Farming Opportunities For Farm Youth in Oklahoma And The United States

Yao-Chi Lu

James Horne

Luther Tweeten

AGRICULTURAL EXPERIMENT STATION
OKLAHOMA STATE UNIVERSITY

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Yao-Chi Lu, James Horne, and Luther Tweeten*

From 1935 to 1969, the number of farms in the United States declined from 6.8 million to 3.0 million, or by 56 percent [11, 12]. Mechanization and barriers to entry including high capital and managerial requirements have restricted opportunities for farm youth to obtain an adequate size farming unit.

A previous study on plans of Oklahoma farm youth in 1967 indicates that 26 percent of them planned to enter farming [3]. A random sample of Wisconsin high school seniors in 1957 revealed that 27 percent of farm boys indicated they planned to farm [1]. A much higher proportion (40 percent) of farm boys with farming plans was reported in an Iowa study [2].

The previous Oklahoma study [3] revealed that many farm boys planning to start farming consider higher education unimportant for successful farming and forego higher education. If insufficient farming opportunities exist for those who want to farm, some aspirants will have to seek employment off the farm. Boys who are thwarted in their plan to farm may find it difficult to compete with urban boys for good nonfarm jobs. It is important that farm youth be informed of opportunities for farming so that they can make their future plans accordingly.

Some attempts have been made to estimate farming opportunities. Stam [5] has estimated cumulative farming opportunities created through death and retirement for six classes of commercial farms in the North Central region. Manderscheid [4] has used the same approach to estimate farming opportunities for Michigan farm youth, but he considers only those farms with sales of $10,000 or more as adequate. The two studies did not take into account opportunities for smaller farms to become economics units through farm consolidation. According to *Farm Real Estate Market Developments* [9], 60 percent of all farm transfers and sales in the United States entailed consolidation with an existing unit.

*Respectively, Assistant Professor, Graduate Assistant, and Professor, Department of Agricultural Economics, Oklahoma State University, Stillwater. This research was supported by the Agricultural Experiment Station, Oklahoma State University, and by the National Science Foundation.

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The objective of this paper is to estimate farming opportunities for farm youth in Oklahoma, in each of the other 49 states, and in the United States in aggregate. This information will help farm youth make future plans, and will help school administrators, teachers, counselors, and parents to counsel youth toward more nearly optimal educational and occupational goals. The discussion for Oklahoma is presented first in some detail to illustrate the methods and interpretations for subsequent estimates.

Replacement Rates

Replacement rates relate the number of farm boys entering the working force during a given period to the number of farms which will become available due to death and retirement of farm operators. During a given period, replacement rates depend upon two factors: (1) the demand for farming opportunities measured by the number of farm youth who are expected to reach the age of entry into the working force and to survive until the end of the period; (2) the supply of the farming opportunities measured by the number of farms which will become available for a new start. The supply in turn depends upon the rates of death and retirement of farm operators and the rate of farm consolidation.

Assumptions

Estimates of replacement rates depend upon the definitions used of farms and farming opportunities. Throughout this study the following assumptions have been made:

1. Youth enter the working force at age 20,
2. Mortality rates for the total white male population in each state apply to farm operators under 65 years of age, with the exception of the South in which the mortality tables for the total male population was used. Farm operators over 65 are assumed to retire or die within the next decade.

Limitations of This Approach

Replacement rates are based on the number of youth entering the working force and the death and retirement of farm operators. There are other variables, not considered in this study, that could improve or lessen the chances for a farm boy to obtain a farming unit.

Some of the major variables that could improve a farm boy's chance for obtaining a farm are:

1. A change in the social security system that would allow farmers to retire earlier than assumed in this study,

2. A large proportion of farm youth leaving the rural areas before they reach the employable age used in this study,

3. Farmers leaving the farm to take urban jobs before retirement age, and

4. Slackening of factors creating economies of size, thereby reducing pressure for farm consolidation.

Some of the major variables that could lessen a farm boy's chance of obtaining a farm are:

1. An increasing number of persons in the nonfarm sector returning to the farm,

2. Tight credit restraints, and

3. Economies of size become more pronounced, causing greater demand for units to consolidate with existing farms.

Number of Farms by Economic Class in Oklahoma

In 1964, the number of commercial and other farms in Oklahoma totaled 88,726. Based on the assumption that all farm operators retire or die in the decade after they reach 65 and on expected mortality among all farmers, Table 1 shows the number of farming units in Oklahoma by economic class made available for sale or transfer from 1964 to 1974.[1]

[1] The *1964 Census of Agriculture* classifies commercial farms into six classes based upon the value of agricultural products sold. The data on the number of farm operators by farm and age group in 1964 were obtained from *1964 United States Census of Agriculture* [6]. The number of rural farm male population was obtained from *United States Census of Population, 1960* [7]. To be comparable with farm operators data in 1964, the rural farm male populations was projected to 1964. Survival rates are derived from *Life Tables: 1959-61* [13]. The age distribution of hired workers was derived from *The Hired Farm Working Force of 1968* [10].

Table 1. Number of Farms Available for Sale or Transfer in Oklahoma, by Economic Class, 1965 to 1974.

Economic Class	Value of Farm Products Sold	No. of Available Farms	Cumulative No. of Available Farms
I	$40,000 or more	279	279
II	$20,000-$39,999	696	975
III	$10,000-$19,999	1,684	2,659
IV	$ 5,000-$ 9,999	2,857	5,516
V	$ 2,500-$ 4,999	3,679	9,195
VI	$50-$ 2,499	1,764	10,959
Part-time	$50-$ 2,499	2,362	13,321
Part-retirement	$50-$ 2,499	10,450	23,771
Abnormal		5	23,776

On the demand side, the number of rural farm males reaching employable age from 1965 to 1974 is 21,578, or an annual average of 2,158. This is less than the number of farms made available, but only a small portion of the farms made available constitute an opportunity for a new start in farming.

Estimates of Farming Opportunities in Oklahoma

Table 1 shows that 23,776 Oklahoma farm operators are expected to die or retire from 1965 to 1974. Most of the farms they vacate will be consolidated with existing farms. According to *Farm Real Estate Market Developments* [9], only 36 percent of all farm transfers and sales in Oklahoma constitutes single units available for occupancy. Thus, only 8,557 of the above openings, or 856 annually, can be expected to constitute a new start in farming. The replacement rate is 0.4. This means that on the average, only two out of five, or 40 percent, of all Oklahoma farm boys will have the opportunity to enter farming.

The shortcoming of approach 1 is that it does not necessarily estimate opportunities on *adequate* size units. It is unrealistic to consider a farm with a gross income of $2,500 per year a real opportunity. The definition of an adequate farm, one that will provide a satisfactory yearly income for a family, is necessarily somewhat arbitrary. If farm boys consider only those farms made available with a gross income of $10,000 or more as an adequate opportunity, then the replacement opportunities on such farms are projected to be 2,659 from 1965 to 1974. This gives Oklahoma farm boys only one in eight chances of obtaining an adequate size unit.

An economic farming unit will require sales of at least $20,000 annually in the 1970's. There are opportunities in the decade following 1965 for only 975 operators to take over individual farms with sales over $20,000 occasioned by death or retirement of present operators.

This constitutes a small supply indeed, and it is well to consider another source of economic units—the small farm. While smaller farms are not economic units, they can consolidate to become economic units. Assuming all farms made available that have gross sales under $20,000 consolidate to form $20,000 sales units, the total requirements for new operators on farms with $20,000 or more in sales in Oklahoma is 5,092 in the decade or 509 per year. The replacement rate or chance for obtaining an economic farming unit is one in four (24 percent).

Replacement Rates for the United States, by State

Farming opportunities vary substantially from state to state. The above three estimates of replacement rates for the United States are shown in Table 2. From 1965 to 1974 the opportunity for obtaining a farm of any size (estimate 1) are best for farm boys in Connecticut (67 percent), Rhode Island (63 percent), and Massachusetts (62 percent); the worst for those in North Dakota (8 percent) and South Dakota (10 percent).

Estimate 1, because it is tied to past experience through the rate of consolidation, is probably the best single measure of the likely *gross* flow of boys into farming in the early 1970's. Many of those who enter, especially those on uneconomic units, will be disappointed and will leave the farm in a few months or years. Thus the replacement rates of estimate 1 are considered too high to be optimal or desirable.

The opportunities for obtaining an adequate farming unit (estimate 2) are best for farm boys in Connecticut (30 percent), Massachusetts (29 percent) and Rhode Island (29 percent); the worst chances for farm boys in West Virginia (3 percent) and South Carolina (4 percent).

Estimate 2 is included because it conforms closely with past procedures to estimate replacement rates in farming. A shortcoming of the estimate is failure to include opportunities to form economic size units by combining farms with annual sales of less than $10,000 into larger, economic size units. Thus it tends to underestimate farming opportunities.

Estimate 3 is corrected for the underestimation in estimate 2, and represents both a desirable and attainable adjustment. Progress made already in the 1965 to 1974 decade suggests estimate 3 can be attained. While a $20,000 unit is not fully adequate based on farm management studies, income from nonfarm sources can supplement income from the farm to bring income from all sources to a reasonable level for farm people. Thus we conclude that estimate 3 is the best single measure for planning purposes of the replacement rate used in this study.

According to estimate 3, which is based on opportunities from vacancies on large farms as well as from combining small farms, farm boys in Delaware (49 percent), Connecticut (38 percent), and Rhode Island (36 percent) have the highest chances of obtaining an economic farming unit; the lowest chances in South Carolina (8 percent), Alaska and North Carolina (10 percent).

Table 2. Farming Opportunities by State, 1965 to 1974.

Divisions and States	Number of Entrants	Estimate 1		Estimate 2		Estimate 3		Number of Hired Workers Needed
		No. of Farm Operators Needed	Replacement Rates (%)	No. of Farm Operators Needed	Replacement Rates (%)	No. of Farm Operators Needed	Replacement Rates (%)	
New England	14,494	7,687	53.0	3,211	22.2	4,102	28.3	3,836
Maine	4,161	2,378	57.1	903	21.7	1,170	28.1	759
New Hampshire	1,507	894	59.3	254	16.9	371	24.6	242
Vermont	4,266	1,477	35.0	702	16.6	880	20.8	556
Massachusetts	2,548	1,584	62.2	734	28.8	916	36.0	1,109
Rhode Island	318	199	62.6	91	28.6	113	35.5	120
Connecticut	1,734	1,155	66.6	527	30.4	652	37.6	1,040
Middle Atlantic	66,338	26,534	40.0	9,387	14.2	12,965	19.5	9,724
New York	28,824	10,559	36.6	4,658	16.2	6,036	20.9	4,360
New Jersey	4,035	1,924	47.7	1,038	25.7	1,238	30.7	1,790
Pennsylvania	33,479	14,051	42.0	3,691	11.0	5,691	17.0	3,574
East North Central	235,222	60,517	25.7	26,030	11.1	40,044	17.0	12,455
Illinois	48,073	11,539	24.0	10,278	21.3	12,642	26.3	3,523
Indiana	43,356	9,599	22.1	4,204	9.7	6,927	16.0	1,618
Ohio	47,141	11,805	25.0	4,274	9.1	7,660	16.3	2,547
Michigan	42,183	13,188	31.3	3,052	7.2	5,529	13.1	1,988
Wisconsin	54,469	14,386	26.4	4,222	7.8	7,286	13.3	2,779
West North Central	240,294	51,761	21.5	31,799	13.2	48,004	20.0	12,358
Iowa	57,001	10,831	19.0	9,680	17.0	12,131	21.3	2,622
Kansas	25,668	4,410	17.2	4,399	17.1	7,031	27.4	1,654
Minnesota	52,973	14,289	27.0	4,629	8.7	7,490	14.1	2,026
Missouri	43,952	15,785	35.9	4,305	9.8	8,859	20.2	2,098
Nebraska	24,971	3,133	12.5	4,206	16.8	5,952	23.8	1,550
North Dakota	18,443	1,494	8.1	2,169	11.8	3,059	16.6	1,343
South Dakota	17,286	1,819	10.5	2,411	14.0	3,482	20.1	1,065
South Atlantic	222,265	67,359	30.3	15,629	7.0	28,796	13.0	22,028
Delaware	1,676	755	45.0	418	24.9	818	48.8	327
Maryland	9,375	3,721	39.7	1,329	14.2	1,837	19.6	1,318
Virginia	34,823	14,076	40.4	2,096	6.0	4,687	13.5	2,500
W. Virginia	10,877	6,308	58.0	360	3.3	1,371	12.6	502
N. Carolina	78,786	20,293	25.8	4,072	5.2	7,955	10.1	3,492

Table 2. (Continued)

Divisions and States	Number of Entrants	Estimate 1		Estimate 2		Estimate 3		Number of Hired Workers Needed
		No. of Farm Operators Needed	Replacement Rates (%)	No. of Farm Operators Needed	Replacement Rates (%)	No. of Farm Operators Needed	Replacement Rates (%)	
S. Carolina	36,921	7,042	19.1	1,397	3.8	3,060	8.3	2,620
Georgia	40,233	10,011	24.9	3,689	9.2	5,798	14.4	3,852
Florida	9,574	5,153	53.8	2,268	23.7	3,270	34.1	7,417
East South Central	172,120	65,405	38.0	7,876	4.6	20,858	12.1	10,471
Kentucky	48,542	19,812	40.8	2,077	4.3	6,004	12.4	1,858
Tennessee	52,888	19,082	36.1	1,845	3.5	5,714	10.8	1,846
Alabama	40,579	10,719	26.4	1,990	4.9	4,267	10.5	2,312
Mississippi	30,111	15,792	52.4	1,964	6.5	4,873	16.2	4,455
West South Central	127,190	48,989	38.5	14,105	11.1	25,190	19.8	17,855
Arkansas	30,065	10,125	33.7	2,173	7.2	3,872	12.9	3,459
Louisiana	22,013	8,600	39.1	1,489	6.8	2,902	13.2	2,959
Oklahoma	21,463	8,557	39.7	2,659	12.3	5,092	23.6	1,442
Texas	53,649	21,707	40.5	7,784	14.5	13,324	24.8	9,995
Mountain	63,133	11,504	18.2	7,951	12.6	10,584	16.8	10,029
Montana	8,601	2,290	26.6	1,971	22.9	2,470	28.7	1,553
Idaho	11,941	2,344	19.6	1,524	12.8	2,087	17.5	1,410
Wyoming	3,574	787	22.0	661	18.5	835	23.4	742
Colorado	20,116	2,416	12.0	1,728	8.6	2,288	11.4	1,823
New Mexico	9,706	1,450	14.9	748	7.7	1,069	11.0	1,228
Arizona	4,212	596	14.2	552	13.1	655	15.6	2,340
Utah	4,262	1,424	33.4	597	14.0	971	22.8	569
Nevada	721	197	27.3	170	23.6	209	29.0	364
Pacific	56,457	22,775	40.3	11,281	20.0	14,721	26.1	22,377
Washington	15,234	5,747	37.7	2,421	15.9	3,267	21.5	2,209
Oregon	12,035	5,323	44.2	1,671	13.9	2,575	21.4	1,538
California	27,873	11,052	39.5	7,018	25.2	8,588	30.8	16,781
Alaska	153	29	19.0	11	7.2	15	9.8	18
Hawaii	1,162	624	53.7	160	13.8	276	23.8	1,831
United States	1,197,513	362,531	30.3	127,269	10.6	205,264	17.1	121,133

Hired Laborers

Hired laborers employed on farms more than 150 days per year may be considered an opportunity for farm youth to enter farming. Based on the *Census of Agriculture* data and mortality data as above, 1,442 new starts are available in Oklahoma for the decade following 1964. The estimated demand for new hired workers for the United States, by state and region, is shown in the last column of Table 2.

Comparisons of Geographic Divisions and the United States

Farming opportunities vary substantially from East to West and North to South. These differences are the result of many factors such as the type of farming and size of farms as well as institutional factors and local customs. Estimates from Table 2 are summed and rearranged to show in Table 3 the chances a rural farm boy has of obtaining starts in farming by region. Chances of obtaining an adequate farming opportunity in the United States are 1 in 3.3 by estimate 1, 1 in 9.4 by estimate 2, and 1 in 5.8 by estimate 3.

All estimates give the farm boys in the New England division the best chance for a start in farming. The farm boys in the Pacific division uniformly rank second in their chance of obtaining a farming start.

According to estimates 2 and 3, chances are lowest that boys in the East South Central and South Atlantic divisions will find an adequate farming opportunity. Outmigration from farms will be heavy from these two divisions, where only about 1 in eight (estimate 3) farm boys will be able to obtain an economic unit.

Table 3. Chances for Farming Opportunities by Division, 1965 to 1974.

Division	Estimate 1	Estimate 2	Estimate 3
		Chances 1 in:	
New England	1.9	4.5	3.5
Middle Atlantic	2.5	7.0	5.1
East North Central	3.9	9.0	5.9
West North Central	4.7	7.6	5.0
South Atlantic	3.3	14.3	7.5
East South Central	2.6	21.7	8.3
West South Central	2.6	9.0	5.0
Mountain	5.5	7.9	6.0
Pacific	2.5	5.0	3.8
United States	3.3	9.4	5.8

Source: The reciprocal of the replacement rates in Table 2.

Summary and Conclusions

To help farm youth make educational and occupational plans, it is useful for them as well as for school administrators, teachers, counselors, and parents to be informed about farming opportunities. The purpose of this study was to estimate more precisely farming opportunities for farm youth in Oklahoma as well as the United States.

Three separate estimates were presented. The first estimate was derived on the assumption that certain proportions of available farms for sale due to death and retirement of farm operators during the 1965-74 period will be consolidated. The consolidation rate was assumed to continue at the same rate as in recent years. According to this estimate, 30 percent of farm youth can obtain a farm in the United States.

A shortcoming of estimate 1 is that it does not measure the opportunity to obtain an *adequate size* farming unit. If only farms with gross incomes over $10,000 are considered adequate, only 11 percent of farm boys can obtain such a farm following death or retirement of the current operators in the United States (estimate 2).

Estimate 3 is based on reasonable progress toward economic size units and allows for consolidation to farms with sales of $20,000 or more. The estimate indicates chances of 17 percent to obtain an economic farming unit. In other words, about 1 in six farm boys can expect to obtain an adequate farming unit.

Farming opportunities vary substantially from state to state. According to estimate 1, farm boys in Connecticut, Rhode Island, and Massachusetts have the best chance of obtaining a farm, whereas those in North Dakota have the worst. Opportunities of obtaining an adequate farming unit (estimate 2) are best for farm boys in Connecticut, Massachusetts, and Rhode Island; the worst for those in West Virginia and Tennessee. Farm boys in Delaware and Connecticut again have the best chances of obtaining an economic farming unit while the least likely place to obtain an economic unit is in South Carolina.

Estimates of farming opportunities can be compared with farming intentions. The above rates were obtained by dividing the number of farming opportunities by the number of farm boys entering the work force during the same period. But not all farm boys plan to enter farming. According to the study on plans of high school seniors [3], only 26 percent of Oklahoma farm boys planned to farm. This estimate closely matches estimate 3, which indicates that 24 percent of the farm boys in the state will find an economic farming opportunity. The similarity suggests that, in general, farm boys are realistically appraising opportunities to farm, and is a sign that progress is being made toward economic size farms in the state.

In addition, a farm boy can start farming as a hired worker. There are also numerous job possibilities in the industries that supply farm inputs and move products from the farm to the consumer.

The replacement rates say nothing about capital, education and other requirements that influence decisions to start farming. Capital investment in land and buildings per farm in Oklahoma has grown from $6,096 in 1929 to $61,153 in 1966 [6]. Farm management studies at Oklahoma State University reveal that investments of $200,000 are commonly required today to form an economic farming unit. Off-farm employment can supplement farm earnings and provide satisfactory family income with a smaller farming investment than $200,000. Whether earnings are from farming, agri-business employment or elsewhere, schooling beyond high school increasingly is essential for a satisfactory total income.

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