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Agribusiness Firms in Alabama: Profiles and Perceptions of Skills and Experiences Needed for Careers in Agribusiness

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This study examines the profiles of agribusiness firms and the skills and experiences required for a career in Agribusiness field. Data for this study was generated through a mail survey administered to a total of 300 Agribusiness companies in Alabama. Results are generally consistent with previous studies and show that interpersonal skills, communication skills, ability to use general computer software, and business and economic skills are the most important skills for a successful career in agribusiness.

The need to enable students to compete effectively in today's job market was the focus of most agribusiness and agricultural economics program reviews in the last two decades. Litzenberg and Schneider (1987) noted many schools' increased interests in preparing students for successful agribusiness management careers. In 1989, the National Agribusiness Education Commission (NAEC) issued some recommendations for the future of agribusiness education in a report entitled "Agribusiness Education in Transition: Strategies for Change." These recommendations included, among others, the restructuring of the programs to meet today's challenges.

The dynamic changes in food and agribusiness markets and the implications for post-secondary education led the U.S. Department of Agriculture to appoint the National Food and Agribusiness Management Education Commission (NFAMEC 2004) in 2003. The commission, consisting of a panel of industry and academic leaders, was mandated to study various issues regarding the agribusiness education. CEO's of selected agribusiness firms were interviewed to ascertain their perspectives on the transformation and training needs evolving in the industry. Regarding an ideal future employee, these leaders indicated communication skills and interpersonal communication skills (including writing skills) were the most important. This was followed by the ability to be a "team player" and work in a team environment. Analytical or critical thinking skills were also rated equally high. Computer skills and quantitative-analysis skills were dominant among expected characteristics. Furthermore, knowledge of the food and agribusiness marketplace, accounting, finance, macroeconomics, and international trade received fairly high consideration.

Employers require well-trained and highly skilled workers who are not only able to withstand but to thrive on the challenges and the high demand in the business arena. Prospective employees, on the other hand, need to be aware of the skills and experiences that agribusiness firms require. Educators charged with maintaining and upgrading the quality of undergraduate degree programs require an ongoing sensitivity to the changing needs and perceptions of employers.

This study presents a profile of agribusiness firms in Alabama and examines the skills, aptitudes, and experiences expected of employees by a sample of agribusiness firms. Knowledge of the firms and their expected job skills will provide insights into current expectations of agribusiness firms in the state. The knowledge gained will assist educators and policy makers in developing programs and designing curricula to more adequately prepare students to compete and to face the challenges in today's job market. The next section presents a review of related studies. This is followed by the data description and method of analysis. The results and discussions are then presented, followed by the conclusions.

Related Studies

Several researchers have examined knowledge, skills, and experiences needed by employees in

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agribusiness. Many of these studies focused on employees, agribusiness leaders, teachers, and others. The findings indicate that individuals who plan to enter the world of agribusiness need to possess a variety of skills and experiences.

Radhakrisna and Bruening (1994) compared employee and student perceptions of skills required in agribusinesses in Pennsylvania. The results of the study indicated that both employees and students perceived that interpersonal skills, communication skills, and business and economic skills are very important for a career in agribusiness. However, moderate emphasis was placed on computer and technical skills.

A study of communications and business curricula needs of agribusiness employees (Bruening and Scanlon 1995) indicated that employers in the agribusiness industry recognize the need for changes in the curricula that would include thinking and reasoning skills. The business skills most mentioned by the participants of the study included human relations, organizational, managerial, and analytical thinking. Communication skills were considered the most critical personal skill needed by the employee. Results from a focus group indicated that participants would hire individuals who have the ability to freely communicate both orally and in written form at a very high level, and who could adapt their communication style according to the needs of the clientele.

Cole and Thompson (2002) investigated agribusiness employers who had hired Oregon State University (OSU) graduates rather than graduates of other colleges and universities. They sought to understand actions taken by the employee or knowledge gained that would lead employers to classify the employee as outstanding. The ten most commonly listed responses were: knowledge of subject matter, knowledge of new technology, excellent communication skills, excellent leadership skills, good interpersonal skills, self-starter, computer skills, work ethics, reliability, and ability to make educated and informed decisions.

Wolf and Schaffner (2000) surveyed agricultural exporters to determine the skills and training their firms desired in potential professional employees. The result suggested that agribusinesses expect graduates to operate ethically and to have strong communication skills. Regarding curriculum content, employees who have an excellent grounding in the functional areas of agribusiness (finance, marketing, and accounting) are highly sought, followed by those with specialized expertise in international agribusiness.

In a study on competencies and qualities of Agricultural Economics graduates, Litzenberg and Schneider (1987) solicited comparative rankings of alternative skills and characteristics of agricultural economics graduates required by a wide array of agribusiness firms. The results suggested that interpersonal skills were ranked highest overall. They recommended that educators must address the development and improvement of interpersonal and communication skills, as well as business and economics skills. The authors were surprised at the relatively low ranking of previous work experience. Participation in extracurricular activities was also ranked quite high.

McKenzie (1993) used the framework of job analysis to identify the importance of job skills and personal qualities required by entry-level agribusiness managers and to determine if the curriculum of the College of Agriculture in Jamaica provided those skills and qualities. The skill areas evaluated were communication, personal qualities, business and economics, technical, employment, experiences, and computer and management information. Personal qualities were found to be the least covered while technical skills were the most comprehensively covered areas.

In a study of the characteristics associated with above-average starting salary offered in allied fields (agribusiness, agricultural economics, and business economics), Siebert et al. (2002) found that firms value work experience, whereas students value higher grade point average and interview preparation. Students seeking to receive maximum starting-salary offers will need to enhance their academic performance as well as work and leadership experience.

Data Description and Analysis

The data for the study were generated by a survey of CEOs of agribusiness firms in Alabama. The survey solicited comparative rankings of skills and characteristics expected of potential employees of agribusiness firms in Alabama. The survey also included questions to classify firms by activities and types, as well as their interest in international marketing. Names and addresses of agribusiness companies in the state were assembled from the

Alabama Industrial Directory 1997–98. A total of 300 agribusiness companies with at least 20 employees were selected for the study. The survey was pretested and modified accordingly prior to mailing. The survey, with a return stamped self-addressed envelope, was mailed to the chief executive officers (CEOs) or representatives of the selected firms. A second set of surveys was mailed to all the firms that failed to return the initial survey after eight weeks. Also, telephone calls were made to the respective companies to encourage the completion and return of the surveys. These efforts resulted in a total of 30 (10%) completed and returned surveys.

Basic descriptive statistical analysis and paired-samples t-tests were employed to analyze and summarize the data using the Statistical Packages for the Social Sciences (SPSS). Due to the low response rate, the distribution of the firms in the sample (30) in four major sectors—chemical, manufacturing, distribution, and food processing—was compared with the distribution of the firms in the original sample (300 firms). The distribution closely resembled the distribution of the firms in the total sample. Consequently, the results presented could be generalized for the agribusiness industry.

Results and Discussion

Profile of the Agribusiness Firms

The 30 agribusiness firms were classified into four major sectors: chemical (10 percent), manufacturing (43 percent), distribution (10 percent), and food processing (37 percent). Approximately 80 percent of the firms were in manufacturing and processing. According to the Alabama Agricultural Statistics, these two sectors were the largest contributors to the value of production to the state's economy in 1999, supplying over 70 percent of the total agribusiness output.

With regard to the firms' employee status, 40 percent of the firms reported they had 50 or fewer full-time personnel. Another 40 percent indicated they had more than 200 full-time employees, while fewer than 20 percent had between 51 to 200 employees. About 27 percent of the firms had 25 or fewer part-time workers, while only three percent reported having between 51–100 part-time employees. Most of the firms that had part-time employees were small (in terms of total number of employees and gross sales) firms. In terms of structure, a majority of the firms (83 percent) were corporations, ten percent were cooperatives, and seven percent were single proprietorships. None of the firms was a partnership. With respect to gross sales, a large proportion of the firms (67 percent) had more than $25 million in gross sales in 2000. Approximately 20 percent had between $1 million and $25 million in gross sales, while 10 percent grossed less than $500,000. Of the 30 firms, 53 percent exported products overseas and 47 percent marketed their products only locally. Sixty-three percent of those that engaged in export marketed their products in Asia, 37 percent exported to Europe, 19 percent to South America, 25 percent to Mexico, and 19 percent to Canada. Another 31 percent exported to other parts of the world.

Skills and Experiences Required by the Agribusiness Firms

Agribusiness employers were asked to rank the kinds of training and education needs they expect from prospective employees. Of the thirty companies that responded, 33 percent ranked training in product specialty and product handling highest (Table 1). About 27 percent indicated information-database experience, while about 23 percent chose training in market information as the most important training expected from prospective employees. Another 20 percent indicated that education in price information was the most important, while 10 percent of the firms selected training in export market development as most important. About 17 percent chose training in other areas (see Table 2 for details).

Table 2 presents the average responses of the firms to personal characteristics and skills expected of prospective employees. Following Litzenberg and Schneider (1987), the responses were arranged with the various categories presented in order of final average ranking. Individual characteristics are ranked by the mean responses within each group. Additionally, paired t-test analyses were conducted to ascertain significant relationships between individual means in a group.

The results revealed that interpersonal skills have the highest overall rank (4.30), followed by communication skills (3.97); business and economic skills (3.32); computer, quantitative, and management skills (2.80); and previous work experience (2.39). Within the interpersonal-skills category, positive

Table 1. Training Needs in Agribusiness.

Training	Count	Percent
Product specialty and product handling	10	33.33
Information database	8	26.67
Market information	7	23.33
Price information	6	20.00
Export market development	3	10.00
Internal trade linkage improvement	2	6.67
Other trainings [a]	5	16.67

a Accounting/Sales; All areas/small work force; Engineering/IT/Buss. Admin; Production technique.

work attitude was ranked highest, with a mean value of 4.72. This was significantly higher than other trait within the group at five-percent level or less. Following positive work attitude was self-motivation with a mean score of 4.34, team player and loyalty to organization (4.29 each), work without supervision (4.28), and people skills (4.19). Compared with providing leadership (3.96), these were ranked significantly higher at the 10 percent level.

The next important group in terms of overall ranking was communication skill. Within this group, speaking clearly and concisely was ranked highest, with an average mean of 4.30, followed by the ability to express ideas clearly, both verbally and in writing, with a mean score of 4.09. Both of these skills were significantly higher at the one-percent level than was the ability to write technical reports, which had an average score of 3.52.

In the case of business and economic skills, ability to solve complex problems ranked highest (3.44), followed by ability to identify goals and objectives (3.43), ability to understand and use basic accounting methods (3.39), ability to use inventory management system (3.34), ability to use selling skills (3.25), identify and manage risk and uncertainty (3.22), and ability to coordinate human and physical resources (3.19). However, there was no significant difference among the means within the group.

In computer, quantitative, and management skills, ability to use general computer software was ranked significantly higher than all other specialized skills, with a mean value of 3.77. This was significantly higher than each other item in the group at the one-percent level. This was followed by ability to use computers in making management decisions and ability to use computer accounting system, both of which were significantly higher at the five-percent level than were the remaining three traits.

Previous work experience was ranked the least overall. Experience with the university and experience with trade magazines were significantly lower than other previous experiences. Experience with the USDA had the highest mean average ranking, followed by industry internship, marketing, agribusiness firm, extracurricular activities, and private groups. However, they were not significantly different from each other.

Conclusions and Recommendations

This paper summarizes and presents the most important job skills required for a successful career in the agribusiness industry. Although the sample for the study was limited, the results were generally consistent with previous studies. With regard to communication skills, the importance of speaking clearly and concisely, as well as the ability to express ideas both verbally and in writing cannot be over emphasized. In terms of interpersonal characteristics, positive work attitude was the most important, followed by self-motivation. Ability to work in a team and loyalty to organization were other significant qualities identified.

In the case of business and economic skills, abilities to solve complex problems, to articulate goals and objectives for the firm, and to understand and use basic accounting concepts were the three most important skills. The abilities to understand and use computer software, to employ computers in management decision-making, and to use computer accounting systems were the essential computer,

Table 2. Essential Education and Training Skills.

	Mean (average response)	Standard deviation	Overall rank
Interpersonal skills	**4.30**		**1**
Positive work attitude	4.72 [2]	0.53	1
Self-motivated	4.34 [3]	0.86	2
Able to work in a team or a team player	4.29 [3]	0.76	4
Loyalty to Organizations	4.29 [3]	0.66	4
Work without supervision	4.28 [3]	0.75	6
People skills	4.19 [3]	0.69	7
Provide leadership	3.96	0.81	9
Communication skills	**3.97**		**2**
Speaks clearly and concisely	4.30 [1]	0.82	3
Express ideas clearly both verbally and in writing	4.09 [1]	0.81	8
Write technical reports clearly	3.52	1.19	11
Business and economic skills	**3.32**		**3**
Solve complex problems	3.44	0.89	12
Identify goals and objectives	3.43	1.10	13
Understand and use basic accounting	3.39	1.03	14
Use inventory management system	3.34	0.98	15
Able to use selling skills	3.25	1.38	16
Identify and manage risk and uncertainty	3.22	1.19	17
Coordinate human/physical resources	3.19	1.33	18
Computer, quantitative, and management skills	**2.80**		**4**
Use general computer software	3.77 [1]	1.03	10
Use computers in mgmt decision- making	3.12 [2]	1.36	19
Computer accounting system	3.00 [2]	1.22	20
Interpret and use math and statistical methods	2.52	1.50	25
Design and implement management information system	2.48	1.50	26
Computer modeling in agricultural projection	2.20	1.32	29
Previous work experience	**2.39**		**5**
Experience with USDA	2.95	1.47	21
Experience with an industry internship	2.89	1.41	22
Experience in marketing	2.86	1.52	23
Experience with an agribusiness firm	2.55	1.47	24
Extracurricular activities	2.35	1.04	27
Experience with private groups	2.26	1.10	28
Experience with universities	1.84 [1]	0.96	30
Experience with trade magazines	1.42 [1]	0.77	31

[1] significant at 0.01.
[2] significant at 0.05.
[3] significant at 0.10.

quantitative, and management skills required by agribusiness firms.

The results of the study provide further insights into the expectations of agribusiness firms. The information provided will be useful to schools and departments in strengthening their programs and to assist students in agribusiness to prepare themselves for a successful career in the agribusiness industry.

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