



Marketability of Illinois Agriculture College Graduates

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Abstract

Beginning in 1975, all Illinois agricultural colleges cooperated in a study to show the marketability, or job placement, of their two-year and four-year graduates. The methods used in acquiring data, with the necessary cooperation of all Illinois colleges, are discussed. Areas of employment and other data are shown as reported by individual graduates and by college personnel. Uses of such data by students, parents, counselors, and college planners are shown in the recommendations and conclusions.

Introduction

This study was developed primarily as a result of past problems arising from educational institutions attempting to offer, continuing to offer, or expanding agricultural programs. These problems included:

1. The inadequacy of job opening and placement data for college planners to justify the need for new or revised programs. Changing agricultural technology and agricultural production practices, resulting in desirable financial returns, have stimulated farmers to acquire more education. Suppliers of inputs have had to become better educated to properly serve farmers. These conditions will continue in the future, resulting in the need for more education of suppliers of agricultural inputs, farmers, and distributors of agricultural products. New jobs requiring new skills will create needs for trained personnel. The agricultural colleges should provide programs to meet these changing needs.

2. There were inadequate data to show actual job placement of agriculture graduates. National news media emphasized the surplus of college graduates. The general public assumed this applied to all graduates. As such articles were being published, almost all Illinois agriculture graduates were obtaining employment. The national surplus of public school teachers was also being emphasized, even when there was a shortage of agriculture teachers.

3. There were inadequate data to support counselors in advising students and parents about post-college agricultural career opportunities.

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4. There has been an historical tendency for high school and college program planners to scrutinize agriculture programs when confronted with budgetary constraints. Even without supporting data, proposals usually followed to reduce or eliminate these programs. Too often the general public accepted such proposals as the only feasible approach to solving financial problems.

Objectives

The objectives of this study were as follows:

1. To obtain annual records of the "first full-time career positions" obtained by all agriculture graduates from the two-year and four-year Illinois education institutions offering degrees in agriculture.

2. To assemble data that would indicate the marketability of graduates from the various professional agriculture programs.

3. To make the data available annually to high schools, two-year colleges, and four-year colleges offering agriculture for:

- a. advisement of students and parents relative to careers in agriculture.
- b. curriculum building and up-dating.

These objectives, relative to the Illinois agriculture graduates of 1975, have been achieved. Also, the instruments and procedures for data collection have been developed and tested. With some modifications in the questionnaires and experience in analysis, the resulting data, through time, will provide a sound historical data base from which counselors, students, parents, and college planners may make sound decisions relative to agriculture programs and careers. The data may also be used by agriculture planners to justify the importance of higher education in agriculture to non-agriculture college administrators, taxpayers, and others unfamiliar with educational needs in agriculture.

Procedures

Data Collection

Two questionnaires were used for data gathering: (1) one by each of the 1975 Illinois agriculture graduates, and (2) one by an agriculture educator from each of the Illinois agriculture colleges. Graduates from almost 100 percent of the Illinois agriculture colleges completed questionnaires, and 100 percent of the agriculture colleges provided data on 100 percent of their agriculture graduates. All data presented in this study were reported by the graduate and/or the college.

Cooperation from Illinois Colleges

In April, 1975, the proposal for the study was presented to the Annual Meeting of the Illinois Articulation Conference. This organization, founded over 20 years ago, is made up of representatives from all Illinois agriculture colleges. Approximately 60 Illinois college teachers of agriculture attend each annual meeting. The primary purposes of the organization are to articulate agriculture courses, to develop standard introductory agriculture curricula for Illinois, and to discuss and offer solutions to current curricular problems.

TABLE 1. — Placement of and average beginning monthly salaries, 1,528 agriculture graduates, Illinois two-year and four-year agriculture colleges, 1975, and projected monthly salaries, 1976, as of 1975

Placement Area	Two-Year		B.S.		M.S.		Ph.D.		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Further Education	107	18	127	17	37	25			271	18
Educ. or Extension	6	1	30	4	40	27	20	50	96	6
Farming-Prof. Farm Mgt.	209	34	153	21	3	2	14	33	379	25
Private Industry	244	40	184	25	43	29	7	17	478	31
Government Work	12	2	48	7	22	15			82	5
Military	3	½	2						5	0
Not Placed	4	½	47	7	2	2			53	4
Other	23	4	141	19					164	11
Totals	608		732		147		41		1528	100
Avg. Monthly Salary, 1975		\$675		\$829		\$970		\$1,250		
Expected Avg. Mo. Salary, 1976		\$713		\$900		\$1,013		\$1,325		

After the proposal was presented, the Conference membership passed a resolution in the form of a motion "to support and cooperate in the study" (support and cooperation meaning to provide the necessary data to make the study a success). In addition, the chairman of the conference appointed a six-member committee, four members from the two-year colleges, and two from the four-year colleges, to assist in the final development of the study. This committee was later termed an Advisory Council and has provided valuable input and support. The support and cooperation given by the members of the Conference, the Advisory Council, and the agriculture teachers at each of the Illinois colleges was necessary in order to obtain the data for this study.

Summary of Data

In 1975, there were 39 Illinois colleges offering courses in agriculture. Thirty-five of these were two-year colleges. However, 11 of the two-year colleges had no graduates in 1975. All four of the four-year colleges had B.S. graduates, two had M.S. graduates, and one had Ph.D. graduates.

There were 1,528 Illinois agriculture graduates in 1975—608 from the two-year and 920 from the four-year

colleges. There were 732 B.S., 147 M.S., and 41 Ph.D. graduates.

Of the 1,528 Illinois agriculture graduates from all agriculture colleges in 1975, 478 (31 percent) were reported placed in private industry, 379 (25 percent) in farming or professional farm management, and 271 (18 percent) continued their education. This is a total of 1,128 (74 percent) entering these three general areas. Of the remaining 26 percent, six percent entered education or extension, four percent were not placed at time of reporting, and 11 percent were reported as "other."

The average monthly salary for the two-year graduate was \$675, for the B.S. graduates \$829, for the M.S. graduates \$970, and the Ph.D. graduates \$1,250. All Ph.D. graduates were reported placed, and all but two percent of the M.S. graduates were placed. The average beginning salaries for all were projected to be higher in 1976.

Most of these graduates were 20 to 22 years old. Approximately 94 percent of the two-year graduates were male and six percent female. Of the four-year graduates, 91 percent were male and 9 percent female. A greater percentage of females is expected at all Illinois agriculture colleges in the immediate future.

TABLE 2. — 4-H, Agriculture Occupations Courses, FFA, and other vocational organization experiences in high school, reporting two-year and four-year Illinois agriculture graduates, 1975

Type of College	4-H		Ag. Occupations		FFA		Other Voc. Organizations	
	Yes	No	Yes	No	Yes	No	Yes	No
Two-Year	65.6	34.4	80.6	19.4	75.5	24.5	35.6	64.4
Four-Year	51.1	48.9	49.2	50.8	47.5	52.5	20.9	79.1
Combined	59.7	40.3	67.7	32.3	64.0	36.0	29.5	70.5

TABLE 3. — Type of employer, reporting two-year and four-year Illinois agriculture graduates, 1975

Type of College	Farm- ing	Farm Sup.	Serv.	Mgt.	Ag. Fin.	El. and Sec. Ed.	Higher Ed.	Govt.	Food Dist.	Other
Two-Year	53.3	26.4	5.1	0.0	0.0	0.0	0.0	1.0	0.0	14.2
Four-Year	31.0	16.2	4.2	0.7	3.5	7.8	4.2	10.5	2.1	19.7
Combined	44.0	22.1	4.7	0.3	1.5	3.2	1.8	5.0	0.9	16.5

The two-year graduates came primarily from rural and small-town areas (94 percent). Of the four-year graduates, 65 percent were rural, 16.4 percent small-town, and 18.6 percent urban.

Nearly two-thirds of the two-year graduates had 4-H experience, three-fourths had FFA experience, and three-fourths had agriculture in high school. About one-third of the graduates had other vocational organization experience. The four-year graduates had less involvement in 4-H, FFA, and other vocational experience.

Upon graduation, about one-half of the two-year graduates entered farming as "operators," "partners," or "salaried," while more than 20 percent continued their education. With the exception of the seven or eight percent reporting "no career employment" or "other employment," the remainder were salaried. Farming, farm supply, and service provided employment for over three-fourths of the two-year graduates.

Regarding the type of employer, more than one-half (53.3 percent) of the two-year graduates reported "farming," more than one-fourth (26.4 percent) reported "farm supply," and 5.1 percent "service." "Other" was reported by 14.2 percent and "government," one percent. Farming, farm supply, and service accounted for nearly three-fourths (74.8 percent) of the types of employers.

Types of employers of the four-year agriculture graduates of 1975 were greater in number. However, 31 percent reported "farming," 16.2 percent "farm supply," and 4.2 percent "service." These three types of employers provided jobs to more than one-half (51.4 percent) of the four-year graduates. One out of five (20 percent) reported "other" as the type of employer. Education was reported by over 10 percent, and "government"

by more than 10 percent. "Agriculture finance" was reported by 3.5 percent, and "food distribution" or "manufacturing and management" was reported by the remaining three percent.

For the population of 1975 graduates, 44 percent reported type of employers as "farming," and 22.1 percent as "farm supply."

The majority (66 percent) of the Illinois two-year agriculture graduates reported a very close relationship between employment and college major. "Closely" was reported by 21.8 percent, and "somewhat" by 9.6 percent. Only 2.6 percent reported "not related."

Less than one-half (44.5 percent) of the four-year agriculture graduates reported a very close relationship. "Closely" was reported by 28.1 percent, "somewhat" by 16.4 percent, and "not related" by 11 percent. The reporting by the four-year graduates was logical since they reported a much greater variety of employers than the two-year graduates.

There appeared to be a tendency for the Illinois two-year agriculture graduates to evaluate their college education higher than did the four-year graduates. Almost one-third (31.9 percent) of the two-year graduates rated their higher education "superior" and "unusual." Only 2.2 percent rated it "below average" or "inadequate." Slightly more than one-fourth (27.2 percent) of the four-year graduates rated their education "superior" or "unusual," while 11.4 percent rated it, "below average" or "inadequate."

Agriculture production was the specialization preferred by the two-year graduates. There was much more diversity among the four-year graduates. Animal agriculture and agriculture science were the most preferred at 15 and 16 percent respectively.

TABLE 4. — Relationship of employment to college major, reporting two-year and four-year Illinois agriculture graduates, 1975.

Type of College	Very Closely	Closely	Somewhat	Not Related
		Percent		
Two-Year	66.0	21.8	9.6	2.6
Four-Year	44.5	28.1	16.4	11.0
Combined	56.9	24.5	12.5	6.1

TABLE 5. — Student evaluation of higher education received relative to achieving present employment status and potential, reporting two-year and four-year Illinois agriculture graduates, 1975.

Type of College	Superior	Unusual	Above Average	Average	Below Average	Inadequate
Two-Year	23.5	8.4	36.9	29.0	1.1	1.1
Four-Year	16.5	10.7	30.7	30.7	5.0	6.4
Combined	20.4	9.4	34.2	29.8	2.8	3.4

Salaried positions were accepted by more than one-half of the four-year graduates. Over one-half of these positions were in "agriculture related" or "agribusiness," and 29.9 percent were in "farming." As with the two-year graduates, "farming" and "farm supply" provided employment for the majority of graduates. "Other" types of employment provided positions for both two-year and four-year graduates.

Although annual earnings of the graduates of agriculture mechanics, agriculture production, and agriculture supply appeared to be higher than those of some other areas, two-year graduates with no specialization had some of the highest earnings. Many of the graduates also had secondary employment with substantial earnings.

Of the 1,528 Illinois agriculture graduates of 1975, over one-half (56 percent) went into "private industry" and "farming or professional farm management." Eighteen percent continued their education, and the remainder accepted positions in "education," "extension," and "government." Only four percent reported "not placed."

On the basis of numbers of agriculture graduates placed in various areas, the greatest areas of need appeared to be production agriculture and agriculture supply. However, greater needs in these broad areas are concomitant with greater support needs in other areas: education, agriculture mechanics, agriculture services, agriculture economics, general agriculture, horticulture, plant and animal agriculture, agriculture science, natural science, and various combinations of these areas with related agriculture areas, as well as non-agriculture areas.

Recommendations

The following recommendations appear to be warranted from the analysis of the data collected in the first phase of this study. The data should prove to be helpful to decision makers in:

1. Resource Allocation: With ever-increasing competition for funds for education, those people responsible for budgetary allocation should make decisions on the basis of valid data to assure optimum use of available funds.

2. Curriculum Planning: Planners of programs should provide appropriate courses and programs in career education, commensurate with societal needs, to enhance the marketability of graduates.

3. College Administration: Final decisions by college administrators should be based on valid data reflecting actual needs, economy, and efficiency.

4. Parents and Students: Both parents and students make sacrifices for students to obtain education for a career. Factual data should be available upon which both may make decisions relative to occupational opportunities.

5. College Follow-Up: Colleges should have a continuing follow-up and evaluation program in all educational areas. The rapid increase in technology and changing societal needs mandate constant evaluation to assure that the occupational programs are directly related to post-graduation employment.

The necessary data for making optimum decisions by all concerned can be available only through the cooperation of college personnel with a qualified researcher(s). As a result, college personnel should encourage, support, and cooperate in research that will provide data upon which decisions of optimum value may be made.

CONCLUSIONS

Judging from actual job placement, the Illinois agriculture colleges are providing the necessary education to young men and women for careers in agriculture. Both specialized and general areas of agriculture education are offered. Follow-up data of occupational programs graduates indicate that the education received is applicable for placement in a cluster of occupations, as well as for the specific occupation for which the student was trained. Guidance counselors at both high schools and colleges should be aware of these findings.

The education of those directly engaged in agriculture will affect the economy and standard of living of all people. Concurrently, and of great importance, Illinois colleges are preparing young men and women, the majority from the rural and small-town areas, for careers that meet the needs of the labor market. Without this training, these young people, many already having valuable agriculture experience, might be lost to agriculture.