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AUTHOR Wirth, M. E.; And Others
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ABSTRACT

To provide farm employers with a clearer understanding of what is required to attract qualified people for responsible positions and agricultural students with an overview of substantial job opportunities in farm employment, this study summarized agricultural employment trends, reviewed research findings in occupational development, surveyed Washington agricultural students to gain insights on how they perceive farming and full-time farm employment as an occupation alternative, and analyzed student salary expectations. Results from 1972-73 surveys of 109 high school vocational/agricultural students, 93 community college farm management students, and 118 Washington State University farm management students revealed preferences for self-employed farming; desired size of farm on which to work; attitudes toward farm employment related to school level, occupational choice, and residential background; and salary expectations. While 40% of students surveyed ranked self-employed farming as their first occupation choice, only 5% ranked working as a farm employee a first choice. They rated farm employment as markedly inferior to other occupations with respect to income, work environment, acceptance by others, recognition, and achievement. However, they believed farm employment provided more independence on the job and viewed the rural farm setting as a desirable environment in which to reside and raise a family. (NEC)

Bulletin 825

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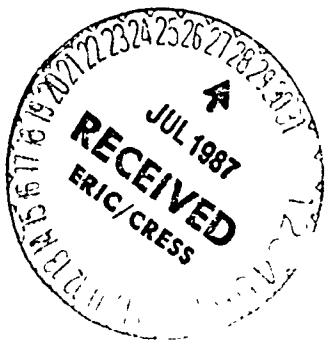
M. E. Wirth *L. F. Rogers* *Terry Francl*

College of Agriculture Research Center, Washington State University



FARM EMPLOYMENT—STUDENT ATTITUDES AND EXPECTATIONS

M. E. Wirth, L. F. Rogers, and Terry Francl[1]

SUMMARY AND IMPLICATIONS

Over the past three decades, total employment on United States farms has steadily declined. Up until the mid-1960s, employment of year-round full-time farm employees increased, but since that time, it too has been falling, currently at about 1% a year. Even so, there are still nearly 250,000 farms that employ upwards of 650,000 full-time workers.

Agriculture could in no sense be considered a labor-shortage sector. Yet, increasingly farm operators and farm organizations express concern over the difficulty of recruiting qualified employees. Among the reasons cited are increasing complexities and sophistication in production processes, tight profit margins, and the increased risks of great losses under conditions of large-scale operations. The consequences of poor management, including that of hired personnel, have now become truly hazardous to the continued existence of many farm firms.

The farm labor market has shifted toward a new breed of farm employee. The focus is upon attracting the young person with an agricultural background, formal training in technical agriculture and management subjects, and a strong interest and feel for the complex art of farm management. There is no shortage of graduating students who might fit this description. Colleges of agriculture are typically at or near record levels in their enrollments. Yet, for the most part, few farm employers have actually sought out and hired this kind of young person.

The problem is two-sided. Few farm employers are actively investigating the question of what kind of employment package it takes to make farm employment competitive with other occupations. And too few qualified students investigate or even seriously consider the possibility of farm employment as a career alternative.

Most top managers feel that qualified high-performing employees who command high salaries more than pay their way by increasing profits to the firm. Furthermore, they feel that poorly qualified people who can contribute little or nothing to the management of the firm are often overpaid. It is probably true that many farm employers do not yet believe that this is the case. Often, the inability of farming to compete with other industries for good people is cited as the most pressing farm labor problem.

Most students are in the formative stage of career development. They are searching among available alternatives that might suit their developing talents and tastes. Few have firm career goals or have made serious commitments. Few will include farm employment in their search of alternatives. For those who do, the shadow of the "hired man" or "hired hand" hangs heavy over the scene. Too often they see the stereotype—a person of little formal education, possessing only the most elementary communicative and analytic skills, and one who works long hours for room, board and a subsistence wage. The wages-hours gap between farm and nonfarm employment continues and reinforces this caricature. It is still true that farm workers on the whole work more days in a year, more hours in a day, and receive less pay than persons in any other occupation.

The study reported here was designed to sample the attitudes and opinions of agricultural students in high school and college concerning farm employment as an occupational choice. The results further confirm the unfavorable image of farm employment that young people have.

Four of ten sample students said they would rank farming for themselves (self-employed farming) as their first occupation choice. But only 1 of 20 sample students would make farm employment (working as a farm employee) a first choice. They rated farm employment as markedly inferior to other occupations with respect to income, work environment, acceptance by others, recognition, and achievement.

Students said that interesting work was the most important criterion in choosing an occupation. Next and equally important were opportunity to advance to a better position and chance to serve people, followed by work that maintains contact with farming. Reasons related to income ranked no higher than fifth.

Student attitudes toward farm employment were negative in 8 of 10 need categories. Their attitudes concerning income and work environment were most unfavorable. Analysis of student responses to questions concerning work and earnings in farm employment compared with secondary data on earnings and hours shows that their attitudes are well founded in fact. Students as a whole had a good grasp of the conditions of employment in farm jobs. Moreover, they fairly accurately estimated their starting salaries if they took jobs in other occupations after graduating.

Farm employers would be well advised to capitalize on the two need categories where farm employment has a definite edge in the minds of students over other occupations. Students believed that farm employment provides for more independence on the job. They also viewed the rural farm setting as a desirable environment in which to reside and raise a family. Farm employers will also find it helpful in recruiting and keeping good people to move high performers quickly into responsible positions where decisions are made. This desire for responsibility was noted increasingly among college and university students. Changes in this direction will not only make farm work more interesting and challenging, but will help enhance the social status of farm employees as a group.

Although 4 of 10 sample students said that self-em-

[1] Professor of Agricultural Economics, Professor of Agricultural Economics and Department Chairman, and Agricultural Economist, Federal Reserve Bank of Chicago, formerly, graduate student, Department of Agricultural Economics, respectively. The authors acknowledge the helpful suggestions of Donald A. West, Walter L. Slocum, and Leland C. Strait, who reviewed an earlier draft of this report. Work was conducted under project 0262.

ployed farming (farming for themselves) would be their first choice of occupation, placement data and other studies show that less than 2 of 10 with this goal will realize it.

Many circumstances and reasons get in the way; one of the most important is large capital requirements. In any event, those who can't go into self-employed farming constitute a labor pool that could be important to farm employers. As a group, such students are predisposed to view farm employment more favorably than other students. Nearly 3 of 10 students surveyed in this study gave farm employment as a preferred occupation if they could not get into self-employed farming. Less than 1 in 10 of all other students who did not have self-employed farming as a first preference indicated that farm employment would be their first choice.

Students' anticipated earnings, upon graduation, in their preferred occupations substantially exceeded market data averages for earnings in farm employment. However, they said they would be willing to work on a farm job for slightly less. But even then, this figure exceeded prevailing earnings in farm employment by over $100 per month.

The implications here for farm employers seem unmistakable. If they are going to compete sucessfully for agriculturally-trained graduates, irrespective of other considerations, starting salaries including fringe benefits cannot be much more than $50 per month below that offered by competing industries. There is also a crucial need to reduce hours and days worked to a level comparable with competing occupations, recognizing the need for long hours during selected seasons of the year.

The current high level of unemployment nationally, particularly among young people, may modify these conditions in the short run. But, in the longer term, farming will have to compete on an earnings-per-hour basis or accept those remaining in the labor force after other industries have had their pick.

This study focused on how young people view farm employment as an occupation. But we also stressed from the outset that the problem of effectively matching the labor needs in modern farming with qualified people is two-sided. It has to concern both employer and employee. While we did not examine the employer's view in this study, it is important and needs to be stated. Farm employers should be surveyed to assess their views on changing job requirements and qualifications in modern farming and the extent to which agricultural students are being trained in ways that will qualify them to assume responsible positions in farm employment.

PERSPECTIVE ON FARM EMPLOYMENT

An increasing number of farm operators and farm organization representatives are expressing concern about the difficulty farmers have in hiring and retaining qualified employees. They are looking for people with training, ability, and the desire to fill key, full-time farm employment positions. While an increasing number of farm youth are continuing their education beyond high school, very few consider farm employment as a viable occupation alternative when they finish their advanced training.

Farming practices are becoming more complex as new advanced technology is applied to farming. The size of the average farm continues to grow. The amount of capital employed in nonland assets is increasing even faster. Manual labor requirements have stabilized or even decreased. The increased size and complexity of the farm operation requires more advanced management techniques to ensure maximum production efficiency.

While many of the farm youth who continue their education program beyond high school obtain training in advanced technological skills, few choose to use their skills as farm employees. Many would like to farm but are restrained by capital limitations. More often, farm youth choose to pursue a career in agribusiness or in nonagricultural occupations. Many who remain in farm work have less education, lack specialized training, and in general make a minimal contribution beyond their manual labor. But some workers begin and remain in farm work because few alternatives are either available or considered.

Although opportunities for farm youth to farm for themselves are increasingly limited, the job market for year-round farm employees in the United States is still substantial. Estimates of the current farm job market indicate that well over a half million persons are full-time farm employees. While many of these jobs were undoubtedly as farm laborers, many were at well paid managerial levels.

Colleges of agriculture have long recognized the trend toward a declining proportion of their graduates who are returning to farms either as self-employed farmers or as employees. This has been but one of several important factors that has contributed to development of curricula designed to prepare students for employment in business related to agriculture, business government, and other nonfarm occupations.

Agriculture students in colleges typically express a keen preference for many of the facets of farm work and rural living. Yet, few actively seek farm employment as a career.

Thus, this situation appears as a paradox. On the one hand is the expressed need for highly trained and qualified people. On the other is the sizeable number of farm youth graduating from colleges of agriculture who have the required technical qualifications and prefer farming and life in a rural setting.

Study objectives

What appears needed is a clearer understanding on the part of farm employers of what is required to attract qualified people for responsible positions, and on the part of agricultural students, the need to investigate the number of substantial job opportunities in farm employment.

To provide information on this general problem, we made a study with the following major objectives:

1. to summarize employment trends in agriculture
2. to provide an overview of research findings in the field of occupational development
3. to survey agricultural students to gain insights on

how they perceive farming and full-time farm employment as an occupation alternative

4. to analyze student salary expectations and how they relate to earnings in farm employment and agriculturally related jobs.

It is believed that the information reported here will be of value to agricultural employers who are seeking qualified young people for responsible jobs in modern commercial agriculture. Moreover, this information should be useful to faculty in colleges of agriculture and vocational agricultural instructors in curriculum development and in counseling students who express interest in farm employment.

FARM POPULATION AND EMPLOYMENT

Farm population trends

The farm sector has provided a continuous flow of labor manpower for other occupational sectors of the United States. From 1940 to 1974, while total population grew from 132 to 212 million, the farm population declined from about 31 million to a little over 9 million (table 1). This is an annual average rate of growth in the total population of 1.4% compared with 3.4% decrease for the farm population. For both the total and farm populations, the rate of change appears to be stabilizing at lower levels during the early 1970s.

The rapidly declining farm population was mostly a result of the very high rates of net outmigration from 1940 to 1965.

Years	Annual average net outmigration from the farm population
1940-45	1,602,000
1945-50	677,000
1950-55	1,115,000
1955-60	910,000
1960-65	794,000
1965-70	594,000
1970-73	113,000

Source: (34)

During the 1965-70 period, the rate decreased to less than 40% of the 1.6 million rate of the peak years of the 1940s and by the early 1970s, averaged less than 7% of the rate during the peak years.

Employment in farming

Farm employment—family and hired workers—totaled near 10 million in 1950 (34). From then until 1963, the number declined at almost a constant rate of 3.2% a year. From 1963-68, the number declined at nearly double that rate and then leveled off, falling slightly toward the 1974 total of 4.3 million.

The trend in the number of farm wage workers is similar, but the rate of decrease was less pronounced. The total number was 4.3 million in 1950, fell by 1.4% a year to 1963, decreased at a 4% rate to 1968 and then leveled out to about a 1% rate of decrease in the early 1970s (34).

The Census of Agriculture provides information for assessing the full-time labor force employed in farming. Detailed data are available on the number of hired farm workers who worked 150 days or more per year. This classification is defined by the census as *regular hired workers,* and is roughly equivalent to the full-time farm labor force.

In 1954, the number of regular hired farm workers reported was about 673,000. This number increased at about 2.7% per year to a total of 866,000 in the census year 1964. At that point, the trend turned around. By 1969 (the most recent census available) the total number was down to about 654,000, a decrease of nearly 5.5% per year from the 1964 high (31).

While the number of regular hired workers has declined since 1964, farmers' total expenditures for labor continued on an upward trend. From 1964 to 1969, the increase has been a bit over 3% a year. Expenditures for contract labor, machine hire, and custom work also grew during this period at the substantial rate of nearly 12% per year.

When the trend in expenditures for all farm labor is examined together with the trend in outlays for contract labor, machine hire, and custom work, we find a pattern of decreasing constant-dollar expenditures for direct labor inputs into farming. In 1954, the combined total for these two categories of expenditures amounted to $2.9 billion. By 1969 this total, which is also a rough estimate of agriculture's total wage bill, had increased nearly 65%. Yet over the same period, the Farm Wage Rate Index rose nearly 100%.

While these estimates are crude, they suggest that total direct labor inputs into production farming decreased in real terms at the rate of about 1.3% per year over the 1954-69 period. Additional evidence is the fact that the index of quantities of labor inputs used in agriculture fell at the rate of 4.1% per year over this same 15-year period. From 1969 to 1973, the rate of decline leveled off, falling only about 1% per year during that period (34). The con-

TABLE 1. Total population and farm population, United States, selected years, 1940 to 1974

Year	Total population (million)	Farm population (million)
1940	132.1	30.5
1950	151 7	23.0
1960	180.7	15.6
1970	204.9	9.7
1974[1]	212.0	9.3
--------Annual average percentage rate of change--------		
1940-50	1.4	- 2.8
1950-60	1.8	- 3.8
1960-70	1.3	- 4.6
1970-74	9	- 1.1
1940-74	1.4	- 3 4

[1]Preliminary estimates

Sources: (34,36)

TABLE 2. Regular hired workers by class of farm, United States, 1969 and 1964

Economic class of farm	1969		1964		Percentage change 1964 to 1969	
	Farms reporting	Workers	Farms reporting	Workers	Farms reporting	Workers
Class 1a--$100,000 sales or more	40,039	322,141	28,915	319,182	38.5	0.9
Class 1b--$40,000 to $99,999	74,097	151,063	72,148	195,733	2.7	-22.8
Classes 2 - 5--$2,500 to $39,999	133,506	181,166	233,528	351,085	-42.8	-48.4
Total	247,642	654,370	334,591	866,000	-26.0	-24.4

Source: (31)

tinuing trend toward substitution of capital for labor by acquisition of labor-saving machinery has undoubtedly been important in this regard, along with the increasing proportion of farm inputs that embody nonfarm labor purchased from nonfarm sources.

Both the total number of farms reporting regular hired workers and the number of workers decreased much more for farms in the lower farm sales classes from 1964 to 1969 (table 2). The number of smaller farms reporting regular hired workers fell about a fourth, as did the number of workers they hired. The number of medium farms, while increasing by nearly 3%, reported over a fifth fewer regular hired workers. Only large-scale farms ($100,000 or more farm sales) increased the number of regular hired workers. The number of farmers in this class reporting regular hired workers increased by nearly 39%, yet the number of workers rose by only 1%. The number of large farms increased during the 1964-69 period by about two-thirds but the number of regular hired workers per farm on these farms actually decreased.

While about three-fifths of all farms reported expenditures for hired labor in 1969, only 14% employed regular workers (table 3). As would be expected, substantial differences existed among economic classes of farms. For example, less than half of Class 5 farms reported outlays for hired labor, compared with over 90% for large-scale farms. Moreover, nearly four fifths of large-scale farms reported employing regular workers as contrasted with less than 3% for Class 5 farms. Regardless of economic class, decreases in the percentage of farms reporting expenditures for hired labor and employment of regular hired workers were characteristic of the change over the last census period.

TABLE 3. Percentage of farms reporting farm labor, United States, 1969 and 1964

Economic class of farm	Expenditures for hired labor		Regular hired workers	
	1969	1964	1969	1964
	%	%	%	%
Class 1a - $100,000 sales or more	93.9	98.0	77.0	92.1
Class 1b - $40,000 to $99,999	85.9	90.8	43.7	63.6
Class 2 - $20,000 to $39,999	73.4	82.5	21.1	37.7
Class 3 - $10,000 to $19,999	62.4	70.1	9.3	17.4
Class 4 - $5,000 to $9,999	52.4	60.9	4.0	7.7
Class 5 - $2,500 to $4,999	46.5	50.6	2.8	3.5
Total Classes 1 - 5	61.7	66.3	14.3	18.4

Source: (31)

In 1969, about two-thirds of farms with less than $100,000 sales that reported regular hired workers, hired only one worker (table 4). Only 3% hired more than 4. Although the number of farms that reported regular hired workers decreased by nearly a third from 1964 to 1969, the percentage distribution of farms by number of workers changed only slightly during this period.

The situation for large-scale farms was considerably different; the number reporting regular hired workers increased 38% over the 5-year period. Yet, there was a general downward shift in the number of regular hired workers per farm. In 1964, over a fourth reported employment of 10 or more, but by 1969 the figure was down to 17%. In 1969, a fourth reported hiring only one regular worker, and that was double the rate for 1964.

Class 1 farms as a whole accounted for less than half of the farms that reported employment of regular workers in 1969. Yet, this class hired nearly three-fourths of the total number of regular workers, an average of slightly over four per farm (table 5). The smallest subclass averaged two regular hired workers, while large-scale farms averaged eight. The average number of regular hired workers employed by large-scale farms was substantially greater among those farms in the higher farm sales subclasses. For example, farms with sales of $100,000-$199,999 employed an average of fewer than 4 regular workers in 1969; those in the $1 million and over subclass averaged 62.

Such data clearly document the heavy outflows of manpower from farming to other occupations. Employment in agriculture, by any measure, has declined markedly over the past three decades. Yet, substantial job opportunities remain in farming. The extent to which these jobs will be filled by qualified young people will depend upon a complex of economic, social, psychological, and political fac-

tors. Increased awareness by farm employers of the competitive conditions required to attract qualified talent will be important. But also crucial are the attitudes these young people have toward farming and the perceptions they develop of farm employment as a career choice. The general question of occupational choice is considered briefly in the next section.

THE PROBLEM OF RESEARCHING OCCUPATIONAL ATTITUDES

The process by which people choose occupations has been studied from the vantage points of several disciplines. This field—known as occupational development—has received attention from psychology, sociology, economics, and education. The central thrust of these efforts has been on prediction and explanation of the process of occupational choice-making.

Ginzgerg (7) was one of the early contributors to the theory that occupational choice is a developmental process that covers several years with a cumulative impact resulting in the choice of an occupation. Occupational decisions are not viewed as single point-in-time events.

Ginzberg theorized that occupational decision-making can be analyzed in three major time periods. The fantasy period begins when a youngster thinks about an occupation in terms of his wish to be an adult. This is followed by the tentative period in which the individual recognizes the problem of deciding upon a future occupation. Finally, the realistic period sets in and the individual realizes that he must compromise between what he wants and the opportunities available to him at that time.

While the age at the transition points will vary with each individual, depending on such factors as intelligence and environment, changes will usually fall within a well-defined period. Case materials and general data from developmental psychology indicate that the onset of the tentative period occurs within a 2-year range beginning at 10 years of age. The period of realistic choice typically starts near the end of the seventeenth year, and again variation from the norm is within a two-year range.

TABLE 4 Distribution of farms by number of regular hired workers, United States, 1969 and 1964

	Farms with farm product sales of $2,500-$99,999		Farms with farm product sales of $100,000 & over	
	1969	1964	1969	1964
	Number of farms			
1 hired worker	140,733	192,095	9,784	3,845
2 hired workers	41,118	63,968	7,382	4,373
3-4 hired workers	19,627	34,565	8,689	6,354
5-9 hired workers	5,171	12,256	7,413	6,751
10 hired workers or more	954	2 792	6,771	7,592
Total	207,603	305,676	40,039	28,915
	Percentage of farms			
1 hired worker	67.8	62.9	24.5	13 3
2 hired workers	19.8	20.9	18.4	15.1
3-4 hired workers	9.4	11.3	21.7	22.0
5-9 hired workers	2.5	4.0	18.5	23.3
10 hired workers or more	.5	.9	16.9	26.5
Total	100.0	100.0	100.0	100.0

Source: (31)

Others such as Holland (12) and Blau and Duncan (1) have supported and elaborated on Ginzberg's theory. They have described career choice as a rational compromise between desire and reward. During the periods when various occupational alternatives are being considered, the individual is subject to a variety of interacting influences. These forces include peers, parents, other significant adults, social class, culture, and the physical environment. Holland theorizes that from this experience the person develops a hierarchy of habitual or preferred methods of dealing with environmental tasks. From an ecological standpoint, these

TABLE 5 Distribution of regular hired workers by size of Class I farm, United States, 1969

Economic class of farm	Number of farms reporting	Number of regular hired workers	Average number of regular hired workers
Class Ia--$100,000 sales or more			
$1,000,000 and over	1,552	96,152	62.0
$ 700,000 to $999,999	926	22,334	24.1
$ 500,000 to $699,999	1,434	24,898	17.4
$ 400,000 to $499,999	1,412	17,355	12.3
$ 300,000 to $399,999	2,798	27,057	9 7
$ 200,000 to $299,999	6,730	42,902	6 4
$ 100,000 to $199,999s	25,187	91,443	3.6
Total Class Ia	40,039	322,141	8.0
Class Ib--$40,000 to $99,999	74,097	151,063	2.0
Total class I	114,136	473,204	4.1

Source: (31)

habitual methods are associated with different kinds of physical and social environments and with differential patterns of abilities. The person making a vocational choice in a sense searches for situations that satisfy his hierarchy of adjustive needs.

According to Holland, final choice of occupational level depends on the individual's intelligence and self-evaluations; self-evaluation is a function of socioeconomic origin, need for status, education, and self-concept. Self-concept is determined by self-knowledge, a person's ability to discriminate among potential environments in terms of his own attributes and self-evaluation, and the worth the person attributes to himself. Self-knowledge refers to the amount of information the person has about himself. Over-evaluation leads to the selection of environments beyond the person's adaptive skills (unrealistic aspirations). Under-evaluation leads to the selection of environments below the person's skills.

Super (28, 29) and his associates looked beyond the first occupational choice to career prediction. They also considered the nature of vocational exploration and the comparability of vocational maturity at different stages of development. Two general conclusions reached by Super and associates remain valid:

1. People tend, insofar as circumstances permit, to gravitate toward jobs in which they have the ability to compete successfully with others.
2. Given intelligence above the minimum required for learning the occupation, be it executive work, teaching, packing, or light assembly work, additional increments of intelligence appear to have no special effect on an individual's success in that operation . . . (28:75).

However, no prediction is made about how well a person will do in the occupation if his qualifications exceed the minimum requirements. In most cases, given the minimum ability for successful completion of training or for successful entry into that occupation, additional ability does not seem to be related closely to success. Success, defined as how far a person advances, how much he contributes to a field, or how much above average he is in that field, seems to be largely a reflection of personality characteristics such as interests, needs, self-concepts, and motivations, and of situational factors that are independent of the individual (28:75).

Some workers have looked specifically at college youth (4,15,16). Davis reported that most of the college students studied entered college with some professional bias; e.g., 70% preferred a professional career field (4:9). Other data showed that despite their lack of specific career choices, most freshmen aimed for a broad category of professional and technical jobs where they could use their advanced knowledge. After 4 years of college, they usually choose a specific occupation within the area in which they expressed an interest as freshman. Given the notion that at least some changes typically occur during 4 years of college, these results hardly support the view that college experience is decisive in affecting occupational choice. As a whole, the students remained oriented to the job they were most interested in as freshmen. The changes that did occur appear to be a continuation of trends that began before entry into college (4:76).

While many college freshmen do have occupational plans, 30% have no definite plans and others may change their plans. Davis cited data reporting that half of the 4-year undergraduates had shifted plans between major occupational groups, or went from an essentially no-choice position to a definite occupational desire. This appears to result in net gains in some fields (business and education) and net losses for others (medicine, engineering and physical sciences). Davis interpreted the change in career plans as ". . . increasing congruence between personal values and values satisfied by work in different fields" (4:76).

Korn (16) reached the same basic conclusion as Davis in regard to college undergraduates selecting careers while in school. In addition, he pointed out that many students appear to choose a career without adequate evaluation of either personal potential or career alternatives. He suggested that career choices requiring more psychological commitment at the beginning of college may result in greater perseverance in the original choice. He contended that student choices are not so much the result of wise planning as the impact of social forces on their lives.

Kaldor and others (13,14) have presented a revised theory of occupational choice derived from the principles of economic decision-making. Their thesis is that an individual's assessment of the consequences following from a particular occupational choice is subjectively determined by his value system. The extent to which the person gets the outputs he wants in the proportions he wants them constitutes the level of occupational utility, which in a very limited sense embraces part of the content of "job satisfaction" (the psychologists' term).

The level of occupational utility is a function of a set of variables the person believes relevant to his choice. The set might include such things as level of beginning earnings, the rate of increase in earnings over time, stability of earnings, the amount of physical or mental activity, working conditions, cooperation with others, and so on.

Sociologists have spent a great deal of time analyzing occupational and career pursuits of farm youth. A central issue concerns the ability of farm youth to cope with the rigors of urban life.

One popular theory has been that rural children make the poorest personal adjustment, followed by town children and by city youth. Nelson and Storey (21) came to that specific conclusion in one study. Personal adjustment is defined as the ability to assimilate into society, to work with other people, to retain a job, and so on. These and many other abilities and characteristics are measured in tests such as the California Test of Personality. Others have reached similar general conclusions about the farm youth population, (e.g. 5, 8).

There are also numerous theories on the amount of influence occupational information has on either the individual's choice of an occupation or his aspirations to attain a given occupational status. Burchinal (3) argued that those students who are exposed to and use more occupational information are less likely to choose farming as an

occupation. He theorized that upon learning about the alternatives, students pursue higher status occupations. However, Haller (10) concluded that choosing to farm is not uniquely influenced by low receptivity to new information. He found that those who had made an occupational choice in the blue-collar or lower white-collar occupational fields had a similar receptivity to occupational information. Kroll, Kinklage et al. (17) refer to some of Super's work that indicates that vocational maturity is a planning orientation within the individual and is not related to the amount of specific information or content that an individual knows concerning a vocation. Vocational information for an individual appears to bear little relationship to the emergence of his career pattern.

Other studies reported that farm boys have lower occupational aspiration levels than their counterparts in town and the urban areas (5, 24). In Sewell and Haller's study (24), only 24% of the farm boys aspired to the professional occupations; 34% of the village boys did so, and both were markedly lower than urban boys (48%).

However, there may be some question about the occupational status ranking associated with farming. Blau and Duncan (1) wrote, "we are not wholly confident of the status score as an index of the socioeconomic position of farm occupations. We know that the prestige ratings given farming by the general public run higher than would be expected from the value of the socioeconomic index for this occupation" (1:286). It is likely that high school students (the sample in both studies listed above) still tend to relate to their fathers' occupations when considering their own occupational aspirations. If their fathers' occupation is ranked unduly low, then their aspiration levels will also be low.

In a later study Haller and Sewell (10) came to slightly different conclusions about the aspirational level of farm boys. In this study they were trying to determine what influence the expectations of significant others had on the individual's occupational aspiration level. They found no evidence that those choosing farming are uniquely influenced by the low expectations of significant others. Significant others include parents, peers, and other influential adults. Rather, the achievement expectations that significant others have for the youth who choose farming are not substantially different from the expectations for youth who choose blue-collar occupations or lower white-collar occupations.

Reichman (22) studied the vocational maturity of ninth and twelfth grade high school boys. He found the usual relationship in studies of this type. Statistically significant relationships existed among the subject's vocational maturity and his IQ, academic achievement, and socioeconomic status of his family. Another finding was that the boys' vocational aspirations were negatively correlated with holding after-school jobs.

This negative correlation may be a result of the fact that students from higher socioeconomic status (SES) groups tend to have higher educational and vocational aspirations and less need for after-school employment than students from lower SES levels. But then, perhaps the type of work experience is an important element in this regard. Reichman's results are interesting because some theorists and researchers have assumed that independent work experience affects a student's vocational maturity, educational and vocational aspirations, and choice selection in a positive direction (22:17).

Slocum (26) examined the role that education plays in preparing an individual for an occupation. His data refute the theory that farm boys who plan to farm tend to have lower educational aspirations than other farm boys. He also found more farm boys than nonfarm boys aspired and expected to go to college and obtain a college degree. The aspiration levels of farm and nonfarm girls did not differ significantly. These findings are directly contrary to earlier findings of Slocum and other sociologists. Changes in the reference group values appear to provide one explanation for the unexpected findings. Changes in educational values of farm parents are suggested as another possible reason for the different findings.

Some workers have considered the effect of peer influence on educational and occupational aspirations. Haller and Butterworth found that peers influenced a high school student's occupational aspirations but had little effect on educational aspirations (9). Haller and Sewell found a positive intercorrelation between high occupational expectations from peers and discouragement from entering farming (10).

Bohlen and Yoesting (2) considered another aspect of occupational aspirations—congruency. Congruency is defined as positive agreement between the type of occupation aspired to when the individual is in high school and the type of occupation in which the respondent is employed at a later date (in this study, 8 years). Incongruency is the disagreement between aspirations and attainment. Bohlen and Yoesting found the greatest congruency among those who wished to farm. There was no significant difference in congruency between those with high and low socioeconomic status. There was also no significant relationship between occupational information and congruency. Bohlen and Yoesting concluded that aspirations are not good predictors of occupations that are eventually attained.

Kuvlesky and Bealer reached the same conclusion in another study (18). They discovered that fewer than 26% of high school sophomores had reached their occupational aspirations 10 years later. Aspirations are undoubtedly related to previous levels of attainment, but no investigation of such relationships was reported in this study.

For some time, rural sociologists have been predicting that the gap, if there is a gap, between rural farm, rural nonfarm and urban youth, is closing. Slocum (26) confirms this trend with respect to the educational aspirations of high school students. As the one-room country schoolhouse disappeared from the rural areas, farm youth were assimilated in the town or urban-oriented population centers at an early age. As communications improved on a national level, farm youth came to view the same society that their town and urban counterparts saw every day.

Slocum also found that farm and rural nonfarm family incomes were nearly identical (median incomes were $7,142 and $7,134 respectively). Perhaps family income differentials affect students' educational and occupational aspira-

tions more than indicated in previous studies.

While the findings rev' ved above are helpful in assessing important influences on occupational choice, these studies were not directed specifically toward the problems of attracting young people who are trained agricultural specialists to farm employment. A study that comes nearer this mark was done by Sherlock and Cohen (25). They made an in-depth study on recruitment to dentistry that parallels the questions considered in this study. They concluded that occupational choices are made as compromises between reward preferences and expectancies of access to specific occupations; both of these career perspectives are developed with reference to familial occupational history, especially the occupational status of the father. The results suggest that a father who has been mobile imparts his mobility aspirations to his son.

These and other findings relating career perspectives to their structural antecedents in the student's background strongly suggest that the roots of career choice extend back into the occupational history of one's family (25:13). Further evidence implies that dentistry is chosen because it combines high rewards with a reasonable degree of access.

While the Sherlock and Cohen article is more closely allied to the topic in question than most of the other studies cited, it also poses some questions. For instance, can one assume that the decision-making process of a person going into dentistry, which is in the top ranks of the socioeconomic status hierarchy, compares with one choosing farm employment, which is at the bottom? According to Blau and Duncan (1:27) the comparison is tenuous at best. Also, even though Sherlock and Cohen studied present dental students, they made no suggestions on how to attract additional students into the dental field.

This brief review of occupational development suggests that the process of career choice-making is multifaceted and complex. The data and analysis in the following sections are designed to improve understanding of what farm youth perceive as important with respect to career choices and particularly how they view farm employment as a career choice.

SURVEY OF ATTITUDES AND EXPECTATIONS

A questionnaire was designed to provide information on the attitudes and expectations of agricultural students toward career alternatives, particularly farm employment. This questionnaire was used in a survey of 320 agriculture students. The sample group included 109 Vo-ag students in 8 high schools, 93 farm management students in three community colleges (2-year colleges), and 118 students in an upper division farm management class at Washington State University. The survey was made during the 1972-73 academic year.

The questionnaires were mailed to the cooperating instructors, together with a detailed explanation of the project. The questionnaires were completed during classes and returned by the instructors to the department of agricultural economics at Washington State University.

A general description of the areas from which the sample was drawn is given below:

Town	*Type of school*	*Sample size*	*Area of state*
Chehalis	High school	15	SW
Yakima	Com. college	35	So. central
Moses Lake	Com. college	19	Col. Basin
Quincy	High school	16	
Pasco	High school	23	SE
Deer Park	High school	13	East
Endicott	High school	8	
Spokane	Com. college	39	
Pullman	Wash. State U.	118	
Tonasket	High school	15	No. central
Ferndale	High school	8	NW
Snohomish	High school	11	West
Total sample		320	

In constructing the sample, it was believed that selection of high school students, community college (2-year students), and 4-year university students would provide some contrast in attitudes toward occupations.

High school students would seem to best represent the influences of family and immediate surroundings on attitude formation, while 4-year university students were viewed as least representative of local influence. The university typically brings together in its student body an extremely wide array in backgrounds and experiences. Additionally, the further exposure to higher education may have some effect in changing attitudes.

Community college students were believed to lie somewhere between high school students and university students with regard to those factors that strongly influence occupational attitudes.

ANALYSIS OF SURVEY RESULTS

The questionnaire completed by students was designed to obtain information within the following general categories:

1. occupational preferences
2. attitudes toward farm employment
3. advantages and disadvantages of farm employment
4. salary expectations
5. employment expectations.

Occupational preferences

Preference for self-employed farming

Students were first asked, "Do you plan on entering farming for yourself (or in partnership on either owned or leased land) within a year of completing your schooling (or release from the military, if applicable)?" Forty-one percent answered "yes." The balance replied that they did not plan to farm for themselves. The responses by school level were:

School level	Plan to farm	Do not plan to farm
	%	%
High school	31	69
Community college	51	49
WSU	43	57
All students	41	59

Reasons for planning to farm. Those who planned to farm for themselves were then asked to indicate in order of importance the three most important reasons from among those listed below:

..... Level of beginning earnings
..... Greater opportunity
..... Stability of earnings
..... Interesting work
..... Earnings potential
..... Steppingstone to better opportunity
..... Opportunity to farm available
..... Other

Student responses were aggregated into a composite index by scoring first-rank reasons as 3, second-rank as 2, and third-rank as 1. Two categories predominated; greater opportunity and interesting work. Both categories accounted for 28% of the index response for all students. The response was about the same in all school levels (table 6).

Being interested in one's work would certainly be an important part of finding satisfaction in a job. In this regard, West and Price studied non-metropolitan high school graduates (37). They found that male graduates who entered farming for themselves were more satisfied with their jobs than were workers in other jobs.

In contrast to interesting work and greater opportunity, the three income-oriented categories combined received only 16% of the index score for all students.

TABLE 6. Percentage distribution of rankings of reasons for planning to farm, composite index of first, second, and third choices, by school level

Reasons	School[1] High school	Community college	WSU	All students
	%	%	%	%
Greater opportunity	28	27	29	28
Interesting work	27	26	31	28
Opportunity to farm available	7	12	16	12
Earnings potential	11	12	6	9
Stability of earnings	10	5	2	5
Opportunity to serve others	4	6	4	5
Steppingstone to better opportunity	5	3	4	4
Level of beginning earnings	4	3	---	2
Other	4	6	8	7
Total	100	100	100	100

[1]Differences between percentage distributions significant at the 1% level

When the same index analysis is made but with only the first-choice reasons, the predominance of the greater opportunity and interesting work becomes more pronounced; the former accounts for 38% of the index response, the latter, 27% (table 7). Again, responses are quite uniform among school levels and the income categories are relatively unimportant.

Preferences for other occupations

The 41% of students who planned to farm for themselves were next asked to state an occupational preference if circumstances prevented farming for themselves. The 59% who said they did not plan to farm were asked the same question.

Only 17% of all students chose farm employment (table 8). Farm employment was defined in the questionnaire as being employed full-time or year-round on a farm or ranch. Thus, it appears that farm employment is viewed as less desirable than other occupations by students studying agriculture in either high school, college or university.

TABLE 7. Percentage distribution of rankings of first choice reasons for planning to farm for yourself, by school level

Reasons	School High School	Community College	WSU	All Students
	%	%	%	%
Greater opportunity	39	38	38	38
Interesting work	25	30	26	27
Opportunity to farm available	4	5	12	7
Earnings potential	4	5	2	4
Stability of earnings	11	3	2	5
Opportunity to serve others	4	8	---	4
Steppingstone to better opportunity	4	3	2	3
Level of beginning earnings	4	3	---	2
Other	5	5	18	10
Total	100	100	100	100

TABLE 8. Percentage distribution of occupational preferences of students, excluding the choice of farming for yourself, by school level

Occupation	School[1] High school	Community college and WSU	All students
	%	%	%
Agri-business	17	42	34
Government	27	17	20
Farm employment	11	19	17
Teaching	7	11	9
Other	38	11	20
Total	100	100	100

[1]Differences between percentage distributions significant at the 0.1% level

High school vocational agriculture departments and colleges of agriculture are both increasing their emphasis on preparing students for careers in business and government. This is consistent with the expressed preferences of students and with projected job openings. Over half of all students surveyed said their first choice of employment was in one of these categories. Thirty-eight percent of the high school students' responses were classified as "other," and that includes a very wide range of occupational possibilities. It seems quite likely that in expressing these choices, high school students may be reflecting some bias, or course orientation, of their particular school.

Reasons for occupational choice. Students were asked to rank the three most important reasons for their choice of occupation from among the reasons listed in the previous section. Earning potential ranked no higher than fifth as the important reason for choice of an occupation based on the composite index of their first, second, and third choices (table 9). It is hard to know what interpretation students placed on the two categories labeled "steppingstone to better opportunity" and "greater opportunity." It is likely that to some extent, both categories reflect an earnings motivation.

The steppingstone to better opportunity reason was intended to convey the idea that the initial job would serve as a good means to a more desirable occupation. The greater opportunity reason was intended to mean substantial opportunities within the first-chosen occupation. If the two were combined as a single "opportunity" classification, it would be the second most important category, with only interesting work ranked above it.

The category "interesting work" clearly dominated the reasons for occupational preference, being larger than the sum of the three earnings categories for each level. Maintaining contact with farming was a major concern for college students, but ranked quite low for high school students. A clear message comes through. Many of these students were motivated both by a desire for interesting work and by a desire to maintain contact with farming. A reasonably responsible position as a farm employee should meet the first need. The desire to maintain contact with the farm is automatically met through farm employment.

When only the first-rank reasons for occupational choice are considered, interesting work becomes even more dominant. It accounts for 43% of all responses while no other category received more than 10% (table 10).

TABLE 9. Percentage distribution of rankings of reasons for preferred occupational choice, composite index of first, second, and third choices, by school level

Reasons	School[1] High school	Community college	WSU	All students
	%	%	%	%
Interesting work	27	32	31	30
Steppingstone to better opportunity	11	13	13	12
Opportunity to serve others	13	11	11	12
Maintain contact with farm	4	15	16	11
Stability of earnings	9	7	7	7
Earnings potential	9	8	7	7
Greater opportunity	9	5	6	7
Level of beginning earnings	7	2	4	5
Other	12	7	5	9
Total	100	100	100	100

[1]Differences between percentage distributions significant at the 0.1% level

Desired size of farm on which to work

Regardless of their expressed occupational preference, students were asked to assume that they would work on a farm, and then to select their choice of farm size measured by the number of fellow employees with whom they would like to work.

The results show a very strong preference for 1- to 3-employee operation (table 11). Over-two-thirds fell in this category. Only 16% preferred working on a farm employing more than 10 people. This may reflect the general attitude farm youth seem to possess that is not typically characteristic of urban students. Edlefsen and Crowe (5) and Haller (8) reported this trait in their studies.

TABLE 10. Percentage distribution of rankings of first choice reasons for preferred occupational choice, by school level

Reasons	School High school	Community College	WSU	All students
	%	%	%	%
Interesting work	39	48	42	43
Steppingstone to better opportunity	8	8	12	10
Opportunity to serve others	7	11	10	9
Maintain contact with farm	2	10	11	8
Stability of earnings	10	4	3	5
Earnings potential	7	7	4	6
Greater opportunity	6	4	6	5
Level of beginning earnings	8	3	5	5
Other	13	5	7	9
Total	100	100	100	100

TABLE 11. Percentage distribution of preferred size of farm on which to work, by school level

School level	Number of farm employees 1	2-3	4-10	over 10	Total
	%	%	%	%	%
High school	31	38	15	16	100
Community college	30	44	17	9	100
WSU	24	38	16	22	100
All students	28	40	16	16	100

It is interesting to consider student responses to this question in relation to employment patterns on farms. Class 1 farms would seem to be the most promising job market for those interested in farm employment. They hire nearly three-fourths of all regular hired workers on farms and their economic size suggests future . (see tables 1 and 5). On the whole, these farms .d an average of 4 regular hired workers.

However, for Class 1 farms with sales over $400,000, the average was much higher. While they constituted only 7% of Class 1 farms, they hired 40% of the regular workers, an average of 23 per farm. These farms are much larger than most students said they would favor if they were working as farm employees. When these largest farms are excluded, however, there remain over 100,000 Class 1 farms employing over 285,000 regular workers, an average of less than 3 per farm.

We can only speculate how important the question of firm size (number of employees) is to students. Whether they consider size to be important in a general sense, or whether their responses should be interpreted literally as referring only to farms is quite unclear.

If their stated preferences apply only to farm employment, it could be said that while 83% would prefer not to work as a farm employee, if they were to do so, they would typically prefer to be on a farm hiring fewer than four employees. If on the other hand their responses can be taken as reflecting an attitude about firm size generally, they may be simply saying that smallness is preferred to bigness. If this is the case, many farm employers have an advantage over typical nonfarm firms in recruiting people. Whatever the case may be with respect to size, students' views may be modified considerably when they enter the market as job-seekers.

Attitudes towards farm employment

The attitudes of students toward farm employment were evaluated through a set of situational statements requiring them to compare farm employment with either their expressed occupational preference or their second choice if their first preference was self-employed farmer. If the respondent's first occupational choice was a special type of farm employment, such as an animal herdsman, he was asked to compare that specialty to general farm employment. The situations were designed to measure need fulfillment in a Maslow-type need hierarchy (19). Terry (30) referred to such needs as human wants relevant to each individual. The 10 need categories, or categories of human want, specified in our study were:

1. income
2. health
3. work environment
4. physical association and contact
5. acceptance by others
6. love and affection
7. recognition
8. dominance
9. independence
10. achievement.

Anywhere from one to six situational statements made up each need category. The statements were randomly ordered in the questionnaire and each was followed by a Likert-type scale with five alternatives (6).

The respondent compared his conception of farm employment with his preferred occupational choice by checking one of the five possible responses. The response choices and the scoring weights used in the analysis were:

Response choice	Scoring weight
Much more desirable	1
Slightly more desirable	2
Equivalent to	3
Slightly less desirable	4
Much less desirable	5

Mean scores were computed for each need category by summing the respondents' scores for all questions in that classification and dividing by the number of individual statement responses. Thus, a score of 3.0 for a need category would show indifference to that need category between farm employment and the stated occupational preference. A score of less than 3.0 reflects a favorable response toward farm employment as compared to the stated occupational choice.

Attitudes related to school level

Mean scores of attitudes were calculated for each school level—high school, community college and WSU for the 10 need categories listed above.

Only 7 of the 30 means calculated favored farm employment (table 12). Farm employment was viewed more favorably than the stated occupational choice for only two categories of need: love and affection, and independence.

TABLE 12. Mean scores of attitudes toward farm employment, by school level[1]

Need category	School: High school	Community college	WSU	All students
Favorable to farm employment:				
Independence[2,3]	2.3	2.8	2.9	2.7
Love and affection	2.8	2.9	3.0	2.9
Unfavorable to farm employment:				
Income[2,4]	3.4	3.7	4.1	3.7
Work environment	3.5	3.5	3.7	3.6
Recognition[2]	3.3	3.4	3.6	3.4
Acceptance by others[2,4]	3.3	3.3	3.6	3.4
Achievement	3.1	3.1	3.4	3.2
Dominance[2]	2.8	3.1	3.2	3.0
Health	3.0	3.0	3.1	3.0
Physical association and contact	2.9	3.0	3.0	3.0

[1]Low scores are more favorable to farm employment. A score of 3.0 indicates indifference between farm employment and occupational choice

[2]Difference between high school and WSU significant at 10% level

[3]Difference between high school and community college significant at 10% level

[4]Difference between community college and WSU significant at 10% level

The love and affection category was concerned primarily with the desirability of rural living and employment for raising a family and the social environment for both a family and a single male. The need for independence related to one's opportunity to act as his own boss in his occupation.

Farm employment was considered least desirable in terms of satisfying the income need. Student responses in this regard appear to reflect a realistic assessment of prevailing incomes in farm employment. Bureau of Census reports show that farm laborers and farm foremen receive the lowest median earnings for annual full-time male workers of any occupation listed (33).

The length of work day and week combined to create an undesirable work environment for farm employment, in opinion of students. They also found farm employment lacking in ability to meet the need for acceptance by others and for recognition. Student opinion in this regard suggests that they see a social stigma attached to farm employment.

Washington State University students, largely juniors and seniors, consistently viewed farm employment as relatively less desirable than either community college or high school students. The difference between WSU and community college students was generally smaller than between community college and high school students.

Several hypotheses may be advanced as to why attitudes toward farm employment appear more unfavorable among persons with more education. There may be a natural selection process introducing a bias against farm employment. Students with professional employment aspirations may well have a bias against farm employment or they may simply be better informed and more aware of alternatives. These students find it necessary to get a college degree, therefore weighting the mix of university students more heavily toward professional interest. Such an interpretation would accord with Davis' findings. He reported that 70% of students studied entered college with a bias toward a professional career field (4).

Another possible explanation lies in the fact that upper division university students have had a longer exposure to higher education, an environment in which traditional rural values are not as highly esteemed as in rural communities.

Attitudes related to occupational choice

Student responses were classified according to their first-ranked occupational choice, excluding "farming for themselves," to determine if attitudes toward farm employment differed among people who aspired to different types of vocations. The responses were divided into one of four specific employment categories or into an "other" category.

Mean attitudes scores were calculated and the results generally paralleled those found previously in relating attitudes to school level.

The two need categories, independence and love and affection received the most responses favoring farm employment (table 13). One rating, 3.5 given to "independence" by those choosing specific farm employment, requires some explanation. A value greater than 3.0 should have been expected because their choice of specific farm employment situation usually was a supervisory position. It is unlikely that they would have considered the general category of farm employment to offer more opportunities for independence than an explicit supervisory position.

Regardless of their occupational choice, students held rather similar views toward the various need categories. For the 8 remaining need categories combined, only 10% of the mean scores were tipped in favor of farm employment. Thus, there is little evidence that students preferring various occupations differ in the specific deficiencies they see in general farm employment. Overall, they found farm employment to be most lacking with respect to income and work environment.

Attitudes related to residential background

Students with a farm background viewed farm employment more favorably than those with rural nonfarm backgrounds, who in turn viewed farm employment more favorably than those with an urban background. Yet, the differences in mean scores were not large (table 14). There remained a strong community of agreement in attitude scores among the farm, rural nonfarm, and urban groupings reflecting negative views of farm employment when compared with a preferred occupation.

A parallel is suggested here between the fairly homogeneous views of students regardless of residential background and Slocum's data showing that educational aspirations of young farm people do not differ significantly from those of nonfarm youth (26).

TABLE 13. Mean scores of attitudes toward farm employment, by occupational choice

	Occupational choice				
Need category	Specific farm employment	Agri-business	Government	Teaching	Other
Independence[1]	3.3	2.6	2.5	2.7	2.4
Love and affection	2.8	3.0	2.9	3.0	2.9
Income[2,3]	3.3	3.9	3.9	4.0	3.5
Work environment[2]	3.2	3.7	3.7	3.9	2.5
Recognition	3.4	3.5	3.5	3.5	3.2
Acceptance by others	3.2	3.5	3.4	3.6	3.3
Achievement	3.3	3.2	3.4	3.3	3.1
Dominance[4]	3.5	3.1	2.9	3.2	2.7
Health	3.0	3.1	3.1	3.0	2.9
Physical association and contact	3.0	3.0	2.9	3.1	3.0
Average of all categories	3.2	3.3	3.2	3.3	3.0

[1]Difference between Specific Farm Employment and the three categories of Agri-Business, Government, and Other significant at 10% level

[2]Difference between Specific Farm Employment and the three categories of Agri-Business, Government, and Teaching significant at 10% level

[3]Difference between Agri-Business and Other significant at 10% level

[4]Difference between Specific Farm Employment and the two categories of Government and Other significant at 10% level

TABLE 14. Mean scores of attitudes toward farm employment, by residential background

Need category	Residential background: Farm	Rural nonfarm	Urban
Income	3.7	3.8	4.1
Health	3.0	3.2	3.3
Work environment	3.5	3.7	3.7
Physical association and contact	3.0	3.0	3.0
Acceptance by others	3.4	3.5	3.6
Love and affection	2.9	3.0	3.1
Recognition	3.4	3.4	3.5
Dominance	3.0	3.1	3.3
Independence	2.6	2.8	3.0
Achievement	3.2	3.2	3.4

Attitudes related to farming vs. nonfarming plans

Student rankings of need levels among those who planned to go into farming for themselves were compared with rankings by all students who planned to enter nonfarm employment. The responses of students who planned to farm must be qualified, since they are in no way equivalent to a comparison of self-employed farming with farm employment. Students who planned to farm for themselves were instructed on the questionnaire to make a first-choice selection of employment *other than farm for yourself* and then compare that choice with farm employment.

As might be expected, those planning to farm rated farm employment more favorably than did other students. Mean attitudes scores for six of the ten need categories favored farm employment. The remaining four, income, work environment, acceptance, and recognition, were negative (table 15).

As a group, students who did not plan to farm for themselves saw farm employment quite differently. They ranked it negatively in 8 of 10 need categories. Only with respect to love and affection and independence did they favor farm employment as much as their nonfarm occupational choice.

Attitudes toward unions for farm workers

Students were asked in a check-off question to give their opinion on whether full-time farm workers should join a union. They were further asked to state reasons for their choice. They responded in the following way:

TABLE 15. Mean scores of attitudes toward farm employment, by farming vs. nonfarming plans

Need category	Plan to farm	Do not plan to farm
Income	3.6	3.8
Health	2.9	3.1
Work environment	3.5	3.7
Physical association and contact	2.9	3.1
Acceptance by others	3.2	3.6
Love and affection	2.8	3.0
Recognition	3.3	3.5
Dominance	2.9	3.1
Independence	2.6	2.7
Achievement	3.0	3.4

Response	Pct. of Students
Yes	14
No	45
Depends on circumstances	33
No opinion	8
TOTAL	100

Except for the "depends" and "no opinion" categories, the responses by school level were very much alike. A larger proportion of community college and WSU students checked the "depends" category than did high school students. The exact opposite was true for the "no opinion" response.

Few students elected to write in reasons for their opinion. Those who did were so divided in their sentiments that no definite pattern was evident. Responses were scattered among such comments as: "Only way to get a fair wage." "If you joined a union and got higher wages you would be pricing yourself out of a job." "Too complex to generalize."

Farm employment advantages and disadvantages

Students were asked an open-ended question on the major advantages and disadvantages of farm employment. Responses were so wide-ranging that a classification scheme that included a meaningful percentage of respondents was hard to develop. One-third to nearly half of the responses had to be lumped into an "other" classification.

Job stability dominated the advantages specified for farm employment. This result is somewhat unexpected, since farm employment usually lacks institutional arrangements that provide job security, such as exist under civil service or certain collective bargaining situations. Yet, it is probably true that year-round farm workers do not typically experience periodic lay-offs that characterize the labor force of many nonfarm industries. Interesting work, which dominated the reasons for selecting an occupation (tables 9 and 10), was listed as a major advantage in the open-ended question by 8% or fewer students in each school level.

The limited opportunity for employees to be responsible for decisions was considered to be the major disadvantage to farm employment. High school students considered the long hours to be almost as bad as the lack of decision-making responsibility. Community college students were about equally divided between low income and long hours as the second most important disadvantage. Similarly, Washington State University students were about equally divided between low income and limited advancement potential as the major disadvantages to farm employment after the lack of responsibility for decisions.

The subject of working hours and time off is of central concern to both employers and employees. Many students ranked long hours as a disadvantage of farm employment. Many students also ranked farm employment unfavorably in the work environment needs category (tables 12-14);

length of work day and work week were principal elements in that category. Student responses in this regard appear to reflect a realistic appraisal of the current situation in farm employment.

According to McElroy's studies, year-round full-time farm employees in the United States worked an average of 312 days in 1973 (20:17) unchanged from the average reported in his 1968 report (20:16). A typical nonfarm work schedule is 50 weeks per year with 2 weeks of vacation and 6 to 8 paid holidays. This averages out to about 243 working days per year. Thus, on the average, farm employees work about 28% more days per year than most nonfarm working people.

Farm employees also put in more hours per week. In a study of the farm work week, Sellers reported a range of 43 to 56 hours of work per week by farm workers among 7 farm types in the Pacific region (23). The average for all farms in the region was 47 hours, the same as the national average for all farms.

Salary expectations

Students expected a starting annual salary that would average $7,629 in their preferred occupation (table 16). Washington State University students expected to receive about $1,000 per year higher starting salary than either community college or high school students. A similar pattern existed for expected salaries 10 years after entry into their chosen occupation field. The expected salaries 10 years hence reflected an average annual increase of approximately 5.5%.

On the average, high school students would require a slight salary premium over anticipated salaries to accept farm employment. On the other hand, community college and university students said they would be willing to accept farm employment with a starting salary about $50 per month lower than they expected to get in their preferred occupation.

These results are somewhat puzzling. On the surface, these data seem to imply that agriculturally trained students may be attracted to farm employment at starting salaries slightly lower than what they would expect to earn in competing occupations. Yet such a conclusion could only be drawn on the basis of students' salary expectations. As was pointed out repeatedly in earlier sections (tables 9 and 10), they gave very low rankings to beginning earnings as a reason for choice of occupation. Because of this contradiction, it seems doubtful that most of these young people would in fact accept farm employment at the salary levels they indicated. Perhaps they mean if other characteristics of farm employment were considered to be as favorable as other alternatives, they might then be willing to accept farm employment at slightly lower starting salaries.

TABLE 16. Mean anticipated annual salary and salary required to induce farm employment, by school level, 1973

Income measure	School: High school	Community college	WSU	All students
1 Anticipated starting salary in first-choice occupation[1]	$ 7,189	$ 7,170	$ 8,270	$ 7,629
2 Expected salary 10 years hence[2]	12,215	12,483	13,859	12,956
3 Lowest starting salary required to induce farm employment[3]	7,417	6,506	7,670	7,264
4 Premium required to induce farm employment[4] (3-1 = 4)	228	-644	-600	-365

[1]WSU significantly higher than either community college or high school at 10% level

[2]WSU significantly higher than high school at 10% level

[3]Community college significantly lower than either high school or WSU at 10% level

[4]All students did not respond to both the anticipated starting salary and lowest starting salary required to induce farm employment questions. Therefore, these figures represent the difference between means only for those students who responded to both questions

Salary expectations related to background factors

Students with farm and rural nonfarm backgrounds expected to receive annual starting salaries $440-$540 higher than those with urban backgrounds (table 17). But, those with urban backgrounds wanted well over $500 more than

TABLE 17. Mean anticipated annual salary and salary required to induce farm employment, by residential background, farming vs. nonfarming plans, father's education and mother's education, 1973

	Anticipated starting salary in first-choice occupation	Lowest starting salary required to induce farm employment	Premium required to induce farm employment[1] (2 - 1 = 3)
	1	2	3
Residential background			
Farm	$7,683	$7,269	$-414
Rural non-farm	7,582	7,452	-130
Urban	7,143	7,700	557
Farming vs. non-farming plans			
Plan to farm	7,622	6,870	-752
Do not plan to farm	7,634	7,663	29
Father's education			
8th grade or less	8,311	7,242	-1,069
Some high school	6,939	7,521	582
High school graduate	7,871	7,362	-509
Some college	7,656	7,328	-328
College graduate	7,099	7,280	181
Beyond bachelor degree	7,744	6,923	-821
Mother's education			
8th grade or less	7,459	7,444	-15
Some high school	7,430	7,711	281
High school graduate	7,857	7,396	-461
Some college	7,797	7,274	-523
College graduate	6,895	6,613	-282
Beyond bachelors degree	6,669	7,000	331

[1]All students did not respond to both the anticipated starting salary and lowest starting salary required to induce farm employment questions. Therefore, these figures represent the difference between means only for those students who reponded to both questions.

they expected to get from their first-choice occupation to attract them to farm employment. Students with rural nonfarm and farm backgrounds said they would accept $130-414 less in farm work than they would expect to earn on nonfarm jobs.

Both students who planned to farm for themselves and those who planned to do other work expected virtually the same starting salaries, about $7,630 (table 17). However, those planning to farm said they would be willing to work on farms for about 10% less than their first-choice occupation excluding farming for themselves. The others indicated they would have to have about the same salary.

When student salary responses were related to the educational backgrounds of their parents, no definite patterns emerged (table 17). There is certainly no clear evidence that either the father's or mother's amount of formal education is positively related to either anticipated starting salaries in the students' preferred occupations or salary levels required to interest them in farm employment.

WSU students in various major fields of study did not differ much in the starting salaries they expected (table 18). The range was only a bit over $500, with the highest expected average at $8,500. With one exception, all majors were willing to work in farm employment at somewhat lower salaries than they would expect in other occupations.

Again recall that students appeared to place substantially more importance on nonincome factors than they did on salaries. The process of career choice-making is obviously complex, and the data presented here further support the notion that income alone cannot form the proper basis for comparing the attractiveness of career jobs.

TABLE 18. Mean anticipated annual salary and salary needed to induce farm employment, by WSU major field of study, 1973

Major field of study	Income measure: Anticipated starting salary in first-choice occupation	Expected salary 10 years hence	Lowest starting salary required to induce farm employment	Premium required to induce farm employment[1] (3 - 1 = 4)
	1	2	3	4
Agricultural economics	$8,165	$12,865	$7,960	$-205
Agricultural education	8,275	12,521	7,750	-525
General agriculture	8,456	13,042	7,737	-719
Agricultural mechanics or agricultural engineering	8,314	17,333	8,429	116
Agronomy or soils	7,980	13,837	7,000	-980
Animal science	8,268	15,041	7,905	-363
Forestry or range management	7,954	12,900	7,933	-21
Horticulture	8,500	17,500	7,000	-1,500
Other	8,400	18,000	7,400	-1,000

[1]All students did not respond to both the anticipated starting salary and lowest starting salary required to induce farm employment questions. Therefore, these figures represent the difference between means only for those students who responded to both questions

Earnings in agricultural occupations

Salary levels or wage rates result from complex interaction of supply and demand factors. But, wages are more than economics. Market rigidities and institutional arrangements and constraints strongly influence the outcome. Yet, in a broad sense, the salary commanded by a particular occupation is a fair indicator of what the market place and the wider society judge to be the economic worth of the services provided and the status or rank to be conferred upon the occupation.

Students did not rank income as one of the highest considerations in their preferred occupation. But this does not mean that they considered salary level as unimportant. Nor does it necessarily presage the weighting they may place on fulfillment of various needs when they are ready to enter the career job market.

A stated preference for a given occupation presupposes information about the occupation and some kind of analysis of how it would fulfill the person's various needs. The accuracy of this information is thus crucial to choosing a career.

In the following sections, students' salary expectations and their perceptions of prevailing wage rates are compared with job market data. These comparisons provide some basis for assessing to what extent their appraisals reflect reality.

Earnings in farm employment

The farm wage rate in the Pacific region has for some years led the nation. The rate in Washington has been a front-runner and in 1974 was equaled only in Arizona (35). Yet in spite of this high level relative to other states, earnings in farm employment are substantially below those of other occupations. This disparity is general and the magnitudes are greater in many other states.

The most recent Bureau of the Census study on consumer income reports annual earnings for year-round full-time workers in 33 occupations (33). Among these occupations, mean money earnings of farm laborers are at the bottom, and by a considerable margin—about $5,200. The next lowest occupation is that of nonfarm laborer, which averages nearly $8,100. This is still very low relative to other occupations. Moreover, farm wage rates have typically been 60-70% below those in manufacturing (11).

Farm employment usually carries with it certain perquisites such as dwelling, livestock products, and garden produce, use of farm vehicles and so on. The value of the typical perquisite package would vary widely by farm type, locality, and region. But, in an average sense, it would have to be worth nearly $2,900 to put farm workers on a money-income par with nonfarm laborers.

Management jobs in farming are much better remunerated than those of farm laborers, but even so, they still rank among the lowest. Mean money earnings for the category "farmer and farm manager" stand fourth from the bottom and exceed only those of service workers, and farm and nonfarm laborers.

Farm wage rates—student estimates vs. actual

Students as a whole somewhat underestimated earnings of farm managers. Based on national averages adjusted to Washington, farm managers averaged close to $12,000 in 1973 (table 19). High school students were nearest the market—about 5% low. Community college students' estimates averaged 17% below the market level. WSU students' average was also low, about half way between the estimates of the other two groups.

Community college and WSU students were close in their estimates of prevailing wage rates for farm labor in Washington. Both groups came within 5% of the market data average for 1973 of $5,940. The average estimated by high school students was unrealistically high —27% above the market level.

No market data are available on earnings for the separate category "farm foreman or supervisor." The average estimates by the three student groups ranged from a little over $7,800 to about $8,300. This is a little under the half-way point between the market data averages for farm managers and farm laborers. These may be reasonable estimates of wages being paid to farm foremen and supervisors, but no verification is possible. The Statistical Reporting Service (35) reports wage rates only for farm laborers, and the rates reported by the Census Bureau (33) aggregate farm foremen and laborers into one category.

The data presented there show that students have a good grasp of what farm employees are paid. Furthermore, the data suggest that student attitudes concerning farm employment that are associated with income are grounded on fairly realistic assessments of the earnings possibilities in farm jobs.

TABLE 19. Student mean estimates compared with reported mean earnings in farm employment, 1973

	Occupation		
	Farm manager	Farm foreman or supervisor	Farm worker or laborer
Student estimates of earnings[1]			
High school	$11,387	$7,835	$7,515
Community college	9,934	8,347	5,644
WSU	10,953	8,299	5,709
Earnings reported by:			
Washington Crop Reporting Service[2]	*	*	5,940
Bureau of the Census[3]			
U.S.	9,523	$5,206[7]	
Washington[4]	11,932	6,523[7]	

[1]Estimates based on a series of estimated mean values for specific income class intervals

[2]Source (35)

[3]Source (32, 33)

[4]An estimate based on adjusting the U.S mean according to the relationship between the Washington and U.S. mean farm wage rates in (35)

[5]A rent-free house plus the income indicated is reported as total remuneration. The 1974 average reported was $6,540

[6]Includes farmers and farm managers, they are not reported separately

[7]Includes farm foremen or supervisors and laborers; they are not reported separately. Mean earnings in 1973 for laborers excluding farm was $8,08

*No data available

Earnings of WSU agricultural graduates

Starting salaries anticipated by WSU students were generally lower than actual starting salaries of B.S. graduates in their fields. For all majors, anticipated salaries averaged about $200 below starting salaries of graduates in 1972, and about $500 below the 1972-73 average (table 20). Only in two cases did expectations appear out of line with what the job market was paying. The average anticipated salaries of agronomy and general agriculture majors were substantially higher than the starting salaries of graduates from these two fields.

TABLE 20. Mean anticipated starting salaries in first-choice occupation, WSU students, and mean starting salaries for B.Sc. degree graduates, College of Agriculture, Washington State University, 1972-74, by major field of study

Major field of study	Anticipated starting salary in first-choice occupation-- WSU students	Starting salaries for B.Sc. degree graduates[1]		
		1972	1973	1974
Agricultural economics	$8,165	$8,004	$10,000	$ 8,500
Agricultural engineering and agricultural mechanization	8,314	*	9,557	10,940
Agricultural education	8,275	9,255	9,046	10,000
Agronomy and soils	7,980	6,500	*	9,0[illegible]
Animal science	8,268	*	*	10,000
Entomology	*	9,000	9,000	10,500
Food science and technology	*	9,000	11,333	11,500
Forestry and range management	7,954	7,668	8,694	9,091
General agriculture	8,456	*	7,867	9,250
Horticulture	8,500	9,643	8,413	8,955
All majors	8,270	8,487	9,094	9,389

[1]Data from (27). These data are based on the known employed graduates. For 1974, 1973, and 1972, no information was available for 14%, 14%, and 24% of the graduates, respectively

*No data available

B.S. graduates' employment compared with student preferences

WSU students' stated first-choices of occupations accord very well with the employment experience of WSU College of Agriculture B.S. graduates during the 1972-74 period. But there was one important exception—the choice of farming for yourself (table 21). Forty-three percent said they would most like to farm for themselves, yet only 19% of the graduates actually did so.

This proportion is close to the figure reported by Blau and Duncan in their study during 1960 of the occupations of farmers' sons (1). They found that 16% eventually ended up farming for themselves. West and Price (38) recently reported data on occupations of farmers' sons similar to those of Blau and Duncan. Their results show that

TABLE 21. Percentage distribution of preferred occupations of WSU students, and starting jobs of B.Sc. degree graduates, College of Agriculture, Washington State University, 1972-74

Occupational field	Preferred occupation	Preferred occupation excluding the choice of farming for yourself	Starting jobs of B.Sc. graduates, WSU College of Agriculture[1] 1972	1973	1974
	%	%	%	%	%
Farming for yourself	43	xxx	19	17	21
Farm employment	3	15	5	4	1
Business and industry	24	45	14	27	31
Education, extension	10	13	12	13	14
Government	16	18	17	12	14
Other	4	9	33	26	19
Totals	100	100	100	100	100

[1]Data from (27). These data are based on the known employed graduates. For 1974, 1973, and 1972, no information was available for 14%, 14%, and 24% of the graduates, respectively.

18% of those 25 years and older were self-employed farmers in 1972. These studies and the data presented here on employment experience of WSU graduates suggest that well over half of those who aspire to self-employed farming after graduation may never realize this ambition.

When the occupation of farming for yourself is excluded as a choice, two important shifts occur. The number indicating a preference for farm employment increases from 3%—a figure on par with employment experience of graduates—to 15%. And the proportion reporting the first-choice of business and industry nearly doubles. Those shifts are largely explained by the choices made by students whose first preference wa farming for themselves. Nearly half this group said they would prefer jobs in business and industry and 30% in farm employment. The balance reported shifts to other fields.

Student preferences compared with the employment experience of graduates also suggest that a higher proportion of students than indicated by their preference rankings will eventually take jobs in the "other" category, which includes a wide range of occupations.

Job preference and employment—WSU majors

Only 3% of the jobs taken by WSU College of Agriculture B.S. graduates during the 1972-74 period were in farm employment, and all were filled by students from 3 major fields of study (27). However, this accounted for only 16 jobs. Eight were filled by animal science majors, one from forestry, and seven from horticulture.

Ninety-nine graduates went into farming for themselves over this same 3-year period; four-fifths of this total came from four major fields of study. Twenty-nine were agricultural economics majors, 19 were from general agriculture, 17 from agronomy, and 16 had majored in animal sciences.

When student preferences for farming and farm employment are related to jobs taken by B.S. graduates, the most pronounced differences occurred among students majoring in agricultural education and animal sciences (table 22).

A fourth of the agricultural education majors reported a first-choice of farming for themselves, but only 2% of agricultural education graduates went into farming for themselves in the 1972-74 period. Ninety-eight percent of the graduates took jobs teaching vocational agriculture in high schools. Teaching was the unanimous second-choice of the agricultural education majors who said their first-choice was farming for themselves. It would appear that the virtual uniformity in the employment record of agricultural education graduates is not entirely because teaching was the preferred occupation.

Animal science students and their counterpart graduates present another interesting contrast. Slightly over a fifth of the B.S. graduates went into farming for themselves during the 1972-74 period. Yet, nearly three-fifths of animal science majors said that self-employed farming would be their first choice.

Apparently, farming is an attractive occupation to many animal science students. Two-thirds of those who gave self-employed farming as their preferred occupation would choose farm employment as their second choice. Moreover, when farming for yourself was excluded as an occupational choice, 43% of animal science majors said they would choose farm employment.

TABLE 22. Percentage of WSU students stating preference for farming for themselves and farm employment related to percentage of WSU College of Agriculture B.Sc graduates taking jobs in these fields, by major field of study

Major field of study	Occupation: Farming for yourself — WSU students' stated preference	Farming for yourself — WSU graduates employed 1972-74[1]	Farm employment — WSU students' stated preference	Farm employment — WSU graduates employed 1972-74[1]
	%	%	%	%
Agricultural economics	32	43	4	0
Agricultural engineering and agricultural mechanization	*	27	*	0
Agricultural education	25	2	0	0
Agronomy and soils	44	33	0	0
Animal science	57	22	5	11
Entomology	0	0	0	0
Food science and technology	*	0	*	0
Forestry and range management	7	3	0	0
General agriculture	53	53	5	0
Horticulture	*	10	*	14
Total	43	19	3	3

[1]Data from (27). These data are based on the known employed graduates. For 1974, 1973, and 1972 no information was available for 14%, 14%, and 24% of the graduates, respectively

*No percentages calculated; sample size was five or fewer students

A comparison of the occupational preferences of animal science students with the employment record of graduates suggests that a much lower proportion of students than would prefer to will actually get into farming on their own. Moreover, a higher percentage than student preferences indicate will take farm employment.

Forty-four percent of agronomy students said their first-choice occupation was farming for themselves. The 1972-74 employment record of agronomy graduates suggests that only about three-fourths who have expressed this choice will actually get into farming for themselves. The record also shows that nearly a third of agronomy majors have gone into business and industry and that figure is fairly close to the students' indicated preference for that field. But, only about a third of the 22% reporting a first preference for government work will be employed in that occupation if the 1972-74 employment pattern continues.

The situation for agricultural economics students is quite different from that reported for the other majors. A third said they would select farming for themselves as a first occupational choice. Yet, the employment record for graduates over the 1972-74 period shows that 43% have gone into farming for themselves—the highest rate among all majors graduating from the College of Agriculture at Washington State University.

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