988 surveys. There were some major differences in farm characteristics:

First, note the low 1986 gross sales figure of $11,500 for those who quit farming for reasons other than retirement. This compared with $23,100 for those who retired and $32,800 for those who remained in farming. Those who decided to discontinue farming tended to have low sales.

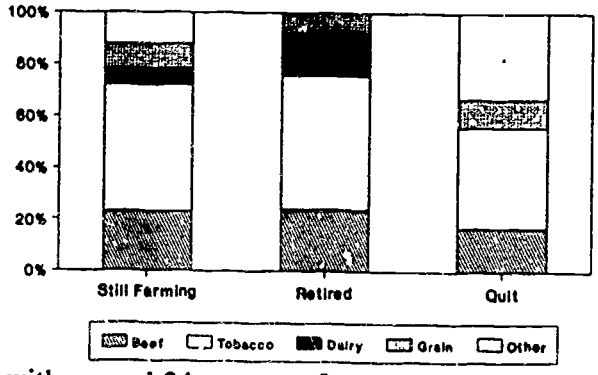
Second, only about 11 percent of those who quit had annual gross sales of $40,000 or more in 1986, defined by the USDA as commercial operators. This compared with 24 percent of those who retired and 19 percent of those still farming.

Third, those who quit farming tended to have lower-acreage farms. In 1986, their average was 86 acres, compared with 160 acres for those who retired and 178 acres for those who stayed in farming. It appears that those who left farming for reasons other than retirement tended to have smaller operations, as measured by gross sales and acres owned. In 1988, those who had retired still owned an average 97 acres, compared with 42 acres for those who left for other reasons.

There was one other major difference in the type of farm operation in 1986, as outlined in Figure 7.2. Historically, small farms in Kentucky have tended to be beef or tobacco operations, with more than 50 percent of their sales in one of these commodities. Tobacco tends to dominate.

But among those who left farming and did not retire, there were substantially fewer farms dependent on beef or tobacco. In fact, only about 17 percent of those who quit farming claimed beef as their main commodity, compared with around 24 percent of those who retired and nearly 23 percent of those still farming in the 1988 survey.

Figure 7.2: Types of Commodities Raised by Kentuckians Who Left Farming, 1986.



There was an even wider difference for tobacco, with 39 percent of those who quit farming dependent on tobacco, compared with 52 percent of those who retired and 49 percent of those still farming. About 33 percent of those who quit farming were in the "Other" category, compared with none among those who retired and 12 percent of those still farming.

Financial Characteristics

The small size of operations of those who left farming for reasons other than retirement suggests that farm income levels may have been too low to offer adequate financial return. A look at both debt/asset (D/A) ratios and average total debts (Table 7.2) shows another facet of this problem.

For those who left farming but did not retire, D/A positions in 1986 were relatively high, 0.35, or 35 cents of debt for every dollar of assets. As expected, those who retired between the 1986 and 1988 surveys had all but liquidated their debt by 1986, while those still farming had a D/A ratio of .19, in the relatively low range, given their gross farm sales.

Table 7.1: Farm Characteristics of Kentuckians Who Left Farming, 1986-1988.

		Still Farming	Retired	Quit
Avg. Gross Sales, 1986		$32,800	$23,100	$11,500
% Commercial Farms, 1986		19%	24%	11%
Acres Owned	1986	178	160	86
	1988	178	97	42

Table 7.2: Financial Characteristics of Kentuckians Who Left Farming, 1986-1988.

	Still Farming	Retired	Quit
Avg. Debt/Asset Ratio			
1986	0.19	0.04	0.35
Avg. Total Debts, 1986	$41,515	$13,900	$40,500*
Avg. Household Income			
1986	$31,786	$21,481	$25,000
1988	$34,727	$17,692	$28,646
Percent Change	+ 9.0%	-17.6%	+14.6%

*Excludes one case with total debts of more than $1 million in 1986.

A common rule of thumb is to consider farm operations with D/A ratios of 0.4 or greater to be in "critical" condition. Obviously, those who left farming but did not retire were facing some financial stress from the farm itself, but the debt level was not necessarily great enough in itself to drive them out of business. About 36 percent of the group reported high D/A positions (over 0.4) in 1986, and of these, only half reported total debts over $50,000.

Given the generally low levels of gross farm sales and the low acreage of their farms, these former operators probably viewed their farms as a heavy financial burden. They were not necessarily forced out by financial insolvency, but believed servicing their debts was too much of a drain on their resources.

Those who left farming for reasons other than retirement also had lower average household income than those who remained in farming (Table 7.2). But the group also showed a larger increase in household income than those who were still farming in 1988. As might be expected, those who retired saw their income drop.

Figure 7.3 suggests that those who left farming but did not retire had by far the largest percentage of households in the middle income category, compared with those still farming and those who retired between 1986 and 1988. Many of those who left farming for reasons other than retirement apparently were not dependent on their farm income. The overall gains in income suggest that they actually benefitted when they decided to leave farming.

Off-Farm Employment

Nearly nine out of ten of those who left farming for reasons other than retirement were employed off farm in 1986 (Table 7.3). This compared with about two-thirds of those still farming and only about 14 percent of those who retired. Apparently, off-farm employment offered an alternative opportunity for the vast majority of those who decided to leave farming, but did not retire, between 1986 and 1988.

Figure 7.3: Household Income of Kentuckians Who Left Farming, 1986-1988.

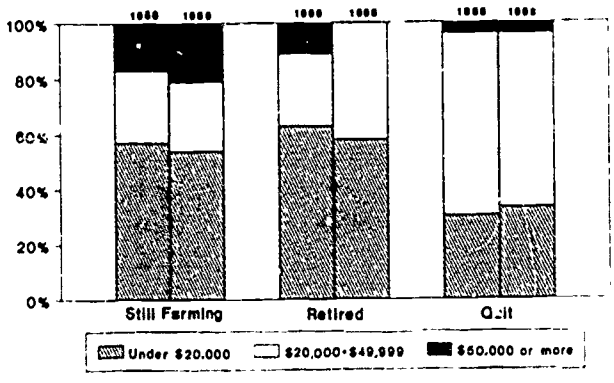


Table 7.3: Off-farm Employment for Kentucklans Who Left Farming, 1986-1988.

	Still Farming (%)	Retired (%)	Quit (%)
Employed off farm, 1986	66	14	87
Farm Type, 1986			
Full Time	34	79	9
Type I (Spouse works)	13	7	4
Type II (Operator works)	24	7	44
Type III (Both work)	29	7	43
Avg. Number of Days Worked Off-farm, 1986			
Men	[illegible]	10	262
Women	91	32	219
Avg. Number of Hours Worked Each Day, 1986			
Men	6.7	1.1	9.2
Women	4.5	1.1	7.4

In other sections of this publication, we have discussed the linkages between off-farm employment and those whose primary sources of gross farm sales are either beef or tobacco. As we noted above, those who did not retire, but left farming between the two surveys were not as highly dependent on beef or tobacco sales, compared with those who retired or those who remained in farming (Figure 7.2). Lower dependence on tobacco, with its high cash value, and beef, with its low labor requirements, seemed related to the financial well-being of this group.

There also were major differences in the type of farms based on the off-farm employment status of the operator and spouse, as shown in Table 7.3. First, note that more than three-quarters of those who retired were full-time farmers in 1986, compared with only about 9 percent of those who quit. This compared with just over a third of those still farming.

There were other differences, too. Almost 44 percent of the operations of those who left farming for reasons other than retirement were Type II, where the operator worked off farm. This was substantially above the percentages for either those who retired or those still farming in 1988. The percentage of Type III farms, where both spouses worked, also was much higher for those who quit, totalling about 44 percent of the farms. This means that 87 percent of farms that ceased operations for reasons other than retirement relied to some extent on the operator's off-farm income.

In addition, those who left farming for reasons other than retirement tended to spend much more time working off farm (Table 7.3).

The men averaged 262 days a year, more than double those still farming. They also devoted long hours to the job each day, 9.2 hours, compared with 6.7 hours for those still farming. Women in these operations spent 219 days working off the farm each year, more than two-and-a-half times the days spent by women in operations that remained in business. These women also spent more time on the job, 7.4 hours each day, compared with 4.5 hours for women still in farming.

Demographic Characteristics

Table 7.4 shows some demographic characteristics of Kentuckians who have left farming. Those who left farming for reasons other than retirement were the youngest, generally the best educated, and least experienced in farming.

The age distribution section of Table 7.4 gives a particularly revealing profile of those who left farming for reasons other than retirement. About 26 percent of these ex-farmers were under 40, about the same as those still farming (24 percent). But in the middle age bracket, 41 to 60, there was a much higher percentage of those who quit (70 percent), compared with those still farming (50 percent). And the percentage over 60 among those who quit (4 percent) was much lower than the 24 percent of those still farming. These figures emphasize the relatively young age of those who left farming for reasons other than retirement. As might be expected, the vast majority of those who retired were over age 60.

Reasons for Leaving Farming

* *Those Who Retired:*

The most obvious reason for leaving farming was age, as shown in Table 7.4. Overall, the relatively large number of retirements reflects the general aging of the farm population in Kentucky. Note how the percentages of those over age 60 who retired far exceeded those who remained in farming and those who left farming for other reasons. About 12 percent of those who retired said they were physically disabled. All disabilities reported in the survey were related to old age. In this group, no one claimed that bankruptcy induced retirement.

Table 7.4: 1986 Demographic Characteristics of Kentuckians Who Left Farming.

	Still Farming	Retired	Quit
Avg. Age of Men	52	72	48
Avg. Age of Women	50	64	47
Avg. Education, Men	11.8	9.9	12.0
Avg. Education, Women	12.2	11.0	13.3
Years Farming, Men	27	40	17
Years Farming, Women	21	30	14
Age Distribution			
40 and under	24%	--	26%
41 to 60	50%	10%	70%
Over 60	24%	90%	4%

* *Those Who Quit:*

We also asked farmers who left farming for other reasons why they did so. The respondents where asked to rank how important the following reasons were in their decision to quit farming. Table 7.5 shows the results in the order of importance, along with percent responding.

Table 7.5: Reasons For Leaving Farming.

	IMPORTANT (%)
Earn more money off the farm	95
Farm income too unstable	83
Farming doesn't provide enough income for my family	82
Improve standard of living	74
Fed up with the financial stress of farming	52
No longer enjoy farming	32
Bankrupt	14
Bank forced me to close	9

Finanical considerations seemed to play an important part in the decision to leave farming, but these considerations were not directly related to financial stress on the farm. For the most part, members of this group left farming voluntarily, and almost all believed they could make more money off of the farm. In addition, 83 percent cited the instability of farm income and 82 percent said farm income was too low to support their families. Almost three-quarters of the group said they left farming to improve their standard of living.

While the debt/asset position of this group might have been marginal (Table 7.1), only about half said they were fed up with the financial stress of farming, and under 10 percent were forced out of farming by the bank. Only about 14 percent claimed to be bankrupt. It appears that the financial reasons for leaving farming were much more likely to stem from inadequate return or income from farming, not from excessive debt loads or bankruptcy.

Life after Farming

Most of those who left farming owned the majority of their land before leaving. Among those who retired, 90 percent owned the majority of their land, compared with 83 percent of those who left farming for other reasons. Of those who owned their land, a majority continued to own the farm. For those who retired, this figure was 66 percent, compared with 83 percent of those who left farming for other reasons.

Even though they were no longer farming, more than 80 percent of the former farmers continued to live in rural areas working at jobs

they held while farming. This suggests that Kentucky is following a national pattern of a changing rural economy that is less dependent on agriculture and more dependent on other kinds of jobs.

Most farms that were sold went back into the farming community. Of those who sold their farms, 85 percent claimed at least some of the land was sold for farming.

Leaving farming resulted in perceptions of a better life for many Kentuckians who left farming between the 1986 and 1988 surveys; but there were differences between those who retired and those who left for other reasons, as Figure 7.4 illustrates.

Those who quit farming generally agreed their families were better off than they were five years ago, with about half agreeing with the statement. About one-third of the retirees agreed. This suggests some ambivalence on the part of retirees, but other factors such as old age also could affect answers.

Summary

As we pointed out in the introduction, there are a number of reasons why farmers have left agriculture over the years. While nearly 12 percent of those surveyed in 1986 had left farming by the 1988 survey, more than half (56 percent) had retired. This group had very different characteristics from those who left farming for other reasons.

With all of the publicity given to farm financial stress and forced bankruptcy during the 1980s, it is important to note here that many of Kentucky's farmers who left agriculture were enduring some financial problems, but most were no longer farming because they found that off-farm employment gave them better economic returns than their farming operations. Their farms, which were chiefly very small operations, were a drain on their resources. But more than 80 percent of these former farmers continued to hold on to at least some of their land and live in rural areas. They are signs of a diversifying rural economy in Kentucky.

Figure 7.4: Perceptions of Well-being by Kentuckians Who Left Farming.

As a group, these ex-farmers, before leaving agriculture, had several characteristics which set them apart from both those who retired and those who remained in farming, including:

* Smaller operations, both in terms of gross sales and acres. The farms most likely were not big enough to generate sufficient income to support a family,

* More dependence on off-farm income and generally higher off-farm income, with more operators working and more families with both the operator and spouse working.

* Less reliance on both tobacco and beef, typically the staple commodities of Kentucky's part-time farmers.

* Generally higher, but not necessarily excessive debt/asset ratios.

* Generally younger, more educated, and less experienced at farming.

These points suggest that the operations of those who left farming, but did not retire, were different from the "typical" Kentucky farm operation. The small scale of the farms implies inability to generate adequate farm income.

The dependence on off-farm income suggests the availability of off-farm employment offered economic alternatives with better returns. Less reliance on tobacco especially suggests possible problems with farm cash flow, which made it difficult to lower debt levels. Younger age and generally higher education levels may have offered employment flexibility.

In addition, the small scale of most of the operations for those who left farming, but did not retire, in conjunction with relatively large off-farm income, suggests that these ex-farmers may have viewed their operations as a secondary source of income all along. Their operations were marginal to begin with, and it was difficult, if not impossible, to cover the costs of operation, especially debt service, given the historically high interest rates of the 1980s.