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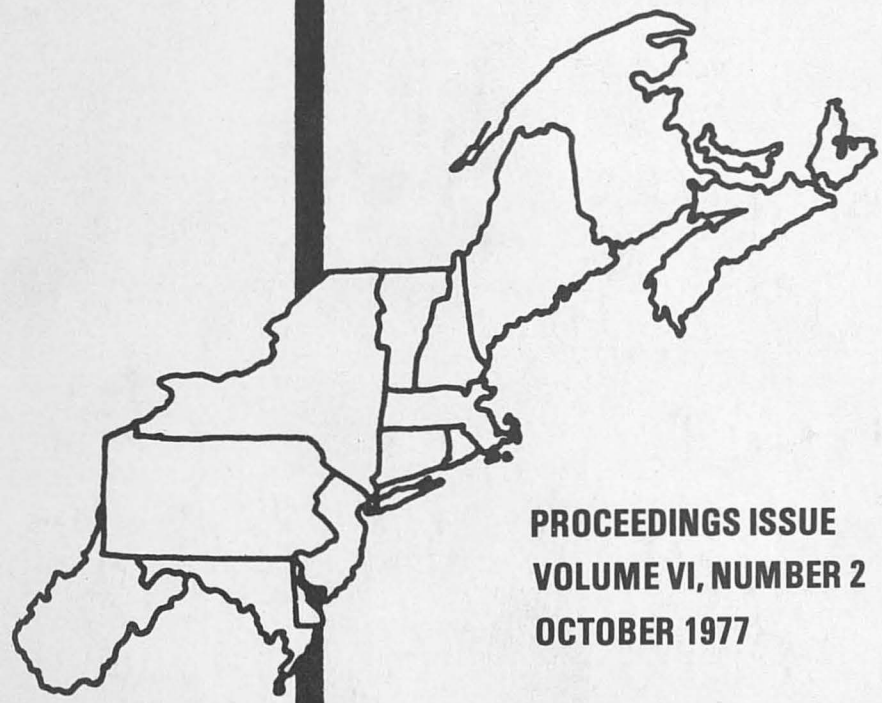
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NON-TRADITIONAL CAREERS: FEMALE AGRICULTURAL ECONOMISTS

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Not too long ago, most decisions were made by men. Using the brain was considered "unfeminine," and it was a rare woman who was acquainted with the intricacies of financial planning. Today, things are changing as more and more women realize that prudent action in money matters can mean the difference between a comfortable future and "just getting by."

New opportunities have been arising for women due to changes in technology, demographic formation, economic conditions and, yes, even executive orders and affirmative action! These new opportunities have penetrated into fields considered non-traditional for women (1, 4, 5). The field of agricultural economics is no exception; there has been an increase in the number of women enrolling in agricultural curriculums across the nation. With the increasing numbers of females in the non-traditional areas, adequate and current data is needed to provide basic information on the state of affairs relative to employment that can be used in advising of female students in Agricultural Economics.

A purpose of this study was to determine how many females graduated from 1970 through 1976 in agricultural economics as well as the number of males for comparison. Library research indicated a lack of data on the number of female graduates in Agricultural Economics at the various institutions in the United States. In view of this circumstance it was decided that the study would have to be based on a survey of Departments of Agricultural Economics.

The Survey of Department Chairmen

To obtain the desired information a survey of all Chairmen of Agricultural Economics Departments in Land Grant Institutions where degrees can be earned in agricultural economics was made. They were asked to provide a list of names and current addresses of all female graduates since 1970 by year and, also, list the number of male graduates for the same time period.

FIGURE 1: FEMALES GRADUATES WITH B. S. DEGREES
IN AGRICULTURAL ECONOMICS
1970-1976

Number of
Graduates

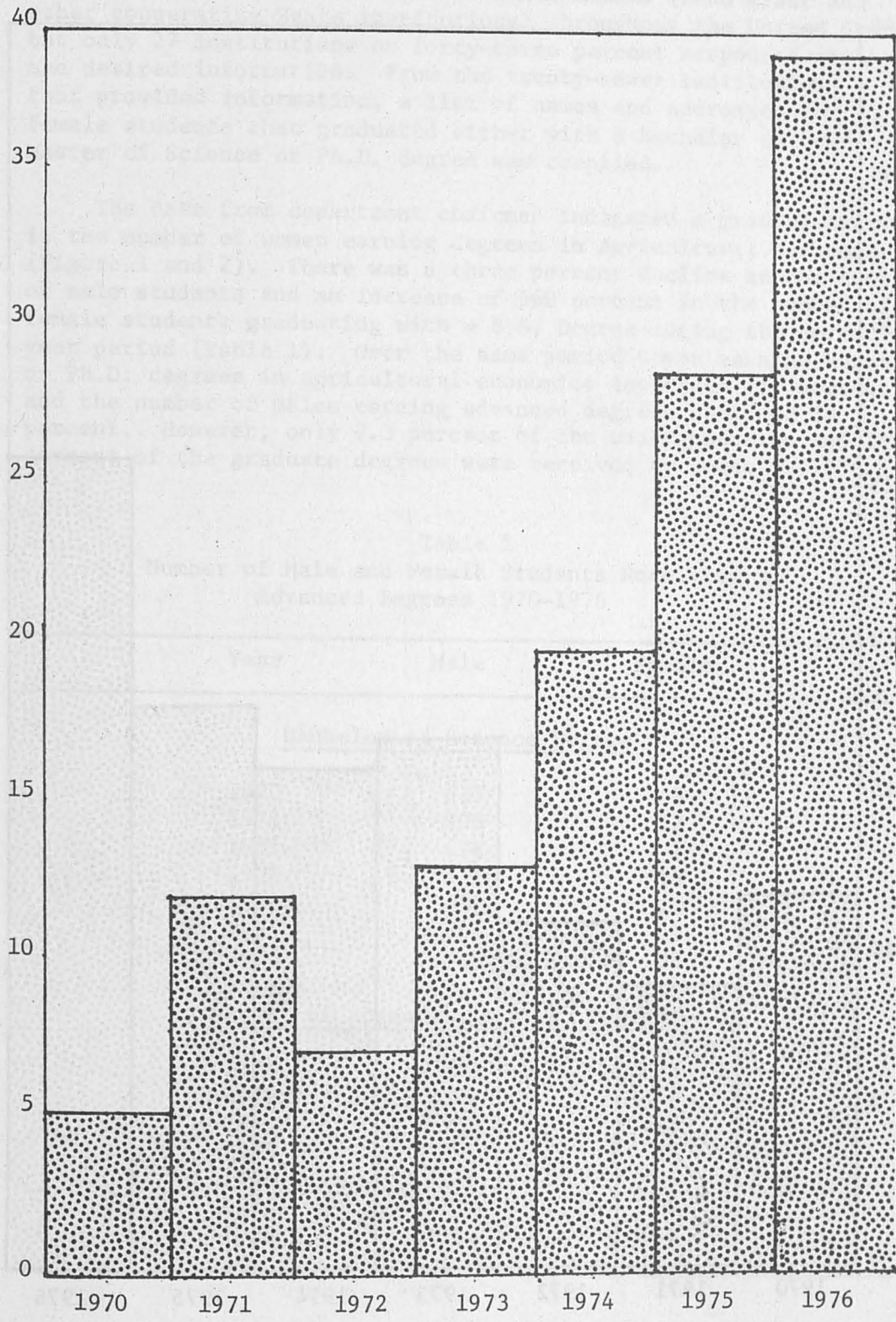
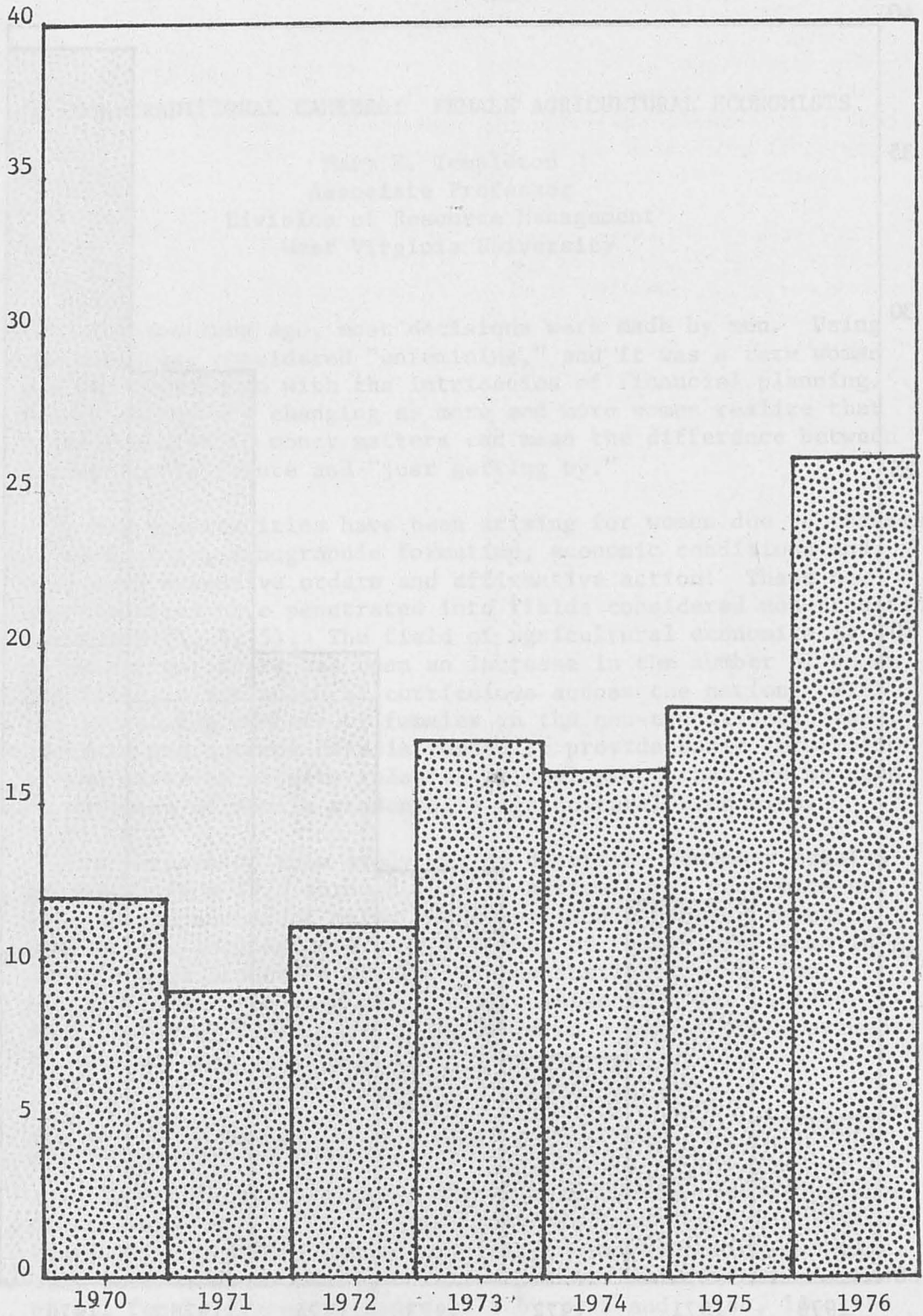


FIGURE 2: FEMALE GRADUATES WITH M. S. & Ph.D.
DEGREES IN AGRICULTURAL ECONOMICS
1970-1976

Number of
Graduates



The request was mailed to 63 institutions (land grant and other cooperating State institutions) throughout the United States, but only 27 institutions or forty-three percent responded with the desired information. From the twenty-seven institutions that provided information, a list of names and addresses for 237 female students that graduated either with a Bachelor of Science, Master of Science or Ph.D. degree was compiled.

The data from department chairmen indicated a gradual increase in the number of women earning degrees in Agricultural Economics (Figure 1 and 2). There was a three percent decline in the number of male students and an increase of 660 percent in the number of female students graduating with a B.S. Degree during the seven year period (Table 1). Over the same period women earning Masters or Ph.D. degrees in agricultural economics increased 117 percent and the number of males earning advanced degrees declined 38 percent. However, only 7.3 percent of the undergraduates and 15.9 percent of the graduate degrees were received by women in 1976.

Table 1
Number of Male and Female Students Receiving
Advanced Degrees 1970-1976

Year	Male	Female
<u>Bachelor of Science Degree</u>		
1970	533	5
1971	696	12
1972	678	7
1973	621	13
1974	637	20
1975	609	29
1976	518	38
<u>Master of Science and Ph.D. Degrees</u>		
1970	263	12
1971	326	9
1972	286	11
1973	290	17
1974	275	16
1975	232	18
1976	163	26

The changes in employment opportunities for women have been a contributing factor in the increased enrollment in the field of agricultural economics. Reviewing the historical patterns of female employment in the 1960's indicates that the largest increases occurred in the employment of school teachers and nurses (2). Percentage gains were made in professions in which women had been either very poorly or rather slightly represented in earlier decades. These included accounting, architecture, chemistry, other life and physical sciences, personnel and labor relations, dentistry, pharmacy, medicine, social science, etc. In many of these occupations the total number of women employed, as well as their relative representation, continues to be small, but the changes are pronounced. These patterns are especially noted during the latter part of the decade when sex differentiation in employment were clearly beginning to break down according to Carnegie Commission of Higher Education (3).

Other indicators that sexual patterns of employment were changing occurred among blue-collar workers where large percentage increases in female employment were noted in skilled craftsmen and laborers, two groups in which had been very much underrepresented in the past (2).

From 1950 to 1960 a very large proportion of the increase in employment of female college graduates (88 percent) was in the professional, technical group. This employment outlet increased the hiring of female college graduates relative to employment of men (3, 6).

Survey of Women Graduates

Since the historical data coincides with information provided by the department chairmen, and after obtaining names and addresses of women who graduated in the field of Agricultural Economics, a questionnaire was designed and mailed to all of the women. The survey involved only 5 questions:

1. Why did the graduate choose the field of agricultural economics?
2. Did the graduate encounter any problems in obtaining employment since receiving her degrees, if so explain.
3. Indicate the type of employment she had accepted.
4. Did the degree holder believe that being female gave her an advantage?
5. Each graduate was asked to list highest degree earned, the institution and date of the degree.

Each graduate was mailed a questionnaire. The response was not as large (27.4 percent) as would be expected for a mail survey to a selected population. However, approximately six percent were returned for insufficient addresses. Although the number of responses was small, they were relatively important.

Each graduate was asked to indicate why she chose the field of agricultural economics. Only four percent of the respondents indicated that employment opportunities was the reason for majoring in the field. This response is of special interest when comparisons are made of unemployment rates among professions. In the spring of 1971 unemployment rates, as shown in Table 2, were lowest in the agricultural sciences field as reported by the National Science Foundation (2). If the graduates were cognizant of the employment opportunities, they did not indicate that in their reasons for choosing agricultural economics. Approximately twenty-five percent of the women chose the field of agricultural economics because of their farm or rural background. Other reasons which stimulated their choice of agricultural economics were as follows:

1. Spurred by interest in gardening and working part time on a cranberry bog at harvest time.
2. Agricultural economics majors have many options (back to farm, service type jobs, and teaching).
3. Believes it to be a field just opening up for women with good opportunities.
4. Enrolled in a good agricultural economics class and the teacher in high school sparked interest in subject area.
5. Required to take a course in agricultural economics for another major and decided to double major in agricultural economics - interest in business and finance.
6. Concerned about world food problems and economic development as a means to help poor people in developing countries.
7. Raised on a farm with no brothers, enjoyed farming, decided no matter if she was a girl she was going to be a farmer.
8. Flexible degree enabling a woman to obtain work in different communities.

Table 2
Unemployment Rates of Scientist by Field, Spring 1971

Field	Percent
Chemistry	3.0
Earth and Marine Science	2.7
Atmospheric and Space Science	2.8
Physics	3.9
Mathematics	2.6
Computer Science	3.6
Agricultural Sciences	0.9
Biological Sciences	1.7
Psychology	1.6
Statistics	2.2
Economics	1.6
Sociology	3.8
Political Science	3.4
Anthropology	1.3
Linguistics	4.5
TOTAL	2.6

Source: Carnegie Commission on Higher Education (2).

9. Obtained a degree in economics, employment opportunities were limited, accidentally pursued MS and then Ph.D. in agricultural economics.
10. Loved the outdoors, since being raised in city felt going into agriculture would be rewarding.
11. Interested in land use planning and natural resource economics, enjoyed the marriage of agriculture and business.

An inquiry was made into the problems that each graduate experienced in obtaining employment and approximately two-thirds of the respondents indicated they had no problems obtaining employment. This substantiates the data in Table 2, where the Agricultural Scientist had the lowest unemployment rate (0.9 percent) in 1971. It is noteworthy, however, that of the 33 percent who encountered employment problems a number of items were listed which in their opinion imposed "barriers to entry." Among these were:

1. Encountered department heads who indicated there were no positions while actively recruiting male agricultural economists for openings in their departments.

2. As first woman hired at the experiment station - my every move is an experiment - and encountered only the obvious problems when surrounded by eight men eight hours a day.
3. Felt employers didn't take me seriously, asking if I could type.
4. Employer generous in pay and titles but has been extremely reluctant to give work with any real responsibility. Believes the lack of stimulating work discourages women from pursuing their career in a traditionally male dominated field like agricultural economics.
5. A problem I have encountered has been trying to work my way into a department where there were no women in responsible positions and the frustration of being trained.
6. Only when being interviewed, asked if I would like to work up from a position of office assistant as that was how all their female employees got to be professionals.
7. Many agribusinesses have not begun to actively recruit women, and many of those who have their "female positions" are in personnel and research labs.
8. I work in a male dominated industry and the assumptions are that the female "really" doesn't know as much as the average male.
9. Some very real but subtle discrimination in working for government - older supervisors who think women should stay in the home.
10. If you lack knowledge in a certain field it is your fault and they do not give you the training men receive.
11. Major problems is acceptance by predominately male co-workers, and some resentment from wives. The agricultural sector is not yet so liberated.
12. Difficulty in determining who needs women for "window-dressing" and who is looking for quality instead. Believes recruitment has more deception than employment offered.

The above problem areas should be of interest to employers, students and advisers. They should be pointed out to prospective students. Further, these facts should be related to students before they begin interviewing for employment.

Low wages and nominal titles were the most prevalent problems cited by women. In fact, 20 percent of all female agricultural economics degree holders noted that they had encountered wage and salary problems when seeking employment. Only three percent of all graduates who responded indicated they had encountered any form of discrimination. It is very likely that the percentage would have been greater if it were not for the influence of affirmative action.

Each respondent was asked if being a female had given her an advantage when seeking employment. Of the responses to this question, 46 percent indicated it made no difference, another 35 percent indicated there was an advantage and 19 percent indicated that being a female was a decided disadvantage. The most prevalent advantage listed was that it was easier to find employment. Others indicated affirmative action was a farce and was not being implemented.

Female agricultural economists are employed by many industries and agencies. Thirty percent of those responding were hired by public agencies which included: Soil Conservation, Ministry of Agriculture, U.S. Bureau of Census, Environmental Protection Agency, Forest Service, Federal Grain Inspection Agencies, Foreign Service and Economic Research Service. An additional twenty-five percent of those responding were employed by educational institutions (Agricultural Economics and Resource Economic Departments or vocational technical schools). Thirty percent were employed by private industries including banks (private and federal land banks), real estate firms and insurance companies. Fourteen percent of the women were self employed, however, they did not indicate the type of business. The remaining one percent did not answer the question on type of employer. The above information on various types of employers indicates that female agricultural economists can find employment in a wide variety of industries and agencies of government.

The employment data should be useful to recruiters and counselors when interviewing students. It should not be too difficult for an adviser to say;

"Look girls, there have been others that proceeded you that earned degrees in agricultural economics, subsequently they sought employment and they were hired. They are employed by many firms and agencies. Some indicated they encountered a few employment problems but these were likely no greater than those encountered by males."

Conclusions

Based on this study prospective female students should be encouraged to enroll as majors in the field of agricultural economics. The number of female students enrolling in agricultural economics has been increasing, and this should be a good indicator for a

promising profession. There are many job opportunities for women - they have encountered few problems (which probably are no greater for females than males) with salaries and titles, and they are enjoying working in what has been a normally non-traditional field for women.

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