Career Choices for Agriculture Graduates Depend on Regional Job Trends

D. T. Dayberry and J. M. Dillingham

An assessment of agricultural graduates of Southwest Texas State University revealed unique employment opportunities when compared to national projections by U.S. Department of Agriculture (USDA) personnel. Regionally, percentages of graduates employed in production, management, and education were higher, while lower percentages were employed in sales, social, and science related careers compared to USDA data.

Introduction

Data gathered by national agencies (United States Department of Agriculture and National Science Foundation) and regional entities (colleges and universities) predicted either prosperous or gloomy outlooks for agricultural careers. Nationally, projected demands for agricultural graduates in a rapidly changing workplace should be indicators of future jobs for entering college students. Regionally, similar forecasts were made to predict whether career opportunities would, in fact, be available for graduates of agricultural programs. Consequently prosperity for university degree programs can be measured by the successful employment of graduates. Conversely, limited job opportunities curtail programs. The 1980 USDA report, *Graduates of Higher Education in the Food and Agricultural Sciences*, projected career availabilities based on post-secondary agricultural enrollment and agricultural industry demography. Coulter, Stanton, and Goecker (1986, 1990) specifically identified six agricultural employment clusters and projected deficits or surpluses of graduates based on industry projections. Based on their study, students should have been advised toward areas of high employment opportunities which had projected deficits of college graduates. Of the six cluster areas, the areas of high opportunities and approximate deficit of graduates through 1990 were as follows: Marketing, Merchandizing, and Sales Representatives (deficit of 2,600 graduates per year); Scientists, Engineers, and Related Specialists (deficit of 2,000 graduates per year); Managers and Financial Specialists (deficit of 1,100 graduates per year); and Social Services Professionals (deficit of 1,100 graduates per year).

Employment clusters identified as having fewer career opportunities and the approximate surplus of graduates through 1990 were as follows: Education, Communication, and Information Specialists (surplus of 900 graduates per year) and Agricultural Production Specialists (surplus of 500 graduates per year). In their 1990 publication, Coulter, Goecker and Stanton, reported agricultural employment trends through 1995 which were similar to the 1986 projections.

National studies have provided valuable information to university faculty members who advise students, revise degree programs, design recruiting strategies, and advise students of potential employment opportunities. However, regional studies by Cepica and Eggenberger (1988) identified differences in actual regional and projected national employment data. Terry and Gray (1990) identified farmers as the highest ranked occupational preference of Missouri and Arkansas students enrolled in non-land grant universities. In both studies, the information was used to provide faculty with information to direct students to appropriate areas of interest.

Statement of the Problem

Southwest Texas State University (SWT) is a non-land grant institution located in central Texas. The agriculture program was established in 1948, with a primary purpose to educate secondary agriculture teachers. Until 1972, the agriculture degree program was a B.S. in agriculture without program areas. The degree was changed to B.S. in agriculture with program specializations in agricultural business, agricultural mechanization, agricultural education, agricultural journalism, animal science, horticulture, plant and soil science, production and management, and range management.

National employment opportunities have been forecast by USDA studies. Agricultural enrollment at SWT has fluctuated and has decreased in program areas where career opportunities are lacking. In other areas, where national data has indicated that employment is limited, enrollment has increased. Regional studies are needed to determine whether actual regional job trends vary from projected national trends for similar time frames. Information relating both actual regional career opportunities and projected national career opportunities is needed by agriculture faculty who provide academic and career advisement to students.

Objectives

The purpose of this study was to assess the career choices of agriculture graduates from SWT. The specific objectives

Dayberry is an assistant professor and Dillingham is an associate professor in the Department of Agriculture at Southwest Texas State University, San Marcos, Texas 78666.

were as follows.

1. Identify USDA employment clusters of 1979-1988 graduates by degree program.
2. Identify trends of employment for agriculture graduates by USDA employment clusters
3. Compare 1979-1988 SWT agriculture graduate employment with USDA employment cluster projections through 1990.

Methodology

A random sample of 350 graduates was selected from 1,190 agriculture graduates from 1950 through 1988. Graduate addresses were obtained from the SWT alumni association. A questionnaire was developed and two mailings, an initial and one follow-up, were made. Data were summarized using percentages and descriptive statistics. A total of 103 responses (29.4 percent) was received.

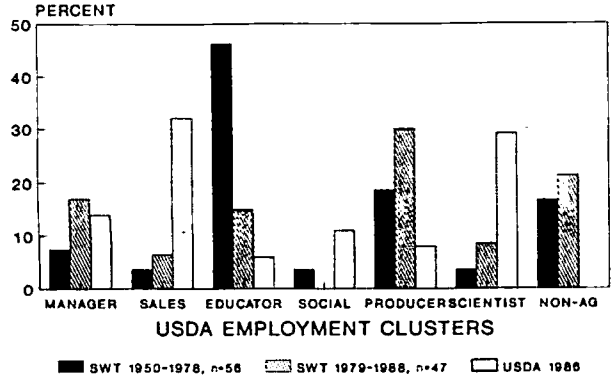
Results

Follow-up studies of employment of university graduates can be used as an indication of opportunities in career fields. Of 14 graduates from the classes of 1979-1988 who responded--almost 30 percent--entered agricultural production while 8 graduates (17 percent) entered the workforce as managers. Non-agricultural employment was entered by 11 graduates, 23.4 percent of the respondents. USDA employment clusters do not include jobs classified as non-agricultural, but since almost one-fourth of SWT agriculture graduates enter non-agricultural professions this category was deemed important to this study.

Agricultural education and agricultural business graduates accounted for 31 of 47 respondents. Four graduates each of animal science and horticulture responded. Returns from agricultural journalism (1), agricultural mechanization (1), plant and soil science (1) and range management (2) are indicative of limited enrollment and subsequent graduates from those program areas.

The educational mission of universities should be fluid and should change as employment demands shift. According to historical statements in the 1990-1992 Undergraduate Catalog, Southwest Texas State University's original mission was to prepare Texas public school teachers, especially

Figure 1. SWT Graduates' Employment Compared to USDA Employment Clusters



those of the south central area, and its mission remained primarily so until 1969 when it attained university status. Accordingly, as displayed in Figure 1, employment trends of agricultural graduates have shifted as the University's educational emphasis has changed from a teacher training institution. Marked decreases in the percentages of educators prepared have mirrored the broadened mission of the university and of agriculture. A comparison of the percentages of 1950-1978 graduates and 1979-1988 graduates employed as managers, sales representatives, producers, and scientists indicate an increase, while percentages of employment in the social cluster show a decrease. Percentages of graduates entering non-agricultural jobs over that time period increased. Defying the national projections, the percentage of SWT graduates entering the production cluster has increased. This finding is similar to that of Cepica and Eggenberger (1988) in which 32 percent of their graduates were employed in production.

National employment trends reflect the probable opportunities for agricultural graduates while regional studies may provide more specific information regarding opportunities. Also in Figure 1, it can be seen that greater percentages of SWT agriculture graduates are *employed* as education personnel and managers. Smaller percentages of SWT graduates are employed in sales, social, and scientist categories when compared to national expectations. Non- agriculture opportunities are prevalent for over 20 percent of SWT agriculture graduates.

Conclusions

Follow-up studies of agricultural graduates are necessary to assist academic and career advisors in presenting employment trends and opportunities to students. Planning of academic programs can benefit from an in-depth study of graduates' comments. The following conclusions are made from this study.

1. Production agriculture and education employment opportunities of SWT graduates exceed national projections.
2. Graduates of SWT find fewer opportunities in sales, social, and science career areas than indicated by national data.
3. Employment trends of SWT agriculture graduates have changed with decreasing percentages of educators and increasing percentages of producers and managers entering employment.

Recommendations

Strategies should be planned to ensure that undergraduates and faculty are aware of employment opportunities for graduates. Periodic assessment of employment opportunities should be done to identify regional trends that should be compared to national data. Differences in national employment opportunities and actual regional employment opportunities infer that academic and career advisors should be cautious when making recommendations to students. National trends should be used as indicators for employment opportunities not yet identified by agricultural faculty or

Agricultural Educators Abroad

David Youmans and Ronald Rosati

Abstract

Overseas opportunities for post-secondary agricultural educators frequently become available on funded projects, sabbaticals, Fulbrights and consultancies. Apart from potential financial incentives, other assets of international work can outweigh its liabilities as part of a professional career. But important personal and institutional considerations must be kept objectively in mind.

Clarification of motives, thorough study of host country, development of serious commitment, and clear understanding of on-site expectations are vital to success offshore. Ability to speak a second language and integration of children into bi-national schools can make the international experience an enriching time.

Careful attention to remuneration, documentation, immunizations, personal effects shipment, and immigration procedures alleviate potential problems. Emergency measures related to health, cash reserves, vital services and political unrest contribute to peace of mind.

Culture shock and re-entry syndrome are unfortunate conditions which need to be recognized and dealt with should they occur. Support networks of experienced colleagues are important in this connection.

Behavior as a guest requires respect, sensitivity, tolerance, patience and maintenance of personal dignity. Consideration is critical in matters of religion, culture, attitudes, values, dress, speech and affection. Conversely, the respect and affection of host nationals is a strong indicator of acceptance and success. The excitement and ultimate benefits of travel are a rich growth opportunity, despite occasional discomforts and risks.

In summary, post-secondary agricultural educators have a role to play in international work, and opportunities open from time to time for committed professionals. Knowing what to expect overseas and how to cope with unfamiliar circumstances and situations can increase chances for success at the work site. A successful international assignment, in turn, may contribute an enriching dimension to an institutional career.

Introduction

Overseas opportunities for agricultural educators frequently become available on funded projects, sabbaticals, Fulbrights and consultancies. Yet, compared to the hundreds of domestic vacancies which occur annually, these opportunities are still somewhat rare. The experience and qualifications required for overseas service may favor a professional who lacks a frame of reference for assessing such an appointment or who simply is not aware of the potential benefits of spending a few years abroad.

Apart from the financial incentive, which is oftentimes favorable, other assets of international work may also outweigh its liabilities as part of an institutional career. Despite certain risks, educators become experienced travelers; their world view is greatly expanded and their perspective more informed. Versatility in handling difficult appointments or assignments may be enhanced. Language capability and cultural growth are improved, and racial and religious tolerance deepens. They become more confident, cosmopolitan and sophisticated. And, their survivability is significantly strengthened. These perceptions derive from the authors, personal experiences and interviews over time with other expatriate experts.

Preliminary Considerations

When pursuing an interest in overseas work, clarify the motives and be absolutely honest with self and family members. Motives may be professional, financial or purely adventurous; but there should be no hidden agenda when one considers relocating a family abroad, especially to the developing world.

Youmans is an extension specialist at Washington State University and a veteran of numerous overseas positions; Rosati is an associate professor of Agricultural Engineering Technology at Illinois State University and recently Chief of Party of Fisheries Research and Development Project, Jakarta, Indonesia.

Continued from previous page.

graduates and should be used to establish untapped industry contacts for future employment opportunities. Additional study is needed to determine the significance of non-agriculture employment opportunities.

References

Cepica, M.J. & Eggenberger, L. (1988). *Educational and career opportunities.* (available from College of Agricultural Sciences, Texas Tech University. Lubbock, Texas, 79409.

Coulter, K.J., Stanton, M. & Goecker, A.D. (1986). *Employment opportunities for college graduates in the food and agricultural sciences.* Higher Education Programs, Office of Grants and Program Systems, U.S. Department of Agriculture, Washington, D.C. Published by Texas A&M University, College Station.

Coulter, K.J., Goecker, A.D. & Stanton, M. (1990). *Employment opportunities for college graduates in the food and agricultural sciences.* Higher Education Programs, Cooperative State Research Service, U.S. Department of Agriculture, Washington, D.C. Printed by Food and Agricultural Careers for Tomorrow, Purdue University, West Lafayette, Indiana.

National Science Foundation. (1989). *Profiles--agricultural science: human resources and funding.* (NSF 89- 319) Washington , D.C.

Terry, D.E. & Gray, M.D. (1990). A study of agricultural students in Missouri and Arkansas non-land grant universities. *NACTA Journal*, 34(4), 32-35.

United States Department of Agriculture. (1980). *Graduates of higher education in the food and agricultural sciences.* (Miscellaneous Bulletin 1385) Higher Education Programs, U.S. Department of Agriculture, Washington, D.C.