FARM ENTRY OPPORTUNITIES FOR YOUNG FARMERS
IN THE HOLTON UNIFIED SCHOOL DISTRICT
DURING THE PERIOD 1965 TO 1975

by

JOSEPH ROLAND FLORY

B. S., Kansas State University, 1959

———————

A MASTER'S REPORT

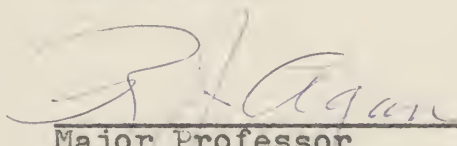submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

School of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1965

Approved by:

_____
Major Professor

ACKNOWLEDGMENTS

This writer wishes to express sincere appreciation to Dr. R. J. Agan, Head Teacher Trainer of Agricultural Education, Kansas State University, for his guidance and assistance while this study was in progress.

Appreciation is also due Mr. Robert Merrepohl and the staff of the ASC office, Holton, for their assistance in securing the names of operators in the Holton Unified School District.

To the farmers of the Holton area who have so graciously contributed help and information, the writer also wishes to express his thanks; and to Mr. and Mrs. J. D. Flory, parents of the author, and Mrs. Roland Flory and family for their patience, encouragement, and understanding.

Without the cooperation shown by all these fine people, this study would not have been possible.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

The 1964 Yearbook of Agriculture presented the belief
that at no time in three centuries has American Agriculture
reached so far and touched the lives of so many people as
today. It further stated that at no time in thirty centu-
ries has world agriculture faced greater problems, greater
challenges, and greater opportunities; and at no time has
American agriculture been so closely connected as now with
world agriculture in its gigantic task of feeding and cloth-
ing more people; husbanding and developing its various
resources; expanding its trade; sharing in and contributing
to the upsurge of modern science; undergirding economic
growth; and, by doing all this, assuming an ever-larger role
in mankind's long struggle for freedom and plenty.[1]

The 1963 Yearbook of Agriculture stated that the
signs of change are everywhere. The article pointed out
that:

> We see them in the growth or decline of communities,
> the building of highways and other facilities, the
> moving of people to new homes and jobs, the renewal
> of cities and the growth of suburbs, the enlargement
> of some farms and the disappearance of others, questions
> about the place of family farms as a dynamic force in
> agricultural production, shifts in the uses of land,
> and changes in our human relationships, institutions,

---

[1]United States Department of Agriculture, Farmer's
World, The Yearbook of Agriculture: 1964 (Washington:
Government Printing Office, 1964), p. v.

and aspirations in rural and urban America alike.[2]

The 1963 Yearbook continued by pointing out that a perspective discloses that a new economic order is taking shape on American farms, in rural America, and in cities. This new order was a product of a technological-scientific revolution, which began 200 years ago and has speeded up tremendously in the few years prior to 1963. The Yearbook article indicated that its effect on agricultural production had been almost beyond belief. Its effect on farmers and communities that could not keep up with its fast pace had been sorrowful. It had made agriculture miraculously successful, but it was a warning signal if the changes, like an automobile out of control, are so fast, so undirected, or so unmindful of traffic signs and lights as to jeopardize the well-being of people.[3]

American agriculture has been blessed with a vast array of resources. Of all our resources, the most valuable have been people. As Secretary of Agriculture Orville L. Freeman[4] said in a statement before the Sub-committee on Family Farms of the House Committee on Agriculture on

---

[2]United States Department of Agriculture, A Place To Live, The Yearbook of Agriculture: 1963 (Washington: Government Printing Office, 1963), p. v.

[3]Ibid.

[4]Ibid., pp. vi-vii.

July 11, 1963:

I believe the family farm system is worth preserving because it has social worth as well as economic value. But if we are realistic, we must recognize that the family farm will continue only if it is an efficient producer of agricultural products in terms of current scientific, technological, and management practices. Most of the people on these farms want to be farmers. It is their chosen profession. They want to stay on the land and in their community. We should help them realize their desire, but where the farming resources are clearly inadequate, we should make available additional opportunities so that such families can have a decent American standard of living.

The steadily increasing migration of large segments of the population from farms to cities has developed into a very significant problem which has been brought about by this nation's constantly changing economic system. This problem has been studied and discussed at great length by eminent leaders in agricultural education who have recognized its importance. E. V. Walton,[5] one of the many men who have labored diligently in this regard, wrote as follows:

Our rural population is declining. Only 13 per cent of the nation's population is needed to produce a surplus of food and fiber on our farms. Tomorrow only 5 per cent may be needed and the day after tomorrow 2 per cent may be able to do it. Simply put, this means that few replacements are needed and if establishment of young men in farming is the only function of vocational agriculture, we could close 90 per cent of the departments of vocational agriculture in the United States.

_____

[5]E. V. Walton, "Vocational Agriculture at the Crossroads," The Agriculture Education Magazine, August, 1958, 31:28-30.

Burkett[6] gave the opposite view in the February, 1959
issue of the Agricultural Leaders Digest:

> If our population on farms drops to a low of 5 per
> cent by 1980, as some predict, and we have a total
> population of 250,000,000, we would have 12,500,000
> people on farms. Assuming one in five is a farm
> operator, as is true today, we would have 2,500,000
> farm operators. Then taking 40 years as the service
> span of an operator, 1/40th of these will have to be
> replaced each year or there would be a demand for
> 60,000 new operators. Since no one has devised a way
> of identifying people who will go into an occupation,
> let's assume we will need two seniors graduating for
> each opening as a farm operator.
>
> The demand for students with vocational agriculture
> training in occupations related to agriculture will
> attract and should attract many of the graduating
> students. So we are very conservative in estimating
> that only one out of two graduates of Voc-Ag will be
> a farm operator. This would mean we need 120,000
> seniors graduating from Voc-Ag each year. At best, if
> one-fifth of the enrollment were seniors, we would
> need to have 600,000 high school boys enrolled.
> According to the 1957 U. S. Office of Education report,
> we had about 460,000 enrolled. While the total number
> of farm operators will be less, we still need just as
> many or more men in training in 1980 as we do today.

As the size of farm units have increased, it has
become possible that new opportunities for operators and
managers would likely become available since it was not
possible to operate the larger unit with the same number of
men as before. The size of farms in Kansas were increasing
and the number of farms were decreasing rapidly. In the
period between April, 1950 and October, 1959, there was a

_____

[6]Lowell A. Burkett, "Trends in Voc-Ag Training,"
The Agricultural Leaders Digest, 40:13, February, 1959.

decrease of over twenty-seven thousand farms in Kansas according to the Census.[7] This decrease was caused mainly by an increase in farm size. During the same period of nearly ten years, the average size of farms increased from 370 to over 480 acres. With a decreasing number of farms resulting in a decreasing need for replacement farmers, the question arose as to whether there would be farming opportunities in the future for Kansas farm youth desiring to become established in farming.

Jackson County showed a decrease of 410 farms during the period 1950 to 1959 according to the Census[8] figures. This was an average of 2.2 per cent of the total farms in the county eliminated each year. The average size of farms increased from 205 to 257 acres during this same period. This would indicate a decline in the number of operators and a corresponding decrease in the number of farm boys available in the future.

Records of the Holton High School[9] revealed that they have offered vocational agriculture since 1937. Thirty-nine boys were enrolled in Voc-Ag during the 1964-65 academic

---

[7]United States Department of Commerce, Bureau of Census, 1959, Census of Agriculture, Kansas (Vol. I, Counties, Part 21, 1961), pp. 3-7.

[8]Ibid., p. 121

[9]Holton High School, Office Files, Holton, Kansas.

year. There were only three Voc-Ag graduating seniors.

A study completed in 1964 by Bradley[10] revealed that 25.9 per cent of the 1959 Kansas high school graduates that had had four units of vocational agriculture were farming five years after graduation. Another 12.6 per cent were engaged in farm related occupations.

Crawford[11] in 1959 found 46.7 per cent of Voc-Ag graduates in Iowa from 1943 to 1952 were farming. In addition, 11.4 per cent were employed in farm-related occupations.

---

[10]Prof. Howard R. Bradley, "Occupational Status of the 1959 Kansas High School Graduates Majoring in Vocational Agriculture," (Non-thesis study, 1964, Kansas State University), p. 8.

[11]Harold R. Crawford, Compiler, "Occupational Record of Vo Ag Graduates for the Ten Years 1943-52," (1959, Sac City, Iowa), p. 3.

PURPOSE

The purpose of this study was to discover factual information regarding the opportunities for establishment of young farmers in farming in the Holton Unified School District. The investigator needed this information to be more accurate in guidance activities and for counseling farm boys studying vocational agriculture under his direction.

Guidance has long been considered an essential part of Voc-Ag. Obtaining information on placement opportunities for young farmers has been recognized by most Voc-Ag instructors as one of their responsibilities. In this connection Byram[1] had the following to say about this matter:

> Aside from estimation of the annual number of opportunities for placement in farming, studies of actual opportunities within a community would appear to be one of the more valuable guidance activities in which teachers of vocational agriculture have engaged. Guidance with respect to placement and advancement in farming cannot be realistic without factual information as to opportunities and demand.

The major purpose of this study, therefore, was to ascertain the number of farming opportunities which might be expected to become available in the Holton Unified District during the period 1965 to 1975.

---

[1]John T. Byram, "Entry Opportunities Into Farming" (Master's Report, M. S., 1962, Iowa State University), p. 17.

The study was designed 1) to determine the farming status of the farm operators according to gross farm income, livestock handled, land owned, acres farmed, and capital investment, 2) to determine the number of farmers who found it necessary to hold off-farm jobs, 3) to determine the acreage, livestock, capital investment, and gross farm income necessary for a satisfactory level of living, 4) to determine if farmers were willing to help finance or join in partnerships with young farmers, 5) to determine the number of farm operators in the district who would retire in the next ten years and the acres farmed, 6) to determine the plans for disposal or transfer of the land owned by the retiring operators, and 7) to determine the number of efficient size farms that would become available each year to young farmers.

METHOD OF STUDY

A list of all farmers currently farming at least 80 acres in the new Holton Unified School District was secured. The basic list was developed and refined from information secured from the files of the Agricultural Stabilization and Conservation office at Holton.

A questionnaire was developed (Appendix) containing 36 groups of pertinent questions.

The questionnaire, along with a letter of explanation, was mailed to 255 farmers. This represented 100 per cent of the list. Two weeks later a follow up card was mailed to those who had not responded. Two weeks later a new questionnaire was mailed to those that had not returned the first questionnaire. Seventy per cent of the questionnaires were returned and tabulated for this study.

LIMITATIONS

The accuracy of the study was limited to the extent that seventy per cent of the questionnaires were returned.

The list included only farmers who operated at least 80 acres in the Holton Unified School District. Some of these farmers had land outside of the district.

The study was accurate to the extent that the farmers' responses were correct and the interpretation of the data by the investigator was accurate.

DEFINITION OF TERMS

Certain terms used in the study were set aside for
special definition as they applied to the study. The
definitions given were not necessarily those used elsewhere.

Holton Unified School District.[1] The unified school district
which was comprised of 127 7/16 square miles located in the
central portion of Jackson County, Kansas. It was referred
to in the study as the "district" and the "Holton area".

Farm Operator. For the purposes of this study a person who
farmed or grazed at least 80 acres of land in the Holton
Unified School District. He could own or rent the land.

Satisfactory Level of Income. The figure of $10,000 mini-
mum gross income was arbitrarily selected and used in this
study as a basis for determining possible farming
opportunities.

Farming opportunity. Was defined as a farming unit likely
to become available and likely to return a gross income of
$10,000 or more.

Consolidation. Was used in this study to refer to a farm

---

[1]Recommendations to the State Superintendent of Public
Instruction of Proposed Unified Districts in Jackson County
Planning Unit, Jackson County Planning Committee. (Form U
109, Jackson County, Kansas), p. 4. (Mimeographed.)

unit being vacated and incorporated into another operation, thus not available for a new operator.

Farming unit. Was defined as all farming operations under one management.

Vocational Agriculture. Was defined as the high school course of study as known in Kansas and operated under the Smith-Hughes Act. Vocational Agriculture was abbreviated in this study "voc-ag" or "vo-ag".

REVIEW OF LITERATURE

Previous research relating to the problem of determining the opportunities for establishment of young farmers in farming in the Holton Unified School District was divided into three primary categories: (1) occupational choices of voc-ag graduates, (2) farm size adjustment and availability, and (3) becoming established in farming.

Occupational Choices of Voc-Ag Graduates

A five year study was made in Kansas by Bradley[1] covering the period from 1959 to 1964 to determine the occupational status of the vocational agriculture graduates of Kansas high schools in 1959. Of the 869 graduates studied, 25.9 per cent were engaged in farming five years after graduation, 12.6 per cent were in farm related occupations, 28.3 per cent were in occupations not related to agriculture, 15.5 per cent were in the armed forces, and 15.8 per cent were still enrolled as college students.

A study was made in Iowa by the Iowa Vocational

---

[1] Prof. Howard R. Bradley, "Occupational Status of the 1959 Kansas High School Graduates Majoring in Vocational Agriculture," (Non-thesis study, 1964, Kansas State University), p. 8.

Agriculture Teachers Association[2] in 1959, covering a ten
year period from 1943 to 1952, to determine the occupational
status of Iowa Voc-Ag graduates. Of the 2,497 graduates
studied, 47.6 per cent were engaged in farming, 9.6 per
cent were employed in related occupations, and 43.7 per
cent were in occupations not related to agriculture. Fifty-
seven and three fourths per cent of the graduates were
either in farming or in occupations related to agriculture.

Considering the graduates in the Iowa study[3] who had
some college education, 40 per cent were farming or in
related occupations, whereas, 64 per cent who had no col-
lege education were farming or in related occupations.

In a study of graduates of 40 Iowa high schools dur-
ing the 1943 to 1954 period, Henderson[4] found that 46.5 per
cent of the vocational agriculture graduates were farming
in 1955. Of the 1545 graduates, 47.8 per cent were in
occupations other than farming.

---

[2]"Occupational Record of Vocational Agriculture
Graduates; ten year period, 1943-52," Iowa Vocational Agri-
culture Teachers Association Annual Report, 1960-61,
pp. 15-17.

[3]Ibid.

[4]Earl M. Henderson, "Influences of High School Voca-
tional Agriculture on the Establishment of Graduates in
Farming," (M. S. thesis, 1956, Iowa State University),
p. 37.

Acker[5] reported that about 7,000 farm boys reach the age of 18 in Iowa each year, but that surveys show that only about 40 per cent intend to farm.

In a very comprehensive 1954 study, using figures for 16 previous but consecutive years, Cassidy[6] stated that he had found that there definitely were opportunities for entering farming. Of the graduates from one high school, during the period 1936 to 1952, 38.1 per cent started farming at various levels on the agricultural ladder immediately after leaving school and were still farming. Six and six-tenths per cent had gone into other occupations, but later returned to farming. A third group, amounting to 17.2 per cent of the respondents, had started farming but later entered other occupations. The remaining 38.1 per cent had never entered farming.

Lewis[7] used 94 graduates for respondents in his 1954

[5]Duane C. Acker, "For Young Men Planning to Farm," Iowa Farm Science, (15:11-12, August, 1960), pp. 11-12.

[6]John Franklin Cassidy, "An Occupational Study of Former Students of Vocational Agriculture of Witton High School from 1936 to 1952" (Research Problem, M. of Ag. Ed., 1954, North Carolina State College, In: Summaries. Vocational Division Bulletin No. 263, Supplement No. 9, 1956), p. 17.

[7]Glenn W. Lewis, "Factors That Influence the Establishment of Vocational Agriculture Graduates in Talbott County, Maryland" (Thesis, M. S., 1954, The University of Maryland, In: Summaries. Vocational Division Bulletin No. 256, Supplement No. 8, 1955), p. 58.

research. All of the 94 men were former students of voc-ag
and had received diplomas during the period 1939 to 1952.
Forty-eight of the men were in farming at different levels.

In a study of 103 sophomore and senior farm boys in
west-central Iowa, Burchinal[8] found that 27 per cent planned
to farm. Another 27 per cent were uncertain as to their
plans.

Pawnee City, Nebraska High School had graduated an
average of nine boys per year during the ten years prior
to the 1964 study by Ganzel.[9] He found that 27.8 per cent
were engaged in farming while 28.9 per cent were in farm-
related occupations and 43.3 per cent were in occupations
not related to agriculture (includes those in military
service).

Farm Size Adjustment and Availability

Considering the age of the farm operators, general
retirement age of farmers and the decreasing number of farms,
Swanson[10] found the actual need for farmer replacements in

---

[8]Lee G. Burchinal, "Who's Going to Farm?" Iowa Farm
Science, (14:12-15, April, 1960), pp. 12-15.

[9]Ronald W. Ganzel, "Farming Opportunities Expected to
Become Available in the Pawnee City School Patronage Area
From 1963 to 1973," (Thesis, M. S., 1964, University of Nebr.),
p. 29.

[10]Robert M. Swanson, "Opportunities for Establishment
of Young Farmers in the Merengo, Iowa Community" (Thesis,
M. S., 1961, Iowa State University), p. 41.

the Merengo, Iowa community during the ten year period, 1961 to 1971, would be approximately 76 operators. It was estimated that 68 sons of operators would be looking for farming opportunities during this same period.

According to Halcrow,[11] one of the important problems in the realm of agricultural production policy was that of how to solve the low income problem. Farm consolidation may be a partial solution to this problem for those farm operators who have been limited by not having enough land to operate efficiently.

Heady and Hoffman[12] had this to say about what happens when farms consolidate: Between 1940 and 1959, the number of farms in the United States dropped by 30 per cent, and the average size of farms increased by nearly one third.

The number of farms in Kansas has decreased 33.2 per cent from 1940 to 1959 according to the United States Census of Agriculture.[13] This represented a decrease of 2,735 farms each year in Kansas. Likewise, the average size of

[11] Harold G. Halcrow, Agricultural Policy of the United States, (Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1953), p. 3.

[12] Earl O. Heady, and Randall A. Hoffman, "What Happens When Farms Consolidate?", Iowa Farm Science, (15:13-15, February, 1961), pp. 13-15.

[13] United States Department of Commerce, Bureau of Census, 1959, Census of Agriculture, Kansas. (Vol. I, Counties, Part 21, 1961), pp. 3-7.

farms increased during this period from 308.2 acres in 1940 to 480.6 acres in 1959.

Heady[14] stated that the family farm was not out, but simply that a family can take care of more acres now than formerly.

In a study of the factors affecting future farming opportunities in Iowa, Joslin[15] estimated that farm size in the economic area in which Iowa County was located would increase at the rate of 6.3 acres per year. The increase would result in the average size farm being 310 acres in 1975. The average size in 1955 was 184 acres. The number of commercial farms in the area was 21,806 in 1955. He estimated that there would be 12,375 farms in 1975. This would be a decrease of 41 per cent in the number of farms.

The data gathered from a 1951 research project by Kirk[16] showed that on 51 farms there were only four for sale and there were no farm units for rent.

---

[14] Earl O. Heady, Nature of the Agricultural Adjustment Problem, (In Iowa Agricultural Experiment Station Report 20:17-21, October, 1957), pp. 17-21.

[15] Kenneth H. Joslin, "Factors Affecting Future Farming Opportunities," (Thesis, M. S., 1958, Iowa State University), pp. 22-24.

[16] William Edwin Kirk, "Opportunities for Establishment and Placement in Farming in the Wytheville Magisterial District, Virginia," (Thesis, M. S., 1951, Virginia Polytechnic Institute, In: Summaries. Vocational Division Bulletin No. 248, Supplement No. 5, 1952), p. 30.

In a similar study, also conducted in 1951, Miller[17] found the opposite of the Kirk study to be true. Of 50 farms surveyed, 15 would soon become available to younger farmers because of retirement. On 37 of the farms, the operators indicated a need to expand operations to include from one for three months to as many as two full-time men. Miller determined that land, labor, building space and capital were the present restrictions of expansion in that order.

In a 1953 study, Brimm[18] developed a formula for figuring replacement needs for farmers. According to his findings, there was a need for 5,200 farmers each year in Tennessee. In one county the study was carried even further in an effort to determine how many persons were available for entry into farming. There were 303 farm boys, 20 years of age, discovered in one county but only 100 of them would be needed to replace farmers who had died or had retired.

---

[17]Harry T. Miller, "A Study of Farm Placement Opportunities in the Fairfield Joint School Area, Fairfield, Pennsylvania," (Non-thesis, 1951, University of Maryland, In: Summaries. Vocational Division Bulletin No. 248, Supplement No. 5, 1952), p. 30.

[18]J. W. Brimm, "Determining the Replacement Needs for Farmers in the State and Counties of Tennessee," (Research Problem, M. S., 1953, The University of Tennessee, In: Summaries. Vocational Division Bulletin No. 256, Supplement No. 8, 1955), p. 14.

In a 1960 study, Carpenter[19] estimated the number of commercial farms in Missouri would decrease from 164,000 reported by the 1950 Census to 86,416 in 1975. The number of farms having gross sales of $5,000 or more were expected to increase from 38,561 reported by the Census in 1950, to 51,472 in 1975. He estimated the number of opportunities to commence farming in Missouri to decline from 8,823 for the years 1955-69, to 5,225 between 1970 and 1975. According to his findings, farming opportunities were expected to be available for 39.5 per cent of the men in the farm population reaching age 20 between 1960 and 1965. By the 1970-75 period, only 31.5 per cent of these young men will be expected to find farming opportunities.

According to Henry,[20] the number of farm operators in Arizona was decreasing in 1960, but the number of owners was increasing. As might be expected, lease agreements had decreased. The rate of placement opportunity, when compared to the total number of farm operators included in Henry's

---

[19]Earl T. Carpenter, "A Projection of Farming Opportunities in Missouri to 1975," (Thesis, Ed. D., 1960, The University of Missouri, In: Summaries. Vocational Division Bulletin No. 291, Supplement No. 14, 1961), p. 10.

[20]Cyrus James Henry, "Placement Opportunities for Farm Operators in the San Carlos Irrigation and Drainage District, Pinal County, Arizona," (Master's Problem, M. Ag. Ed., 1960, University of Arizona, In: Summaries. Vocational Division Bulletin No. 300, Supplement No. 15, 1962), p. 22.

study, had averaged 14.4 per cent since July 1, 1952.

There were relatively few farms available to rent in a two-county study done in Wisconsin by Garvey[21] in 1954. In actuality, 22 per cent of all the farms in one county and 14.6 per cent of those in the other county were rented farms, therefore he concluded that rental opportunities were very limited in this agricultural area.

In 1940, McProud[22] determined that only 17 of the 295 farms included in this study had changed operators the preceding year. He concluded that to become established in farming through a change in farm operators offered only limited opportunity at best.

In 1944, Tolbert[23] showed for the first time in any studies of this type that the number of farms and farmers were decreasing. This decline was attributed to the fact

---

[21]Thomas Joseph Garvey, "An Analysis of the Problems Involved in Becoming Established in Farming in Racine and Kenosha Counties in Wisconsin," (Master's Problem, M. S., 1954, The University of Wisconsin, In: Summaries. Vocational Division Bulletin No. 282, Supplement No. 13, 1960), p. 8.

[22]Gene Elbert McProud, "A Survey of the Troy, Idaho, High School Area for the Purpose of Determining Possibilities for Placement in Farming of Part-Time Students," (Thesis, M. S., 1940, The University of Idaho, In: Summaries. Vocational Division Bulletin No. 237, Supplement No. 2, 1948), p. 70.

[23]Ralph Harmon Tolbert, "A Study of the Rate of Replacement of Farmers in Georgia," (Thesis, M. Ed., 1944, University of Georgia, In: Summaries. Vocational Division Bulletin No. 237, Supplement No. 2, 1948), p. 103.

that of 974 cases studied, the average number of years farmed was 42.51 and it was apparent that this length of farm tenure was going to increase.

A more favorable, long time outlook, with numerous opportunities for young men wishing to improve their status and for those planning to make entry into farming was projected by Bullard[24] in 1941. He found that opportunities to make entry into father-son agreements and to enter farming either as an owner or a renter were numerous. Conditions were not favorable for those desiring to become established in farming at the sharecropper or laborer level.

Worthington[25] reasoned that the number of new farming opportunities available annually in each of Ohio's counties could be derived by developing the following estimates: (1) the number of farms changing operators each year, (2) the number of farms changing ownership each year, (3) the annual mortality of farm operators, (4) the number

---

[24]Amos Gentry Bullard, "A Study of the Farm Boys and the Opportunities for Placement in Farming in the Patronage Area of Bethel High School," (Thesis, M. S., 1941, The University of North Carolina, In: Summaries. Vocational Division Bulletin No. 237, Supplement No. 2, 1948), p. 14.

[25]John E. Worthington, "Determining the Number of Opportunities for Youth to Enter Farming in Each of Ohio's Counties," (Non-thesis, 1956, Ohio State University, In: Summaries. Vocational Division Bulletin No. 265, Supplement No. 10, 1957), p. 90.

of operators leaving the farm for reasons other than death, and (5) the per cent of operators that entered farming in each of the three ten year periods, 1920-50. Using these estimates, he figured that the annual replacement rate of farmers would be 2.5 per cent.

Ganzel[26] used seven methods to determine the number of farming opportunities that would be available to new operators during the period 1963 to 1973. He found that an average of six or more farming opportunities were likely to become available each year. If Pawnee City's school continues to train boys in voc-ag at the rate of the preceding ten years, a farming opportunity should be available for those boys trained in voc-ag that desire to farm.

Clover,[27] in a 1961 study of the Webster City, Iowa Community School District, found that 1.1 per cent of the farms would be eliminated each year by consolidation. Fifty per cent of the operators of farms of 241 to 320 acres, and 58 per cent of the operators of farms of 321 acres or more, planned to retire during the next ten year period.

---

[26] Ronald W. Ganzel, "Farming Opportunities Expected to Become Available in the Pawnee City School Patronage Area from 1963 to 1973," (Thesis, M. S., 1964, University of Nebraska), pp. 33-36.

[27] Everett L. Clover, "Opportunities for Establishment of Young Farmers in Farming in the Webster City Community School District," (Thesis, M. S., 1961, Iowa State University), pp. 38.

This would imply that young farmers would have an opportunity to become established on large farms in the district.

It was determined that fourteen operators would leave farms each year. Because of the pattern of farm consolidation, approximately six farms would be eliminated and thus eight replacement farmers would be needed each year. Clover[28] estimated that there would be ten young men graduating from voc-ag each year in the district. If 50 per cent of these voc-ag grads want to farm, there would be a shortage of three replacements each year.

Becoming Established in Farming

Swanson[29] in 1964 found that ninety-one farm operators had entered farming during the past ten years and that fifty-four had become established during the past five years. He projected a need of seventy-six farm operator replacements in the next ten years. At 1961 replacement figures, determined in the study, 31 per cent of those seventy-six would have entered as owners, 21 per cent as renters, 24 per cent in partnerships, 9 per cent as

---

[28]Ibid.

[29]Robert M. Swanson, "Opportunities for Establishment of Young Farmers in the Merengo, Iowa, Community," (Thesis, M. S., 1961, Iowa State University), pp. 45-47.

laborers and 3 per cent would have been for other farm status workers. The remaining 12 per cent were unaccounted for in the findings shown.

In a 1964 study of forty-six farms in the Delores, Colorado area, Anderson[30] stated:

> It was the firm opinion of many established ranchers and farmers, surveyed for this study, that the best, fastest, and perhaps the way to become established in farming in the Delores area was to begin with used equipment and either enter a share crop agreement or cash rent some of the smaller tracts of land available.

The data[31] showed that there were thirty-eight opportunities projected from September, 1962 to September, 1965 for making entry into farming or ranching on the forty-six farms and ranches that Anderson surveyed. Fourteen of the opportunities discovered were for owners and required an average capital of $12,043. The average capital outlay for the eight opportunities reported for partnership agreements was $12,150. To take advantage of the three cash tenant opportunities would have required an average capital outlay amounting to $2,541 and to have made entry into farming at either of the two reported sharecropper positions would have required an average capital investment of $3,145.

---

[30]Arlyn D. Anderson, "Opportunities For Entry into Farming," (Master's Report, August, 1964, Colorado State University), p. 34.

[31]Ibid., pp. 26-28.

The problems recorded by early investigators were
thought, by the writer, to be best summed up by a statement
drawn from parts of Anibal's[32] findings in a 1955 study.
He reasoned that becoming established in farming continued
to be a difficult task. This was found to be especially
true for young farmers that lacked substantial financial
assistance from their parents. Obtaining capital to become
established in farming and acquiring the use of land were
real problems to many of the group included in his study.
The respondents were able to solve their problems, however,
and there appeared to be opportunities for capable young
men to become established. It was recommended that these
young aspirants be encouraged to do so.

With an ever-increasing number of factors adding up
against a favorable outlook for entry into farming and
ranching, Nylund,[33] in a 1946 study, stated that he found
opportunities to become established in farming could, and

---

[32]John D. Anibal, "Hos Fifty Young Farmers Became
Established in Farming in Lenawee County, Michigan, 1939-54,"
(Thesis, M. S., 1955, Michigan State University, In: Sum-
maries. Vocational Division Bulletin No. 265, Supplement
No. 10, 1957), p. 7.

[33]Felix Alexander Nylund, "The Discovery and Analysis
of the Opportunities in Farming and Related Occupations for
Former Students of Vocational Agriculture," (Thesis, Ph. D.,
1946, Cornell University, In: Summaries. Vocational
Division Bulletin No. 237, Supplement No. 2, 1948), p. 78.

did, exist in the form of partnership agreements, leases,
sales and also as a result of retirement of present opera-
tors, expansion of farm units and parental assistance. He
also discovered that one of the factors which contributed
to the favorability of making entry was the number of years
of experience of the operators. Nylund recognized that one
of the most important factors in becoming established in
farming was parental assistance with the purchase of land
and equipment.

A study was conducted by Gunn[34] in 1950 in the state
of North Carolina. He found on one hand, that partnerships,
especially father-son agreements, were gaining in impor-
tance, but, on the other hand, tenancy was decreasing at
an alarming rate. The best opportunities for ownership
existed in areas where land values were not integrated with
crops under production control. Gunn stated that his most
discouraging conclusion was that the number and percentage
of those gainfully employed in farming was decreasing.

It was an observation of the writer that as the
years have gone by, increased mechanization, quality live-
stock and good management have become synonomous with

---

[34]Lawrence Jennings Gunn, "A Survey of Opportuni-
ties in Agriculture and Related Fields in North Carolina,"
(Thesis, M. Agr. Ed., 1950, North Carolina State College,
In: Summaries. Bulletin No. 248, Supplement No. 5, 1952),
p. 21.

increased capital requirements. In 1954, Garvey[35] wrote
that the average value of livestock and equipment needed
to become established on an average farm was about $12,000.
Garvey also stated that he found many students had gone to
work in related or non-related occupations to help finance
farm operations.

In still another 1954 study, Smith[36] being inter-
ested in how young men became established in farming, inter-
viewed twenty-three men in an effort to determine what entry
opportunities had been available to them. Fifteen of the
twenty-three were farming as partners, and eight were owner-
operators. Smith also discovered that the most common pro-
cedure for becoming established in farming had been to
enter a partnership agreement with parents after the com-
pletion of high school or college.

[35]Thomas Joseph Garvey, "An Analysis of the Problems
Involved in Becoming Established in Farming in Racine and
Kenosha Counties in Wisconsin," (Master's Problem, M. S.,
1954. The University of Wisconsin, In: Summaries. Voca-
tional Division Bulletin No. 282, Supplement No. 13, 1960),
p. 8.

[36]Glenn Edward Smith, "How Young Men Became Estab-
lished in Farming in the Gap Mills Area," (Problem, M. S.,
1954, West Virginia University, In: Summaries. Vocational
Division Bulletin No. 263, Supplement No. 9, 1956), p. 70.

A 1940 study by Dobervich[37] was analyzed in one short but very meaningful statement. The factors most important in getting a young man established in farming were: (1) the number of years spent doing project work in vocational agriculture, (2) the experience received on the home farm, and (3) the possession of about $600.00 in cash to get started.

Carpenter,[38] in a 1960 study, determined that there would be 8,823 opportunities to enter farming in Missouri during the fifteen year period 1955 to 1969, but that this number would decrease to 5,225 in the period 1970 to 1975. Farming opportunities were defined as situations expected to yield a gross income of $5,000 or more per year.

The data gathered from a 1951 research project by Kirk[39] showed that on fifty-one farms most entry opportunities

---

[37]Sam Dobervich, "Problems Encountered in Becoming Established in Farming by Young Men in Vocational Agriculture," (Thesis, M. S., 1940, Iowa State University, In: Summaries. Vocational Division Bulletin No. 180, Supplement No. 1, 1943), p. 52.

[38]Earl T. Carpenter, "A Projection of Farming Opportunities in Missouri to 1975," (Thesis, Ed. D., 1960, The University of Missouri, In: Summaries. Vocational Division Bulletin No. 291, Supplement No. 14, 1961), p. 10.

[39]William Edwin Kirk, "Opportunities for Establishment and Placement in Farming in the Wytheville Magisterial District (Virginia)," (Thesis, M. S., 1951, Virginia Polytechnic Institute, In: Summaries. Vocational Division Bulletin No. 248, Supplement No. 5, 1952), p. 30.

were for laborers. The operators of these farms, which
represented 25 per cent of the farms in the district from
which the respondents were selected, indicated a need for
180 full-time farm laborers and an additional 156 part-
time workers.

Blake[40] found that there was a highly significant
difference in the rate of establishment of graduates in
farming in favor of the voc-ag graduates over the non-
vocational agriculture graduates. His study was concerned
with the influence of high school voc-ag on the rate of
establishment of graduates in farming. He found that the
total gross product of the voc-ag grads increased at the
rate of $175 per year more rapidly than the non-vocational
agriculture graduates.

Joslin[41] estimated that during the period 1955 to
1975, 44.6 per cent of the farm youth in the economic area
in which Iowa County, Iowa, was located would not be able
to find an opportunity on a commercial farm.

In the study, made by the Iowa Voc-Ag Teachers

---

[40]Duane L. Blake, "Influence of High School Voca-
tional Agriculture on the Rate of Establishment of Gradu-
ates in Farming," (Thesis, M. S., 1956, Iowa State
University), p. 25.

[41]Kenneth H. Joslin, "Factors Affecting Future Farm-
ing Opportunities," (Thesis, M. S., 1958, Iowa State
University), p. 39.

Association[42] in 1959, of the voc-ag graduates who were farming, 17.2 per cent were owners, 60 per cent were renters, 18.9 per cent were farming in partnership, and 3.9 per cent were hired hands.

In a 1964 study, Ganzel[43] reported that more farmers used private credit than commercial credit as the only source of credit when buying land. Thirty-two respondents were willing to finance young men wishing to enter farming. These findings refute the saying that 'one must inherit or marry a farm to become established in farming'.

---

[42]"Occupational Record of Vocational Agriculture Graduates; ten year period, 1943-52," (Iowa Vocational Agriculture Teachers Association Annual Report, 1960-61), pp. 15-17.

[43]Ronald W. Ganzel, "Farming Opportunities Expected to Become Available in the Pawnee City School Patronage Area From 1963 to 1973," (Thesis, M. S., 1964, University of Nebraska), p. 32.

FINDINGS

The information discovered in this study was divided into three primary areas: (1) characteristics of area and respondents, (2) number of farming opportunities likely to occur from 1965 to 1975, and (3) acreage and enterprise combinations yielding satisfactory income level.

Characteristics of Area and Respondents

At the time of the study, Jackson County, located in northeast Kansas, was bordered by Nemaha and Brown Counties on the north, Atchison and Jefferson on the east, Shawnee on the south and Pottawatomie on the west.

There were 1,476 farms in the county in 1959. The average size farm was 256.9 acres and was valued at $83.06 per acre. Ninety and three tenths per cent of the land was considered in 1959 to be agricultural.

The area surveyed, Holton Unified School District, contained 81,560 acres with the average size farm as 345 acres. Two hundred and three acres was the average amount of land owned by the respondents. Table I revealed that 29 per cent of the farms in the district were 160 acres or less in size, 33 per cent were 161 to 320 acres, 25.1 per cent were 321 to 600 acres and 12.9 per cent were over 600 acres in size.

TABLE I

AGE OF OPERATORS BY TOTAL ACRES FARMED

Total acres farmed	Total in age group	Age of operators					
		20-29	30-39	40-49	50-59	60-69	70 +
1-80	16	2	4	3	4	0	3
81-160	36	1	5	9	8	7	6
161-240	24	1	6	5	5	7	0
241-320	35	3	7	11	7	5	2
321-400	17	1	3	6	3	1	3
401-480	11	0	2	3	4	2	0
481-600	17	3	2	4	7	1	0
601-800	11	2	2	3	3	1	0
801-1000	8	1	1	4	1	1	0
1001 and more	4	0	2	0	1	0	1
Totals	179	14	34	48	43	25	15

The farmers indicated in question number 36 (Appendix) of the questionnaire that they needed an average of 477 acres to make a decent living for a family of four.

The average age of the farmers was 48.9 years. Seven and nine tenths per cent were less than 30 years of age, 59.7 per cent were 30 through 55 years of age and 32.4 per cent were 56 years of age and older. The latter being approximately 7 per cent less than the state average.

Forty and eight tenths per cent of the operators owned all of the land that they farmed and 7.3 per cent were involved in a partnership (Table II). Eight and nine tenths per cent rented all of their farm land.

TABLE II

AGE OF OPERATORS BY FARMING STATUS

Farming status	Total in age group	Age of operators					
		20-29	30-39	40-49	50-59	60-69	70 +
Owner	73	3	14	18	19	8	11
Renter	18	2	6	2	5	1	0
Owner-Renter	77	6	10	26	16	16	3
Owner-Renter-Partner	5	0	3	2	0	0	0
Owner-Partner	5	1	0	0	3	0	1
Partner-Renter	3	2	1	0	0	0	0
Totals	179	14	34	48	43	25	15

Seventy-three and three tenths per cent of the group over 70 years operated only owned land while 21.4 per cent of the 20 through 29 age group operated owned land only. All of those in a partnership agreement owned or rented other land. See Table II.

Twenty and one tenth per cent of the respondents had farmed for ten or less years. They averaged 24.7 years in farming and 20.5 years of these in the Holton district.

The majority of farmers, 59.2 per cent, had received at least 12 years of education and 17.9 per cent had some college education. Table III shows that 26.8 per cent had eight years or less of school. All respondents had had at least five years of schooling.

TABLE III

AGE OF OPERATORS BY EDUCATION OF OPERATOR

Educational level, years	Total in age group	Age of operators					
		20-29	30-39	40-49	50-59	60-69	70 +
1 to 4	0	0	0	0	0	0	0
5 to 8	48	1	3	8	12	12	12
9 to 11	15	0	2	4	6	2	1
12	84	9	22	30	15	8	0
13 to 14	14	2	1	2	6	2	1
15 to 16	13	1	3	4	3	1	1
17 +	5	1	3	0	1	0	0
Totals	179	14	34	48	43	25	15

Ninety-one per cent of the farmers owned some land.
Seventy-four and seven tenths per cent had bought land with
some source of commercial credit. Eighteen and four tenths
per cent bought their farms with cash only and grossed
$7,250 on the average. One might surmise that by the time
a young farmer waited until he had enough money to buy a
farm, the farm he could afford was too small to return a
satisfactory level of living.

Using the figures supplied by the respondents
revealed an average investment in land of $23,558 by each
land owner. This compares unfavorably with the state
average of $49,035. Table IV shows that 66 or 40.5 per
cent of the land owners had an investment in land exceeding
$20,000.

TABLE IV

AGE OF OPERATORS BY INVESTMENT IN LAND

Investment in land	Total in age group	Age of operators					
		20-29	30-39	40-49	50-59	60-69	70 +
$ 0 to 5,000	6	1	2	1	1	0	1
5,001 to 10,000	31	2	6	7	8	4	4
10,001 to 15,000	33	1	6	11	2	8	5
15,001 to 20,000	27	5	4	9	7	2	0
20,001 to 25,000	19	0	2	9	4	4	0
25,001 to 30,000	16	1	4	1	6	0	4
30,001 to 40,000	11	0	1	4	4	2	0
40,001 to 50,000	10	0	2	3	2	3	0
50,001 to 75,000	5	0	1	1	2	1	0
75,001 to 100,000	4	1	1	0	2	0	0
100,001 and over	1	0	0	0	0	0	1
Totals	163	11	29	46	38	24	15
Average investment		$21,136	21,551	19,946	26,184	21,771	21,666

Four of the age groups in Table IV had an average investment in land of slightly over $21,000 with the 40 to 49 age group being the lowest with $19,946 investment and the 50 to 59 age group having the highest investment in land with $26,184.

The farmers reported an average gross income of
$8,787.71 which was well below the state figures for 1959
of $10,667. A high percentage of the farmers in the Holton
Unified School District were living on very low incomes.
Figures from Table V showed that 53.6 per cent reported
gross incomes of less than $7,500, while 7.8 per cent
grossed more than $20,000.

The youngest age group, 20 to 29, reported the
highest average gross farm income of $10,696 and the oldest
group, 70 years and over, had the lowest average gross
farm income of $4,833. See Table V.

One hundred three farmers or 57.5 per cent had off-
farm jobs which amounted to $3,853 of additional income
per operator. See Table VI.

Sixty-four and three tenths per cent of the 20
through 29 age group had off-farm jobs (Table VI). This
was lower than the three groups of 30 through 59 years.
This was assumed to indicate that the middle aged farmers
who continued to operate on small tracts of land found it
necessary to secure part-time employment.

Twenty-two and three tenths per cent of the wives
were employed full-time and 7.3 per cent were working part-
time. Of the farms where wives had off-farm employment,
79.2 per cent reported gross farm incomes of less than
$10,000. Ninety-three and nine tenths per cent of the

farmers were married.

<div align="center">

TABLE V

AGE OF OPERATORS BY GROSS FARM INCOME

</div>

Gross farm income	Total in age group	Age of operators					
		20-29	30-39	40-49	50-59	60-69	70 +
$ Under 1,000	6	1	2	1	1	1	0
1,000 to 2,500	21	1	4	6	4	1	5
2,500 to 5,000	45	3	6	10	11	10	5
5,000 to 7,500	24	1	7	3	6	4	3
7,500 to 10,000	30	2	7	8	9	3	1
10,000 to 15,000	20	0	2	11	5	2	0
15,000 to 20,000	19	5	3	2	6	2	1
20,000 to 30,000	12	0	3	6	1	2	0
30,000 and over	2	1	0	1	0	0	0
Totals	179	14	34	48	43	25	15
Average gross farm income		$10,696	8,470	10,244	8,313	8,040	4,833

Table VII shows that the educational level attained had some definite effect upon the gross farm income received by the respondents. Those farmers with eight or less years of school had an average gross farm income of $6,708, the nine to twelve year group was $9,780 gross income and those with some college training had an average gross income of

$8,820. This was assumed to be due to the fact that these men were of the younger groups and had not had time to develop their farming programs since attending college. Also, 62.5 per cent of the college group had off-farm jobs amounting to $3,778 each.

TABLE VI

AGE OF OPERATORS BY ADDITIONAL OFF-FARM INCOME

Off-farm income	Total in age group	Age of operators					
		20-29	30-39	40-49	50-59	60-69	70 +
$ 0 to 100	1	0	0	0	1	0	0
101 to 500	2	0	0	0	1	1	0
501 to 1000	7	1	1	2	1	2	0
1001 to 2000	11	0	3	4	3	1	0
2001 to 3000	17	1	2	6	6	2	0
3001 to 4000	13	1	1	5	4	2	0
4001 to 5000	17	1	4	5	4	3	0
5001 and over	35	5	12	9	9	0	0
Totals	103	9	23	31	29	11	0
Average off-farm income		$4,583	4,510	3,758	3,674	2,613	0

TABLE VII

EDUCATIONAL LEVEL OF OPERATORS BY GROSS FARM INCOME

Gross farm income	Total in group	Years of education					
		5-8	9-11	12	13-14	15-16	17 +
$ Under 1,000	6	1	0	4	0	0	1
1,000 to 2,500	21	8	0	7	3	2	1
2,500 to 5,000	45	20	2	16	4	2	1
5,000 to 7,500	24	6	3	10	2	2	1
7,500 to 10,000	30	4	5	16	2	2	1
10,000 to 15,000	20	4	2	12	1	1	0
15,000 to 20,000	19	2	3	12	0	2	0
20,000 to 30,000	12	3	0	6	1	2	0
30,000 and over	2	0	0	1	1	0	0
Totals	179	48	15	84	14	13	5

Table VIII further indicated the effect of education upon a farmers management ability and therefore upon his earning ability. Operators with eight years or less of education showed the lowest per cent of any group receiving $10,000 or more of gross farm income. Except those farmers with seventeen years or more of college and all reported full-time off-farm jobs. Their farming operations were part-time and very limited in scope.

TABLE VIII

PERCENTAGE OF RESPONDENTS RECEIVING $10,000 OR
MORE GROSS FARM INCOME BY EDUCATIONAL LEVEL

Educational level, years	Percentage of operators in group receiving $10,000
5 to 8	18.75%
9 to 11	33.33
12	36.90
13 to 14	21.40
15 to 16	38.46
17 and more	0.0
All operators	29.61

Most studies have found that the acres farmed by a person does not necessarily determine what income he may realize. However, Table IX shows that gross farm income continued to increase until the farmers were operating over 1,000 acres. This indicated that the 600 to 1,000 acre size was the most economically desirable in this district. All groups farming 321 acres or more had gross incomes which averaged in excess of $10,000. This tended to indicate that a minimum of 360 acres would be needed for a satisfactory level of living.

Beef cows were definitely the most popular type of livestock enterprise in the district. Eighty-one per cent of the respondents handled beef cows. Beef fattening was the second most common enterprise with 42.5 per cent, 37.4 per cent had feeder pigs, 28.5 per cent raised sow and

TABLE IX

TOTAL ACRES FARMED BY GROSS FARM INCOME

Gross farm income	Total acres farmed								
	81–160	161–240	241–320	321–400	401–480	481–600	601–800	801–1,000	1,000 and over
$ Under 1,000	4	1	1	0	0	0	0	0	0
1,000 to 2,500	19	1	1	0	0	0	0	0	0
2,500 to 5,000	21	12	8	2	1	1	0	0	0
5,000 to 7,500	4	8	7	5	0	0	0	0	0
7,500 to 10,000	4	2	12	5	4	3	0	0	0
10,000 to 15,000	0	0	5	2	5	4	2	2	0
15,000 to 20,000	0	0	1	1	1	4	6	3	3
20,000 to 30,000	0	0	0	2	0	5	2	2	1
30,000 and over	0	0	0	0	0	0	1	1	0
Totals	52	24	35	17	11	17	11	8	4
Average gross farm income	$3,307	4,781	7,457	10,294	10,795	16,176	19,545	20,312	19,375

litters, 25.1 per cent had dairy cows and 6.1 per cent
raised sheep.

Table X shows the number of operators who had the
various livestock enterprises and combination of enter-
prises. Beef cows as the only livestock enterprise was
the most popular with forty-seven operators reporting or
26.4 per cent. Six and one tenth per cent of the operators
had no livestock in their operations.

TABLE X

NUMBER AND PERCENTAGE OF OPERATORS ACCORDING TO THE
VARIOUS LIVESTOCK ENTERPRISES AND COMBINATION
OF ENTERPRISES

Enterprises and combinations	Number of operators	Percentage of total operators
Beef cows only	47	26.4%
Beef fattening only	4	2.3
Beef cows and fattening	23	12.9
Beef and dairy	12	6.8
Beef and hogs	38	21.4
Beef and sheep	2	1.2
Beef, sheep and hogs	3	1.8
Beef, dairy and hogs	18	10.2
Beef, dairy and sheep	3	1.8
Beef, dairy, sheep, and hogs	2	1.2
Dairy only	5	2.9
Dairy and hogs	6	3.5
Feeder pigs only	1	.6
Sow and litters only	1	.6
Sow and litters and feeder pigs	2	1.2
Sheep only	1	.6
No livestock	11	6.1
Totals	179	100.0

Number of Farming Opportunities Likely to

Occur From 1965 to 1975

Seven methods were used to estimate the number of farming opportunities likely to become available in the Holton Unified School District within a ten year period beginning in 1965.

Seventy per cent of the operators in the district returned the questionnaires. In this section only, the figures were projected to represent all 255 or 100 per cent of the farmers in the district. It was assumed that the 30 per cent that did not reply were average farmers in all aspects of the study.

The seven methods were as follow:

A. Simple projection of death, change of occupation, retirement, and consolidation rates.

B. Same as method A except adjusted to $10,000 gross incomes.

C. Respondents willing to help finance young men.

D. Same as method A except assuming farmers retire at age 65.

E. Same as method A except using present plans of respondents to retire and adjusting incomes to $10,000.

F. Same as method E except adjusting acreages to a

size likely to produce a $10,000 gross income.

G. Same as method A except using respondents'
plans for retirement.

Certain figures were constant in each method where
these factors were projected. They were death rate 12.8
farms, change of occupations 19 farms, and consolidation
55.3 farms. The 5 per cent death rate as used by Clover
and Ganzel was used in this study because accurate local
figures were not available. This figure applied to the
total number of farms in the district (255 x .05) equals
12.8 farms that will become available from deaths in the
ten year period. Seven and three tenths per cent of the
farmers indicated that they will change occupations within
the next decade. This figure applied to the number of
farms in the district was assumed to mean that 19 farms
would become available from farmers changing occupations
per decade. The consolidation rate of the farms in Jackson
County during the period covered from the 1950 Census of
Agriculture was 21.7 per cent. It was assumed, for the
purposes of the study, that this rate of consolidation
would continue during the following ten years. However, it
was the author's opinion that this rate would decrease
somewhat in the next decade. Figuring at the constant rate
for this study would cause 55.3 farms to disappear because
of consolidation.

Descriptions and limitations of each method were as
follows:

Method A. Simple projection of death, retirement,
change of occupations and consolidation rates: This method
was used because it has been used in other studies and
accepted as a standard and reliable method. It also served
as a guide for comparison with the other methods.

The constant figures of death, retirement and change
of occupation rates were applied to the number of farmers
in the district to determine the number of farms likely to
become available. The number of farms lost by the rate of
consolidation was subtracted from this figure. The remain-
der was the number of farms available for new operators.

The 5 per cent death rate per decade applied to 255
farmers yielded 12.8 farms available for new operators.
Eighteen and six tenths farms (255 times the rate .073)
would become available from change of occupations. Other
studies indicated that 20 per cent of the farmers would
retire during a decade. When this figure was applied to
the total number of farmers in the district (255 x .20),
another 51.0 farms would become available for new operators.
By adding 12.8 farms by death, 18.6 by migration, and 51.0
by retirement a total of 82.4 farms would likely become
available for new operators. Farms consolidated at the
rate of 21.7 per cent or 55.3 farms per decade. Subtracting

55.3 from 82.8 resulted in 27.1 farming units to become
available for new operators. This yielded less than two
farming units per year during the 1965 to 1975 period.
See Table XI.

TABLE XI

NUMBER OF FARMS TO BECOME AVAILABLE DURING
THE PERIOD 1965-1975, METHOD A

Cause for availability	Number of farms
Death	12.8
Retirement	51.0
Migration	18.6
Total farms to become available	82.4
Loss of farms due to consolidation	55.3
Farms available to new operators	27.1

It was felt by the writer that this method of deter-
mining the number of farming opportunities could be criti-
cized because every farming unit released could not be con-
sidered a farming opportunity because it would not yield a
satisfactory income. However, by using the consolidation
factor the results were believed to be fairly accurate.

Method B. Consolidating farms into economic classes
producing gross incomes of $10,000 or more. This method
was used to adjust all available farms into farming oppor-
tunities with satisfactory incomes.

Those farming units grossing less than ₊10,000 were consolidated into units capable of producing $10,000 gross incomes. This was done by determining the percentage of farms in each economic class as reported by the 1959 Census of Agriculture. These percentages were applied to the number of farms in the district to determine the number of farms in each economic class. The midpoint income of each class was assumed and multiplied by the number of farms in each class then divided by $10,000 to give the number of farms likely to produce satisfactory incomes. The factors of death, change of occupation and retirement rates were then applied to determine the number of satisfactory farming opportunities to become available. It was assumed that most consolidation would be of farms with incomes of less than $10,000. The constant consolidation rate was therefore not used.

The 1959 Census of Agriculture classified all commercial farms into the following economic classes on the basis of the total value of all farms products sold: class I $40,000 and over; class II $20,000 to $39,000; class III $10,000 to $19,999; class IV $5,000 to $9,999; class V $2,000 to $4,999 and Class VI $50 to $2,499.

The percentages of farms by economic class in Jackson County according to the 1959 Census of Agriculture were as shown in Table XII.

TABLE XII

PERCENTAGES OF JACKSON COUNTY FARMS BY
ECONOMIC CLASSES

Per cent	Class	Gross income
7.8	I and II	Over $20,000
21.8	III	Between $10,000 and 19,999
30.2	IV	Between $ 5,000 and 9,999
25.1	V	Between $ 2,500 and 4,999
15.1	VI	Between $ 50 and 2,499

The number of opportunities that would become available was determined by applying county percentages in the various economic class farms to the Holton Unified School District farms, thus determining the number of farms in each economic class. The midpoint of each class was considered the average gross income of the class (Table XIII). Classes I, II and III were combined because they all returned more than $10,000. That was considered to be a satisfactory gross income.

The midpoint gross income was multiplied by the number of farms in each class and then divided by $10,000 to determine the number of units capable of producing gross incomes of $10,000.

```
Class I, II and III farms $10,000/$10,000 x 75   = 75.  farms
Class IV farms             7,500/ 10,000 x 77   = 57.9 farms
Class V farms              3,750/ 10,000 x 64   = 24.2 farms
Class VI farms             1,275/ 10,000 x 38.5 =  4.9 farms
                                                   ─────
     Total number of farms adjusted to yield
                              $10,000 incomes    162.0
```

TABLE XIII

HOLTON UNIFIED SCHOOL DISTRICT FARMS BY ECONOMIC CLASSES

Economic class	Number of farms	Gross income midpoint
I, II and III	75	Over $10,000
IV	77	7,500
V	64	3,750
VI	38.5	1,275
Current total	179	

If these farms were to become economical units 93 farms (255 - 162) would have to be vacated. By applying the factor of 32.3 per cent for death, retirement and change of occupation 82.4 farms would become available. This left a deficit of 10.6 operators.

It was the belief of the writer the reliability of this method might be questioned because the incomes of many of the older farmers, as shown in Table V, was short of what the land was capable of producing. Converting these incomes to $10,000 did not show a true picture of land productivity. Many of the older operators had retired on the farm and only produced enough to occupy their time and meet current expenses. Their incomes were obviously supplemented by savings and social security.

Method C. Local farmers willing to help finance young men. This method was used to determine if it were true that "One must inherit or marry a farm to become

established in farming." The method was simply a tabulation of the replies of the respondents.

Forty-five and eight tenths farmers reported that they would help finance a young man to become established in farming. Fifty-six and three tenths of these grossed more than $10,000 and all of those under this figure had additional income from off-farm jobs. It was felt that this figure was conservative because of the conservative nature of the farmers in this district and lack of familiarity with partnership operations. An additional 51.5 farmers indicated they were willing to enter a partnership with a young farmer.

It was concluded by the writer that these findings refute the belief that "One must inherit or marry a farm to become established in farming."

Method D. Projection of death, retirement at age 65, change of occupations and consolidation of the area. This method was used in an effort to determine the number of farms becoming available for new operators assuming retirement at age 65. Since farmers were covered by social security there was not the need for a farmer to continue his operation to provide a sole means of living. The constant figures of death and change of occupation intentions, along with retirement of district farmers at age 65, were applied to the number of farmers in the school district to

determine the number of farms likely to become available.
The number of farms lost by consolidation was then sub-
tracted. This left the number of farms available for new
operators.

The death rate, 5 per cent, of the 255 farmers in
the district yielded 12.8 farms. It was assumed that every
farmer will retire when he reaches the age of 65. There
were 87 farmers that were or will be 65 years of age by
1975, thus leaving 87 farms available. Eighteen and six
tenths farmers reported plans to change occupations. The
total number of farms that will become available from
death is 12.8, from retirement is 87, and from changing
occupations 18.6, a total of 118.4 farms. These 118.4
farms less 55.3 farms lost by consolidation netted 63.1
farming opportunities (Table XIV) available for new opera-
tors within a ten year period, more than six farms a year.

TABLE XIV

NUMBER OF FARMING OPPORTUNITIES LIKELY TO BECOME
AVAILABLE BY RETIREMENT AT AGE 65, METHOD D

Cause for availability	Number of farms
Death	12.8
Retirement at age 65	87.0
Change of occupation	18.6
Total farms to become available	118.4
Loss of farms due to consolidation	55.3
Farms available to new operators	63.1

This method was limited because the farmers in the district had not been retiring at the age of 65.

Method E. Using retirement and change of occupation intentions and constant death rate of farmers with incomes adjusted to $10,000. This method was used because it adjusted all farming units that become available to a satisfactory farming opportunity. It was similar to method B except the gross incomes of the respondents' farms were used instead of converting the farms into various economic classes. The lower income farms were consolidated into $10,000 farms by multiplying the gross income midpoint by the number of farms in that group and then dividing by $10,000. The factor of death, change of occupation and retirement intentions were applied to these farms to determine the number of satisfactory farming opportunities to become available.

The gross incomes of 90.1 respondents who intend to retire within the period 1965 to 1975 multiplied by their gross income midpoint gave the total gross income of the group. This figure divided by $10,000 gave the number of farms with a minimum satisfactory income within that group. See Table XV. Thirty-nine and three tenths farms will become available by retirement. The gross incomes of 18.6 respondents who planned to change occupations multiplied by their gross income midpoints and this figure divided by

TABLE XV

NUMBER OF FARMING OPPORTUNITIES LIKELY TO BECOME
AVAILABLE ADJUSTED TO $10,000 GROSS INCOME,
METHOD E

Number of farms	Gross income groups in relationship to $10,000	Available farms
Retirement		
10.0	$ 1,750/$10,000	1.8
30.0	3,750/ 10,000	11.3
14.3	6,250/ 10,000	8.9
12.9	8,750/ 10,000	11.3
22.9	10,000/ 10,000	22.9
90.1		56.2
Change of occupation		
5.7	$ 1,750/$10,000	1.0
5.7	3,750/ 10,000	2.1
1.4	6,250/ 10,000	.9
2.9	8,750/ 10,000	2.5
2.9	10,000/ 10,000	2.9
18.6		9.4
From death		
12.8	$ 8,787/$10,000	11.2
121.5	Total number of farms available	76.8

$10,000 showed the equivalent of 9.4 satisfactory income
farms will become available. Using the respondents' average
income of $8,787 multiplied by the number of farmers
expected to die within ten years (12.8), resulted in 11.2
farms of satisfactory income. Totaling 56.2 farms avail-
able by retirement, 9.4 farms available from change of

occupations and 11.2 farms available because of death
yielded 76.8 farms that will become available. See Table XV.
The combining into $10,000 units was in lieu of using the
constant consolidation rate. This method consolidated the
farms at the rate of 36.7 per cent instead of the constant
21.7 per cent factor used in the previous methods.

Method F. Retirement and change of occupation inten-
tions and death rate of farmers with acreages adjusted to
size of operation to yield at least a $10,000 gross income.
The study showed (Section three of these findings) that a
farm of 360 acres could be expected to return a $10,000
gross income.

The number of farms that were to become available
from retirement plans and change of occupation that did not
have a reasonable chance of grossing $10,000 were consoli-
dated into farms of 360 acres. This was done by multiply-
ing the midpoint size of the various size groups by the
number of farms in the group and then dividing by 360 acres.
Each farming unit over 360 acres was left as a farming unit.

Ninety respondents indicated intentions of retiring.
Twenty-seven and one tenth of these farmers controlled more
than the 360 acre minimum and were considered to be suit-
able farming opportunities. The remaining 62.9 farms con-
tained less than 360 acres and the midpoints of the vari-
ous size groups were multiplied by the number of farms in

each group (See Table XVI). These 90 operators that planned
to retire yielded a total of 58.5 suitable farming oppor-
tunities of at least 360 acres.

TABLE XVI

NUMBER OF FARMING OPPORTUNITIES LIKELY TO BECOME
AVAILABLE BY ACRES ADJUSTED TO A $10,000 GROSS
INCOME, METHOD F

Number of farms	Acreage adjusted in relationship to 360 acres	Farms available
Retirement		
27.1	More than 360	27.1
1.4	1.4 x 340/360	1.3
17.2	17.2 x 280/360	13.3
15.7	15.7 x 200/360	8.7
21.4	21.4 x 120/360	7.2
7.2	7.2 x 40/360	.9
90.0		58.5
Change of occupation		
1.4	More than 360	1.4
4.4	4.4 x 280/360	3.4
5.7	5.7 x 200/360	3.1
5.7	5.7 x 120/360	1.9
1.4	1.4 x 40/360	.2
18.6		10.0
Death		
12.8	12.8 x 345.2/360	12.3
120.4	Total number of farms available	80.8

Eighteen and six tenths respondents planned to change occupations. Only one and four tenths of these operated more than 360 acres. The other 17.2 operated a total of 3,344 acres which is 9 farms when divided by 360 acres. This represents 10 farms of satisfactory size realized from the farmers who planned to change occupations.

12.8 farms will become available by death at the constant rate. It was assumed that these farms were average size, 345.2 acres. These farms were the equivalent of (12.8 x 345.2/360) 12.3 satisfactory farms.

Fifty-eight and five tenths farms were available by retirement, 10 by change of occupations and 12.3 from death for a total of 80.8 farms available to new operators. See Table XVI.

This method showed that 8 farms a year would become available. It would be possible to have a larger number of farming opportunities because 6 farmers, as shown in Table IX, had the managerial ability to produce a $10,000 gross income on less than 320 acres.

Method G. Projection of death, present plans of Holton Unified School District farmers to retire, change of occupations and the consolidation rate. This method was used because it seemed logical that local figures and plans would be most accurate. The present plans for retirement and change of occupations were secured from the farmers of

the patronage area. The standard death rate was applied to
the number of farmers in the area. These factors were
added together to determine the number of farms available.
The rate of consolidation was subtracted from this total
leaving the number of farming opportunities likely to
become available.

The normal death rate, 5 per cent, of the 255 farmers
in the district will yield 12.8 farms. There were 90.1
farmers that planned to retire before 1975, thus leaving
90.1 farms for new operators. Eighteen and six tenths
farmers reported plans to change occupations. The total
number of farms expected to become available from death
was 12.8, from retirement 90.1, and from change of occupa-
tion 18.6, a total of 121.5 farms. These 121.5 farms less
55.3 (21.7 per cent x 255 farms) lost by consolidation left
66.2 farms (Table XVII) available to new operators within
a ten year period, over six and one half a year.

The weakest point of this method was the fact that
each farm that becomes available may not be a farming oppor-
tunity because it would not yield a satisfactory income.
The consolidation rate would increase the size of the farm
and also the size of the gross income.

Summary: The number of farms that are expected to
become available during the period 1965 to 1975 for new
operators by the various methods are shown in Table XVIII.

TABLE XVII

NUMBER OF FARMING OPPORTUNITIES LIKELY TO BECOME
AVAILABLE BY PRESENT PLANS OF FARMERS FOR
RETIREMENT, METHOD G

Cause for availability	Number of farms
Present plans for farmers to retire	90.1
Change of occupation	18.6
Death	12.8
Total farms to become available	121.5
Loss of farms due to consolidation	55.3
Farms available to new operators	66.2

TABLE XVIII

COMPARISON OF FARMING OPPORTUNITIES BY VARIOUS METHODS

Method	Available farms
A	27.1
B	-10.6
C	45.8
D	63.1
E	76.8
F	80.8
G	66.2

All seven methods used to project possible farming
opportunities in this study had advantages and disadvan-
tages. Undoubtedly, the methods that used local conditions
and adjusted the gross incomes to a minimum of $10,000
were the ones believed to be the most accurate and reliable.
Method G using the standard projection of death, present

plans of the Holton area farmers to retire and change occupations and then consolidating the farms at the rate found in Jackson County, was believed to be the most accurate because it involved local figures and intentions. Also, it was between those found to be too low and those estimated to be too high.

The average number of opportunities expected to become available from the seven methods was 49.9 per decade or nearly five per year.

Acreage and Enterprise Combinations Yielding Satisfactory Income Level

The third and fourth factors that were considered in this study were acreages required for a satisfactory level of living and farming enterprises or combination of enterprises in the area most likely to provide desirable levels of income. These factors were analyzed and are reported in this section.

Acres required to return a satisfactory level of income. Three different methods were used to determine the acres required to yield a $10,000 gross income: a) a projection of Jackson County census statistics, b) total acres farmed by respondents in the Holton Unified School District that provided this level of income and c) total tillable

acres farmed by Holton area farmers that had provided this income.

(a) A projection of Jackson County census statistics: The average gross income per farm was $5,984. The average size farm was 256.9 acres. The average gross income divided by the average size of farm gave the average gross return of $23.24 per acre. Ten thousand dollars divided by the average per acre income of $23.24 equaled 431.5 acres required to produce a minimum income likely to result in a satisfactory level of living. It was to be pointed out that Jackson County farm land varied widely in type and type vegetation, from intensive cultivated crops to strictly range conditions.

A projection of Holton Unified School District farmers' statistics: The average gross income per farm in the area surveyed was $8,787. The average size farm was 345 acres. The average gross income divided by the average size of farm gave the average gross return of $25.47 per acre, $2.23 per acre more than the county average. Ten thousand dollars divided by the average per acre income of $25.47 equaled 392.6 acres required to produce a minimum income likely to result in a satisfactory level of living. This was nearly 40 acres less than is required by the average Jackson County farmer.

(b) Total acres farmed by respondents in the Holton

Unified School District that provided $10,000 gross income:
Data pertaining to acres farmed showed that the odds were
against units smaller than 240 acres yielding a gross in-
come of at least $10,000. However, 6 farmers or 29.4 per
cent of those who reported operations of 241 to 320 acres
grossed $10,000 (Table IX). Figure 1 shows that 21.1 per
cent of those farmers with operations of 241 to 400 acres
grossed $10,000. Sixty-seven and nine tenths per cent of
those farmers with operations of 401 to 600 acres grossed
a satisfactory income. All farmers in this study that had
operations exceeding 601 acres grossed at least $10,000.

(c) Total tillable acres farmed by respondents in
the Holton Unified School District that provided $10,000
gross income: Figure 2 shows that the number of tillable
acres a farmer operated affected his gross income. None
of the operators with 80 or less tillable acres grossed as
much as $10,000. The percentage of farmers grossing over
$10,000 was the same, 54.5, for the group 241 to 320 till-
able acres and the group that had 321 to 400 tillable acres.
All operators farming 401 or more tillable acres had gross
incomes of $10,000 and higher.

Using average Jackson County figures, 431.5 acres
were required for a farm to be expected to yield a $10,000
gross income. Using average Holton Unified School District
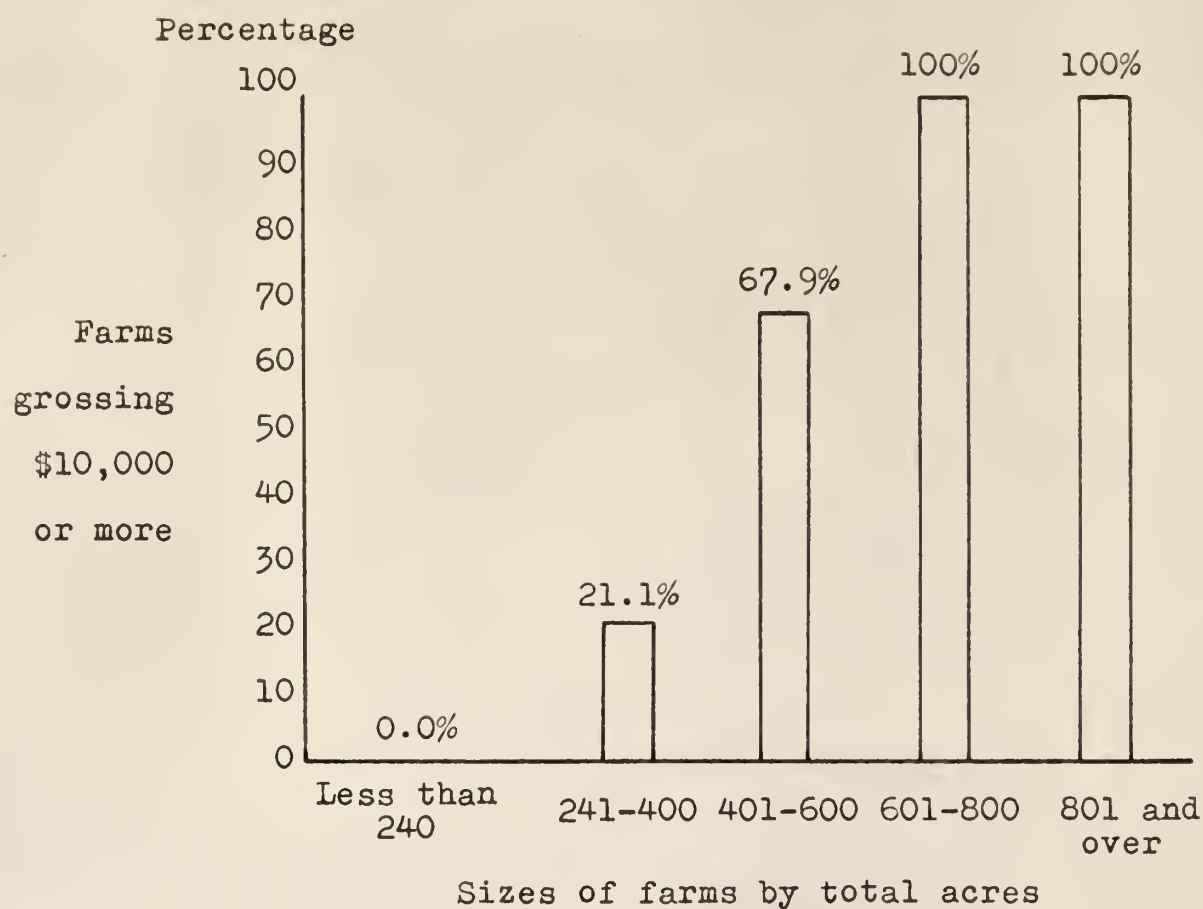respondents' figures, 392.6 acres were required for a farm

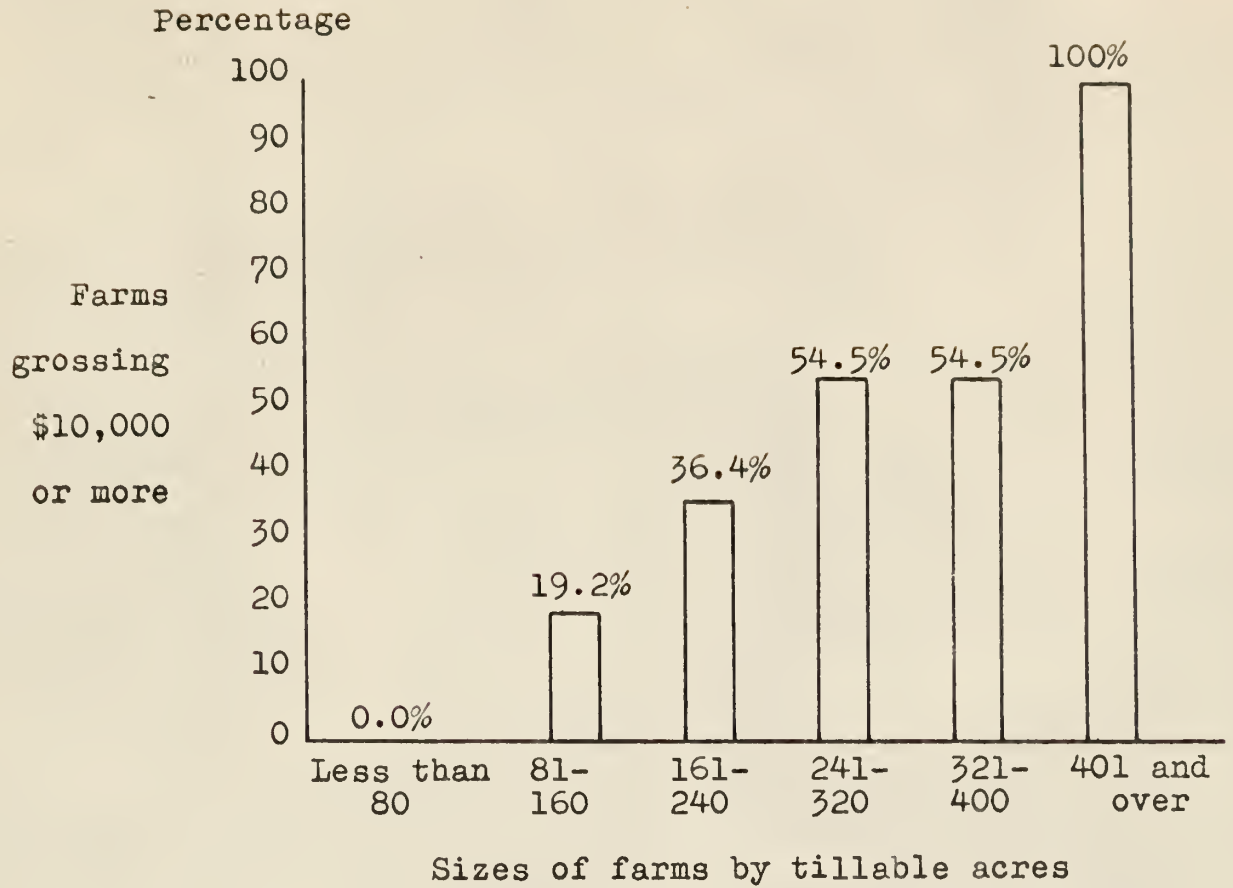Figure 1. Percentages of farms yielding $10,000 gross incomes by size categories in total acres.

Figure 2. Percentages of farms yielding $10,000 gross incomes by size categories in tillable acres.

to be expected to yield a $10,000 gross income. Generally, between 321 and 480 total acres and between 241 and 400 acres of tillable land were required for respondent to report a $10,000 gross income.

Based on the above information, it was the belief of the author, that a farm of 360 acres in the Holton Unified School District might reasonably be expected to yield a satisfactory level of income.

Farming enterprises or combination of enterprises in the area which are most likely to provide a desirable income level. There were many possible combinations of livestock produced in the area. The beef herd operation seemed to be by far the most popular.

Swine (sow and litter). The raising of hogs was not the most important livestock enterprise in the Holton area. Twenty-eight and five tenths of the farmers had sow and litter operations. Thirty-seven and three tenths of these grossed over $10,000. Figure 3 shows, with the exception of one farmer in the 41 to 50 group, that all operators with 31 or more litters per year grossed $10,000 or more.

Swine (feeder pigs). Thirty-seven and four tenths of the farmers in the district fed out hogs. Forty-one and eight tenths of these grossed $10,000 or more, slightly
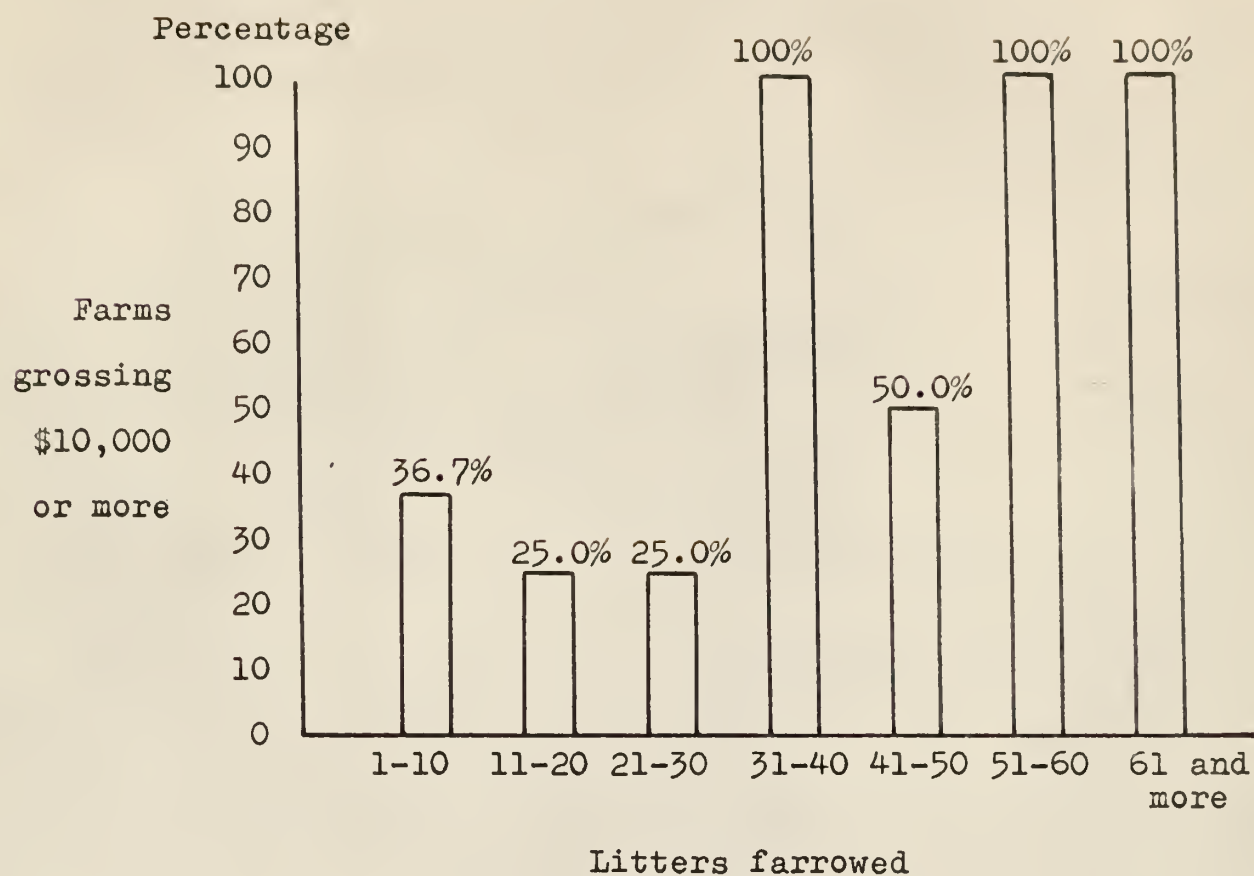
Figure 3. Number of litters farrowed in relation to percentage grossing $10,000.

better than those that raised pigs. There was no sharp line separating the various size operations, even 17.3 per cent of those with 1 to 40 feeder pigs grossed at least $10,000 (Figure 4). Only one farmer did not gross over $10,000 of those that fed 161 or more pigs.

Beef (breeding). Beef breeding cattle was the most frequently reported livestock enterprise in the Holton Unified School District. Eighty-one per cent of the respondents reported beef cows as one of their livestock enterprises, 34.5 per cent of these grossed $10,000 or more. The size of beef cow operation had a definite affect on the per cent of operations that grossed over $10,000 (Figure 5). All operations of 61 or more beef cows had gross incomes of $10,000 or more. The average size operation using the midpoints of the various groups was 31.6 head.

Beef (fattening). Forty-two and five tenths per cent of all farmers in the Holton district fed cattle, 47.4 of these grossed $10,000 or more. The number of beef animals fed had a direct affect on the per cent of operations that grossed $10,000 or more (Figure 6). Fifty-nine and two tenths per cent of the farmers handled 25 or less animals. All farms with 76 or more fattening animals grossed $10,000 or more. The average number of animals fed was 36.7 by using the midpoints of the various size groups.
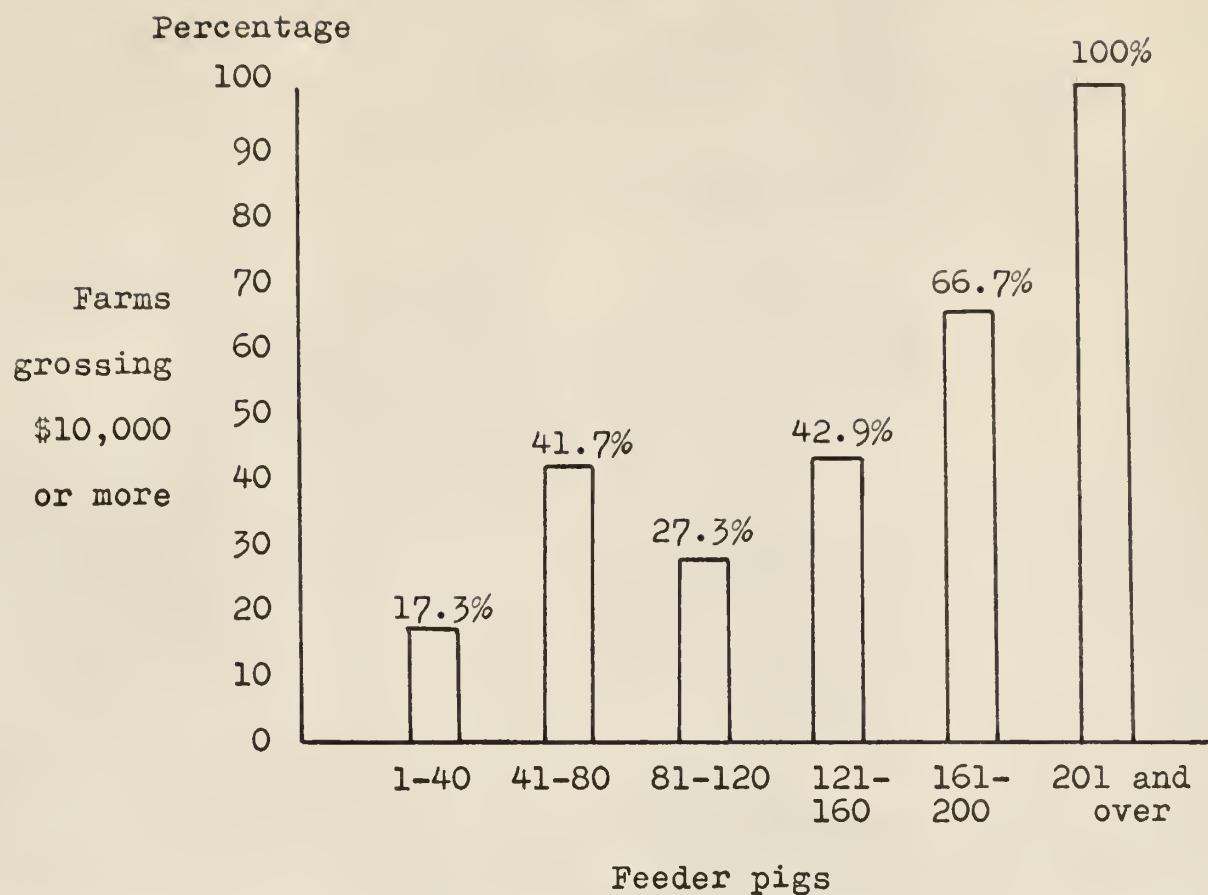
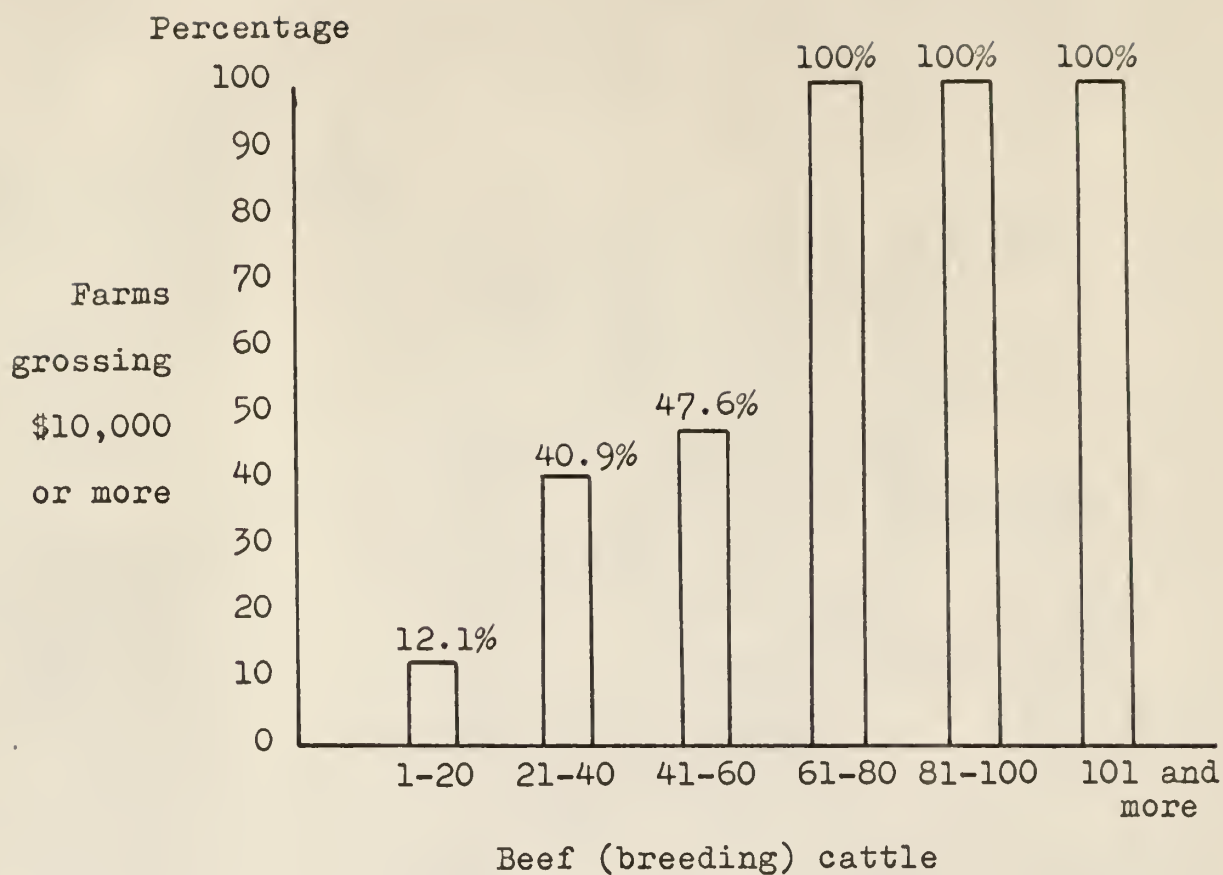Figure 4. Percentages of various size feeder pig operations grossing incomes of $10,000.

Figure 5. Size of beef cow operations in relation to the
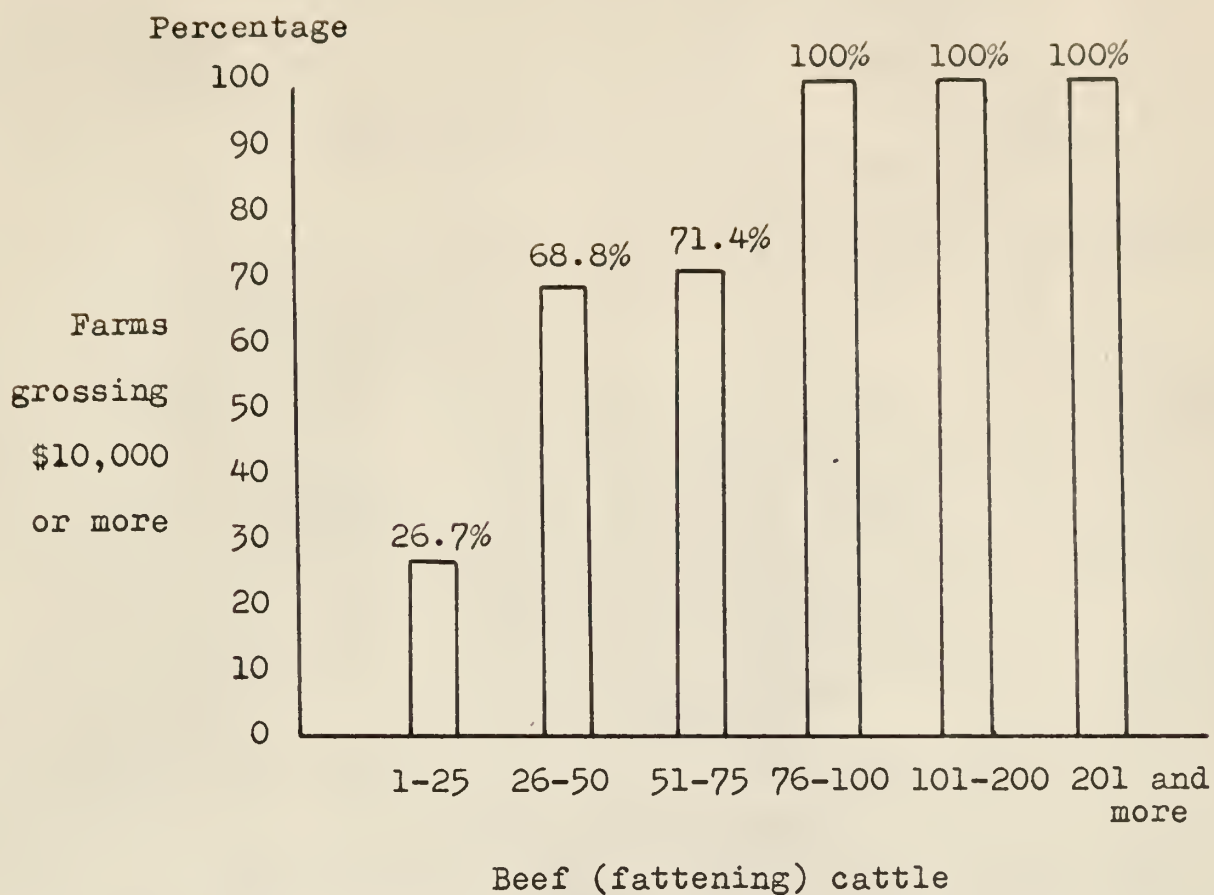   percentage yielding a $10,000 gross income.

Figure 6. Sizes of feeder cattle operations in relation to
the percentage yielding a $10,000 gross income.

Dairy. Twenty-five and one tenth per cent of the farmers were found to have dairy cows. Seventy-five and six tenths of these handled 10 or less. However, 44.4 per cent of those with dairy grossed $10,000 or more. All operations of 31 or more dairy cows grossed $10,000 or more. The average number of dairy cows per farm was 9.8 head.

Sheep. Six and one tenth per cent of the operators reported sheep as one of their livestock operations. However, 54.5 per cent of these had gross incomes in excess of $10,000. This was the highest of any of the other livestock enterprises. The average number of ewes handled was 49.5 head.

Summary: The number of operators handling the various classes of livestock and the per cent of those that grossed $10,000 or more is shown in Table XIX. Nine and one tenth per cent of the farmers that did not have livestock grossed $10,000 or more.

There was no attempt made in this study to determine which combination or combinations of livestock enterprises would be required to produce a satisfactory level of income. It was impossible to state an exact number of livestock required to produce a $10,000 gross income because of the many combinations of livestock and land possible.

TABLE XIX

A COMPARISON OF FARMS WITH VARIOUS LIVESTOCK ENTERPRISES AND PER CENT GROSSING $10,000

Livestock enterprise	Per cent of farmers having enterprise	Per cent of farmers having enterprise grossing $10,000
Beef breeding cows	81.0	34.5
Beef fattening	42.5	47.4
Sow and litters	28.5	37.3
Feeder hogs	37.4	41.8
Dairy cows	25.1	44.4
Sheep	6.1	54.5
No livestock	6.1	9.1

CONCLUSIONS

Based upon the findings of this study it was concluded that:

1. An average of five to six or more farming opportunities were likely to become available each year.

2. If Holton High School continues to train boys in vocational agriculture at the rate of the preceding ten years, a farming opportunity should be available for those boys trained in vocational agriculture that desire them.

3. A farming opportunity was not solely dependent upon the amount of land or livestock but upon the management by the individual. Therefore the potential number of farming opportunities is greater than that indicated in either method.

IMPLICATIONS

Based upon the findings of this study, the following implications were drawn:

1. Instructors of vocational agriculture could and should secure reliable information about the farming opportunities in their communities by ascertaining plans of farmers as revealed through their responses to these questions: "When do you plan to retire?" and "Do you plan to change occupations in the next ten years?"

2.   Vocational agriculture should keep as one of its major objectives the establishment of young men in farming.

3.   An effort should be made to bring together those farmers that wish to retire and young men that want to farm.

4.   Contact should be kept with those boys that have graduated with vocational agriculture training so after additional training or military service has been acquired, farming opportunities may be located.

5.   Plans for turning farming operations over to someone else should be studied at adult farmer meetings.

6.   Vocational agriculture in high school should emphasize the management aspect of farming.

7.   The production and management of livestock should be stressed in all classes--high school, young farmers and adult.

BIBLIOGRAPHY

BIBLIOGRAPHY

Acker, Duane C. "For Young Men Planning to Farm," Iowa Farm Science, 15:11-12, August, 1960.

Anderson, Arlynn D. "Opportunities for Entry into Farming." Master's Report, August, 1964, Colorado State University.

Anibal, John D. "How Fifty Young Farmers Became Established in Farming in Lenawee County Michigan, 1939-54." Thesis, M. S., Michigan State University, 1955. In: Summaries. Vocational Division Bulletin No. 265, Supplement No. 10, 1957, p. 7.

Blake, Duane L. "Influence of High School Vocational Agriculture on the Rate of Establishment of Graduates in Farming." Thesis, M. S., Iowa State University, 1956.

Bradley, Howard R. "Occupational Status of the 1959 Kansas High School Graduates Majoring in Vocational Agriculture." Non-thesis Study, Kansas State University, 1964.

Brimm, J. W. "Determining the Replacement Needs for Farmers in the State and Counties of Tennessee." Research Problem, M. S., The University of Tennessee, 1953. In: Summaries. Vocational Division Bulletin No. 256, Supplement No. 8, 1955, p. 14.

Bullard, Amos Gentry. "A Study of the Farm Boys and the Opportunities for Placement in Farming in the Patronage Area of Bethel High School." Thesis, M. S., The University of North Carolina, 1941. In: Summaries. Vocational Division Bulletin No. 237, Supplement No. 2, 1948, p. 14.

Burchinal, Lee G. "Who's Going to Farm?" Iowa Farm Science. 14:12-15, April, 1960.

Burkett, Lowell A. "Trends in Voc-Ag Training," The Agricultural Leaders Digest, 40:13, February, 1959.

Byram, John T. "Entry Opportunities into Farming." Master's Report, M. S., Iowa State University, July, 1962.

Carpenter, Earl T. "A Projection of Farming Opportunities in Missouri to 1975." Thesis, Ed. D., The University of Missouri, 1960. In: Summaries. Vocational Division Bulletin No. 291, Supplement No. 14, 1961, p. 10.

Cassidy, John Franklin. "An Occupational Study of Former Students of Vocational Agriculture of Witton High School from 1936 to 1952." Research Problem, M. of Ag. Ed., North Carolina State College, 1954. In: Summaries. Vocational Division Bulletin No. 263, Supplement No. 9, 1956, p. 17.

Clover, Everett L. "Opportunities for Establishment of Young Farmers in Farming in the Webster City Community School District." Thesis, M. S., Iowa State University, 1961.

Crawford, Harold R. (compiler). "Occupational Record of Vo Ag Graduates for the Ten Years 1943-52." Sac City, Iowa, 1959.

Dobervich, Sam. "Problems Encountered in Becoming Established in Farming by Young Men in Vocational Agriculture." Thesis, M. S., Iowa State University, 1940. In: Summaries. Vocational Division Bulletin No. 180, Supplement No. 1, 1943, p. 52.

Ganzel, Ronald W. "Farming Opportunities Expected to Become Available in the Pawnee City School Patronage Area from 1963 to 1973." Thesis, M. S., University of Nebraska, 1964.

Garvey, Thomas Joseph. "An Analysis of the Problems Involved in Becoming Established in Farming in Racine and Kenosha Counties in Wisconsin." Master's Problem, M.S. The University of Wisconsin, 1954. In: Summaries. Vocational Division Bulletin No. 282, Supplement No. 13, 1960, p. 8.

Gunn, Lawrence Jennings. "A Survey of Opportunities in Agriculture and Related Fields in North Carolina." Thesis, M. Agr. Ed., North Carolina State College, 1950. In: Summaries. Bulletin No. 248, Supplement No. 5, 1952, p. 21.

Halcrow, Harold G. Agricultural Policy of the United States. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1953.

Heady, Earl O. Nature of the Agricultural Adjustment
    Problem. In Iowa Agricultural Experiment Station
    Report 20:17-21, October, 1957.

Heady, Earl O., and Randall A. Hoffman. "What Happens
    When Farms Consolidate?," Iowa Farm Science, 15:13-15,
    February, 1961.

Henderson, Earl M. "Influences of High School Vocational
    Agriculture on the Establishment of Graduates in
    Farming." Thesis, M. S., Iowa State University, 1956.

Henry, Cyrus James. "Placement Opportunities for Farm
    Operators in the San Carlos Irrigation and Drainage
    District, Pinal County, Arizona." Master's Problem,
    M. Ag. Ed., University of Arizona, 1960. In: Sum-
    maries. Vocational Division Bulletin No. 300,
    Supplement No. 15, 1962, p. 22.

Holton High School. Office Files. Holton, Kansas.

Joslin, Kenneth H. "Factors Affecting Future Farming
    Opportunities." Thesis, M. S., Iowa State University,
    1958.

Kirk, William Edwin. "Opportunities for Establishment and
    Placement in Farming in the Wytheville Magisterial
    District (Virginia)." Thesis, M. S., Virginia Poly-
    technic Institute, 1951. In: Summaries. Vocational
    Division Bulletin No. 248, Supplement No. 5, 1952,
    p. 30.

Lewis, Glenn W. "Factors That Influence the Establishment
    of Vocational Agriculture Graduates in Talbott County,
    Maryland." Thesis, M. S., The University of Maryland,
    1954. In: Summaries. Vocational Division Bulletin
    No. 256, Supplement No. 8, 1955, p. 58.

McProud, Gene Elbert. "A Survey of the Troy, Idaho, High
    School Area for the Purpose of Determining Possibili-
    ties for Placement in Farming of Part-Time Students."
    Thesis, M. S., The University of Idaho, 1940. In:
    Summaries. Vocational Division Bulletin No. 237,
    Supplement No. 2, 1948, p. 70.

Miller, Harry T. "A Study of Farm Placement Opportunities
    in the Fairfield Joint School Area, Fairfield, Penn-
    sylvania." Non-thesis Study, University of Maryland,
    1951. In: Summaries. Vocational Division Bulletin
    No. 248, Supplement No. 5, 1952, p. 30.

Nylund, Felix Alexander. "The Discovery and Analysis of the Opportunities in Farming and Related Occupations for Former Students of Vocational Agriculture." Thesis, Ph. D., Cornell University, 1946. In: Summaries. Vocational Division Bulletin No. 237, Supplement No. 2, 1948, p. 78.

"Occupational Record of Vocational Agriculture Graduates; Ten Year Period, 1943-52." (Mimeographed.) Iowa Vocational Agriculture Teachers Association Annual Report, 1960-61: (15-17), 1960.

Recommendations to the State Superintendent of Public Instruction of Proposed Unified Districts in Jackson County Planning Unit. Form U 109, Jackson County, Kansas. (Mimeographed.)

Smith, Glenn Edward. "How Young Men Became Established in Farming in the Gap Mills Area." Problem, M. S., West Virginia University, 1954. In: Summaries. Vocational Division Bulletin No. 263, Supplement No. 9, 1956, p. 70.

Swanson, Robert M. "Opportunities for Establishment of Young Farmers in the Merengo, Iowa Community." Thesis, M. S., Iowa State University, 1961.

Tolbert, Ralph Harmon. "A Study of the Rate of Replacement of Farmers in Georgia." Thesis, M. Ed., University of Georgia. In: Summaries. Vocational Division Bulletin No. 237, Supplement No. 2, 1948, p. 103.

United States Department of Agriculture. A Place to Live. The Yearbook of Agriculture: 1963. Washington: Government Printing Office.

United States Department of Agriculture. Farmer's World. The Yearbook of Agriculture: 1964. Washington: Government Printing Office.

United States Department of Commerce. Bureau of Census. 1959. Census of Agriculture. Kansas. Vol. I, Counties, Part 21, 1961.

Walton, L. V. "Vocational Agriculture at the Crossroads," The Agriculture Education Magazine, 31:28-30, August, 1958.

Worthington, John L. "Determining the Number of Opportunities for Youth to Enter Farming in Each of Ohio's Counties." Non-thesis, Ohio State University, 1956. In: Summaries. Vocational Division Bulletin No. 265, Supplement No. 10, 1957, p. 90.

APPENDIX
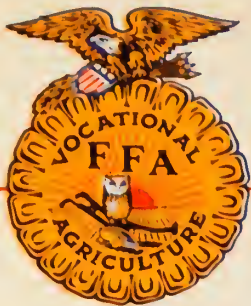
Future Farmers of America

THE NATIONAL ORGANIZATION FOR BOYS STUDYING VOCATIONAL AGRICULTURE

HOLTON FFA CHAPTER
ROLAND FLORY, ADVISOR
HOLTON, KANSAS

December 17, 1964

Dear Sir:

Would you be a part of a very important research study? I am conducting
a survey to determine if, when, and how much farm ground will be avail-
able for young farmers who may wish to enter farming in the new Holton
Unified School District. This study is necessary for the writer to com-
plete the master of science degree in agriculture education.

All farm operators who are farming any amount of ground in the Holton
Unified School District are being asked to complete and return the en-
closed questionnaire. If you are not farming any ground in this dis-
trict, please return the questionnaire unanswered with a note stating
the reason. I would sincerely appreciate your help.

It is evident that if this study is to be of value, all operators will
need to return the survey form. This information will be held in strict
confidence and the questionnaire need not be signed. Please fill out
the questionnaire at your earliest convenience, and return it in the
self-addressed, stamped envelope.

Sincerely yours,

Roland Flory
Vocational Agriculture Instructor
Holton High School

SURVEY TO DETERMINE FARMING OPPORTUNITIES FOR YOUNG MEN
IN THE HOLTON UNIFIED SCHOOL DISTRICT

1. Age _____ Township in which you live _____

   Married: Yes ___ No ___ Number of children: Boys ___

             Girls ___

2. Do you live within the boundary of the new Holton Unified

   School District? ___ Yes ___ No

3. Farming status and total number of acres farmed:

   Owned ___acres   Partnership ___acres   Rented ___ acres

4. How many of the above total acres are located in the

   unified district? _____ acres

5. Total tillable acres:

   Owned ___acres   Partnership ___acres   Rented ___acres

6. Of the land you own:

   a) When was it purchased or acquired? _____

   b) How was it financed? Gift _____ Cash _____ Credit ___

   c) If credit, what was the source?

       Family ___ Private ___ Commercial firms ___

       Other _____

7. If you rent ground, how many different owners are

   involved? _____ Owners

   Type agreement: Cash ___ Crop share ___ Other ___

8. Please indicate the number of animals handled each year:

   Beef cows: 1-20 21-40 41-60 61-80 81-100 101 or more

Beef fattening: 1-25   26-50   51-75   76-100   101-200

201 or more

Dairy cows milked: 1-10   11-20   21-30   31-40   41-50

51 or more

Ewes: 1-10   11-20   21-30   31-40   41-50   51-60   61-70

71 or more

Litters of Swine: 1-10   11-20   21-30   31-40   41-50

51-60   61 or more

Feeder pigs fattened: 1-40   41-80   81-120   121-160

161-200   201 or more

9. Is your wife employed?

Full time . . . Yes ___   No ___

Part time . . . Yes ___   No ___

10. Are you employed off the farm?

Yes ___   No ___

11. If employed off the farm, encircle the average hours
worked per week in off-farm employment:

1-10   11-20   21-30   31-40   41-50   51-60

12. If employed off the farm, encircle the weeks per year
worked in off-farm employment:

0-8   9-17   18-26   27-35   36-44   45-52

13. Do you plan to continue off-farm employment if now so
employed?

Yes ___   No ___

14. Circle the amount of additional family income which you
and your wife earn each year that is derived from
off-farm work:

Less than $100 $101-500 $501-1,000 $1,001-2,000

$2,001-3,000 $3,001-4,000 $4,001-5,000   over $5,000

15. Describe the nature of your off-farm employment and the
name of your employer:

Nature of work _____

Name of employer _____

16. If you are not now employed off the farm, do you
anticipate that it will be necessary to secure part-time
employment off the farm within the next year?

Yes ___   No ___

17. Please circle the range that describes your gross farm
income for an average year:

Less than $1,000 $1,000-2,500 $2,500-5,000

$5,000-7,500 $7,500-10,000 $10,000-15,000

$15,000-20,000 $20,000-30,000   over $30,000

18. Do you consider your farm like a hobby?

Yes ___   No ___

19. Education--encircle the highest grade you have completed:

Grade school   4   5   6   7   8

High School   1   2   3   4   High School Major _____

College   1   2   3   4   5 College Major _____

20. Number of years engaged in farming (to nearest 1/2 year).
(Do not count time spent on farm while attending school
unless you had complete management of the farm.)
_____ Years

21. Number of years in farming in the area now served by the
Holton Unified School District:
____ Years

22. Number of years in the armed service: (To nearest 1/2
year). ____ Years

23. Number of years employed full-time in occupations other
than farming: (Nearest 1/2 year)
____ Years   List occupations _____

24. Do you hire help for assistance in your farming opera-
tion other than family help? ____ Yes ____ No

25. Give the number of man-months that labor is hired on
your farm each year. (Number of men hired X months per
year each is employed.) _____ man-months

26. If you farm in partnership, with whom is your partner-
ship? Check one. Another farmer ___ Retired farmer ___
Absentee ___ Land Manager ___ Investor ___ Other ___
What is the present occupation of the partner? _____

27. Number of sons at home: _____

Age and Education of Sons at Home:

Age ___ Education _____   Age ___ Education _____
Age ___ Education _____   Age ___ Education _____
Age ___ Education _____   Age ___ Education _____

28. Indicate age or ages of sons, if any, who plan to enter
    farming:

    Age ___   Age ___   Age ___   Age ___   Age ___   Age ___

29. Please estimate the amount of money you have invested
    in the following: (Total cost value of your capital
    items). Land owned _____   Breeding livestock _____
    Machinery & equipment _____   Feeder livestock _____
                                   (Total for year)

30. Are you planning to increase your volume and investment
    in farming within the next five years?
    Machinery   Yes ___   No ___
    Livestock   Yes ___   No ___   Land   Yes ___   No ___
    If yes, type _____   Buy _____   Rent _____

31. Do you plan to enter full-time some other occupation
    other than farming before retirement? Yes ___   No ___

32. Years during which you anticipate that you will become
    inactive as a farm operator: Check one.
    1965--1969 _____   1990--1994 _____
    1970--1974 _____   1995--1999 _____
    1975--1979 _____   2000--2004 _____
    1980--1984 _____   2005--2009 _____
    1985--1989 _____   2010--2014 _____

33. When you become inactive as a farm operator:
    a) Do you have plans for turning this operation over to
       someone else? Yes ___   No ___
    b) If yes, will it be to a son ____, son-in-law ____,
       some other relative _____, other ____?

34. If you <u>do</u> <u>not</u> have plans for turning this operation over
    to someone else,

    a) would you be interested in an operator? Yes ___ No ___

    b) would you be willing to help finance a capable young
       man? Yes ___ No ___

    c) would you be interested in becoming a partner with a
       desirable young man? Yes ___ No ___

35. How do you plan to transfer or dispose of your owned
    land? Check one. (Retirement, as used below, means the
    termination of all regular work.)

    Sell before retirement _____
    Sell publicly when retire _____
    Sell to relative when retire _____
    Transfer to relative when retire _____
    Provide transfer in will _____
    No provision in will _____

36. Indicate what you would consider to be the number of
    acres needed by a farmer in your community to allow him
    to make a decent living for a family of four.

    0-100   101--200   201--300   301-400   401-500

    501-600   601-700   701-800   over 800

FARM ENTRY OPPORTUNITIES FOR YOUNG FARMERS
IN THE HOLTON UNIFIED SCHOOL DISTRICT
DURING THE PERIOD 1965 TO 1975

by

JOSEPH ROLAND FLORY

B. S., Kansas State University, 1959

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

School of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1965

This study was conducted in the Holton Unified School District of Jackson County, Kansas, to determine the opportunities for young farmers to enter farming during the period 1965 to 1975.

Information was obtained through a questionnaire sent to farmers operating 80 or more acres in the district. Of the 255 questionnaires distributed, 179 or 70 per cent were returned and tabulated.

The decline in the number of farms in the county was evident in that 21.7 per cent had been lost to consolidation in the past decade. However, through the review of literature, it was the opinion of some writers that opportunities did exist for young men who desired to enter farming in the areas studied.

Similar studies reviewed indicated that 25 to 50 per cent of recent vocational agriculture graduates were engaged in farming. Some surveys indicated that farming opportunities would be available for approximately 50 per cent of the vocational agriculture graduates and this figure corresponded closely with the number of young men desiring to enter farming. It was suggested in several studies that the arrangement of partnerships and parental assistance were the most desirable means of becoming established in farming.

The farmers in the area surveyed operated an average

of 345 acres, 203 of which was owned, and had an average
gross farm income of $8,787. This was nearly $2,000 below
the state average. Forty and eight tenths per cent of the
operators owned all of the land that they operated. The
average investment in land was found to be $23,558, less
than half the state average.

The respondents had an average age of 48.9 years
and had farmed an average of 20.5 years in the district.
Sixty-four and eight tenths per cent of the operators had
at least 12 years of education.

Fifty-seven and five tenths per cent of the farmers
had off-farm jobs amounting to $3,853 of additional income.
Ninety-three and nine tenths per cent of the respondents
were married and 29.6 per cent of the wives were employed.

Beef cows were found to be handled by 81 per cent
of the operators. Beef fattening was the second most com-
mon enterprise with 42.5 per cent, 37.4 per cent had feeder
pigs, 28.5 per cent raised pigs, 25.1 per cent had dairy
cows and 6.1 per cent raised sheep.

Seven methods were used to project the number of
farming opportunities that might become available. Projec-
tion of death, change of occupation, retirement plans, con-
solidation, adjusted gross incomes, and adjusted acreages
were factors used to project the number of farming oppor-
tunities that would likely return at least $10,000 gross

income.

Results of the various methods indicated that minus 11.4 to plus 80.8 openings in the next decade would become available with the average being just under 50 or 5 farming opportunities per year. This was concluded to more than satisfy the needs of the vocational agriculture graduates from Holton High School that would desire to enter farming.

It was further concluded that 360 acres or more would be needed to attain a satisfactory living.