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A Summary of Undergraduate Curriculum in Agribusiness Management Degrees

National Food and Agribusiness Management Education Commission (NFAMEC)

Working Paper #1

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Other NFAMEC Working Papers include

Working Paper #2: A Summary of Doctoral Degree Research in Agribusiness Management and Food Business

Working Paper #3: Graduate Courses in Agribusiness Management

Working paper #4: Capstone Courses in Undergraduate Agribusiness Degrees

Working Paper #5: A Summary of Extension Programs in Agribusiness Management, Food Business, and Industrial Organization

Working Paper #6: A Summary of Masters Degree Research in Agribusiness Management and Food Business

A Summary of Undergraduate Curriculum in Agribusiness Management Degrees

Abstract

Curriculum for 140 agribusiness and agricultural economics programs were identified and compared against a similar study done in 1985 when the National Agribusiness Education Commission began studying agribusiness programs. We have identified five key findings. First, agribusiness management is now tied with policy as the third most commonly taught undergraduate course in agricultural economics departments (after agricultural marketing and agricultural finance). A required course in farm management has decreased from two-thirds of agribusiness degrees in 1985 to only one-third of such degrees in 2003. Second, many agribusiness degrees are three times as likely to require business finance relative to agricultural economics degrees. Third, no strategy courses were identified as being taught in agribusiness management degrees in 1985. In 2003, 17 such courses were being taught. Strategy is a course that integrates many management concepts. With the exception of an advanced farm management course, no such integrative course was identified in agricultural economics courses. Fourth, a course in business marketing was almost twice as likely to be required in an agribusiness degree relative to an agricultural economics degree. Fifth, a required course that explores the international dimensions of finance, management, marketing, policy, trade, or similar topics remains a severe limitation in most agribusiness and agricultural economics degrees. Finally, it is clear that agribusiness management has become an even more important subject in agricultural economics programs since 1985.

A Summary of Undergraduate Curriculum in Agribusiness Management Degrees

Agribusiness has long been a part of agricultural economics undergraduate programs. Undergraduate programs in agribusiness represent a large component of many department's overall undergraduate student enrollment. A recent study by Heiman et al. found that the number of agribusiness or management (e.g., Cornell, UC Davis, etc. where there is no undergraduate business degree) majors greatly exceeded traditional majors such as agricultural economics.¹

The 1989 National Agribusiness Education Commission (NAEC) conducted a comprehensive look at the role of agribusiness in agricultural economics programs in the United States.² The National Food and Agribusiness Management Education Commission was charged with undertaking a similar task. The purpose of this study was to compare curricula and program requirements from a diverse group of colleges and universities offering agribusiness management as degrees or as an area of specialization. First, a 2000 study by Boland et al. on undergraduate curriculum is updated.³ Then a comparison of programs from similar studies in the mid-1980s is compared to the similar requirements in 2003.^{4,5} We have not attempted to summarize other requirements such as humanities, social sciences, and communications courses as this was recently done.⁶

¹ Heiman, A., J. Miranowski, D. Zilberman, and J. Alix. 2002. "The Increasing Role of Agribusiness in Agricultural Economics." *Journal of Agribusiness* 20,1:1-30.

² Downey, W.D., ed. 1989. *Agribusiness Education in Transition: Strategies for Change*. Report of the National Agribusiness Education Commission, Lincoln Institute of Land Policy, Cambridge, MA.

³ Boland, M.A., E. Lehman, and J. Stroade. 2001. "A Comparison of Curriculum in baccalaureate degree programs in agribusiness management." *International Food and Agribusiness Management Review* 4:225-35.

⁴ Franklin, D.R. 1986. "Four Curriculum Options within Agricultural Economics." *NACTA Journal* 30,2:15-17.

The Need for Agribusiness Degree Programs

Food and Agribusiness Managers Require Unique Skills

Sonka and Hudson (1989) identified five factors that separate agribusiness from other industries.⁷ These were: “1) the unique cultural, institutional, and political aspects of food, domestically and internationally; 2) the uncertainty arising from the underlying biologic basis of crop and livestock production; 3) the alternative goals and forms of political intervention across subsectors and between nations in an increasingly global industry; 4) institutional arrangements that place significant portions of the technology development process in the public sector; and 5) the differing competitive structures existing within and among the subsectors of the food and agribusiness sector.”

Managers desire undergraduate students who have skills in management as related to agriculture. More than 500 agribusiness managers responded to Schneider and Litzenberg’s (1989) survey on skills needed by undergraduates in agribusiness management.⁸ The need for more training in human relations, communication, general business finance, general business management, salesmanship, agribusiness finance, international marketing, and agribusiness marketing was cited by 45 percent or more of

⁵ Carmen, H.F. and D.H. Pick. 1986. “Undegraduate Curriculum in agricultural Economics and Agricultural Business Management.” Published in *Proceedings of the American Agricultural Economics Association Teaching Workshop*, Reno, NV, 139-147.

⁶ Wells, G.J., S.E. Miller, and H.M. Harris. 2003. Published in *Proceedings of the Southeastern Decision Sciences Institute annual meeting*, Williamsburg VA.

⁷ Sonka, S. T. and M. A. Hudson. 1989. “Why Agribusiness Anyway?” *Agribusiness: An International Journal* 5: 305-14.

⁸ Schneider, V. and K.K. Litzenberg. 1989. “Current Status of U.S. Agribusiness Education.” Unpublished report, Department of Agricultural Economics, Texas A&M University.

the respondents. Global competition, long-range planning coordination (i.e., business strategy), information technology, communication development, integration of technical and business skills, domestic agriculture policies, changing consumer tastes and preferences, new-product development and packaging, and global food and agriculture policies were ranked 3.3 or higher on a five-point scale (1 equaled not important and 5 equaled important). Many, but not all, of these skills can be obtained within colleges of business. At least 16 studies with similar findings have been published in *Agribusiness: An International Journal*, the *NACTA Journal*, and *International Food and Agribusiness Management Review*.

Management is Taught within the College of Business

Management education is taught in colleges of business. The American Assembly of Collegiate Schools of Business (AACSB) publishes standards by which accreditation will be awarded to business schools. In order to “provide an understanding of perspectives that form the context for business,” degree program coverage should include: 1) ethical and global issues; 2) the influence of political, social, legal and regulatory, environmental and technological issues; and 3) the impact of demographic diversity on organizations.

Curriculum content of programs in AACSB accredited institutions provides primary understanding of the following subject areas: 1) accounting; 2) behavioral science; 3) economics; and 4) mathematics and statistics. Basic written and oral communication skills also are pertinent attributes of the programs. Core requirements for a typical accredited program in management consist of courses in managerial economics, business finance, management concepts, operations management, business strategy,

marketing, human resource management, organizational behavior, quantitative methods, and business law. In addition, a policy-type course that relates management concepts to government, society, and global environment is also required. Thus, we would expect formal agribusiness management degree programs to include similar courses with applications that address the unique aspects of food and agriculture, as noted by Sonka and Hudson (1989).

Description of Undergraduate Agribusiness Management Programs

Programs

An extensive list of baccalaureate degree programs that provide students with training and education in agribusiness management was identified in May 2003. We used a U.S. Department of Agriculture Higher Education Programs database that had information on 1862, 1890, and 1994 land grant universities and non-land grant universities that offer baccalaureate programs in agricultural and forestry sciences. In addition, we did an extensive search of public and private colleges and universities by state to identify other programs. Consequently, we identified 142 programs with degrees or majors in agribusiness management. We obtained programs of study, course catalogs, and other information on 140 of these programs. In many cases, these publications were available using the Internet. If these were not available on the Internet, then electronic and postal mail was used to obtain the necessary information. These programs are listed in Attachments A and B.

Information on each program was used to determine required and elective courses. Required courses were defined as being required for each degree while elective

courses were courses that students could choose for an area of concentration or emphasis. Electives were considered as such if offered in the degree curriculum. Where possible, textbook choice, syllabi, and course descriptions were used to help categorize the courses. Approximately 75 percent of the courses were identified using textbook and syllabi information.

Of these 140 programs, 63 offered formal degrees in agribusiness management. There were 34 B.S. or B.A. degrees in agribusiness or agricultural business; 13 B.S. degrees in agribusiness or food management; six B.S. degrees in agricultural or food business management or marketing; and 10 B.A. programs in business administration with a food and agricultural emphasis. These 63 programs were defined as B.S. degrees in agribusiness management (BSABM). There were six additional programs that have BSABM degrees offered jointly with the college of business.

The remaining 77 programs offered degrees in various areas with agribusiness majors, options, or specializations within another degree. A B.S. degree in agriculture comprised 57 of these programs. Seven programs had B.S. degrees in agricultural and/or applied economics. Six degrees had the words agricultural, food, and/or resource economics in their degree title. There were also B.S. degrees in agricultural science; agricultural, food, and life sciences; applied economics and business management; environmental and business economics; and managerial economics. These 77 degrees were defined as B.S. degrees in agriculture with an agribusiness major or concentration in agribusiness (BSA).

Classification of Courses

For purposes of comparison, the courses were separated into four categories: marketing, management, finance, and other subjects unique to agriculture. Marketing courses included agricultural marketing, agribusiness or food marketing, futures, price analysis, international agricultural marketing, business marketing, sales or selling, and marketing management. Management courses included agribusiness management, farm management, strategy, and business management. Human resource management and international business management were also analyzed as management courses. Finance included agricultural finance, business finance, risk, and advanced finance. Finally, other courses that were examined included agricultural policy, cooperatives, production or managerial economics, agricultural law, and business law.

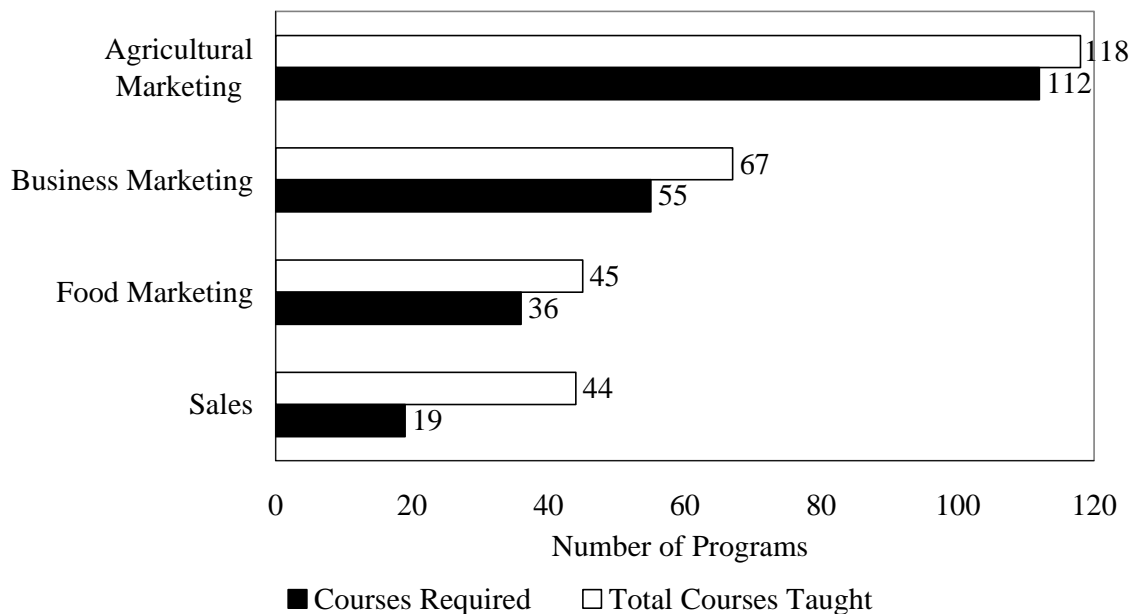
Marketing Courses

An agricultural marketing course was defined as a broad survey of agricultural marketing. Agribusiness or food marketing was defined as agricultural marketing with an emphasis on food distribution and management. Business marketing was defined as an introductory course in the college of business on marketing principles. Figure 1 shows the total number of marketing courses taught and required courses in the 140 programs.

Agricultural marketing, business marketing, and food or agribusiness marketing were required by 75, 52, and 30 percent of the BSABM, respectively. With respect to BSA, the same courses were required by 83, 29, and 22 percent, respectively. Further analysis found that only 12 of the 140 programs did not require some type of agricultural, agribusiness or food marketing course and 10 of those required business marketing. A

course in selling or sales was a required course in 16 and 12 percent of BSABM and BSA, respectively. Sales was more likely to be required in BSABM, but only 28 of the BSA and BSABM taught sales within agriculture colleges. The other courses were taught within business colleges. The syllabi from the major programs revealed that the Kohls and Uhl textbook was used by 26 percent of the agricultural marketing and food or agribusiness marketing classes in 2003 followed by the Schaffner et al. textbook at 21 percent.^{9,10}

Figure 1. Baccalaureate Programs with Required Courses in Agricultural Marketing, Business Marketing, Food Marketing, and Sales

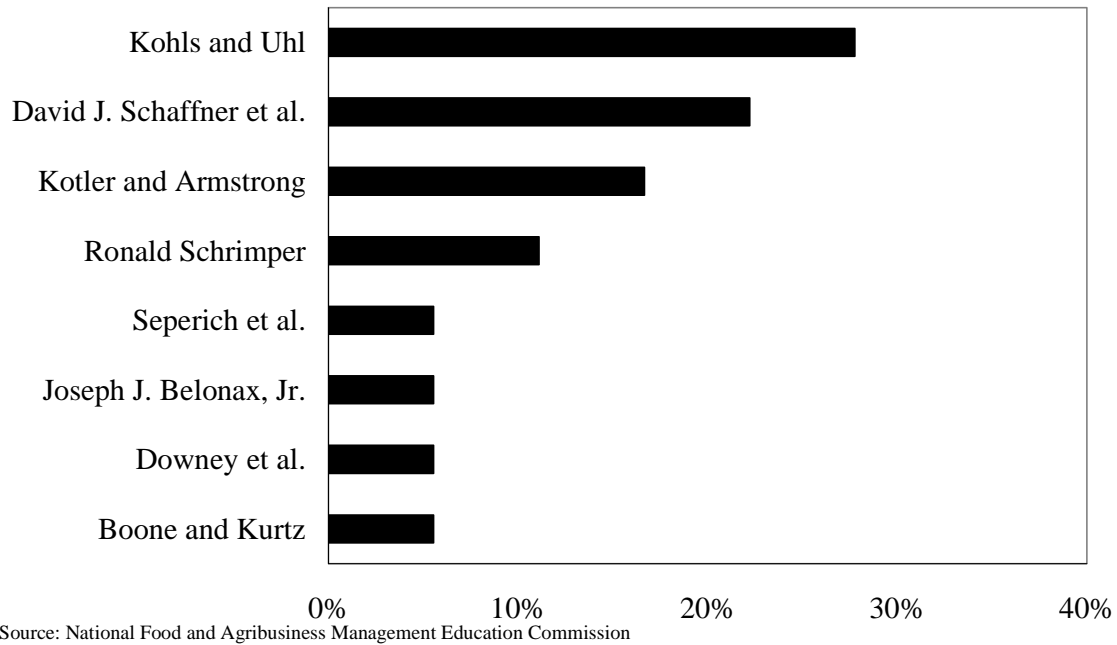


Source: National Food and Agribusiness Management Education Commission

⁹ Kohls, R.L., and J.N. Uhl. 2002. *Marketing of Agricultural Products*. 9th Edition, MacMillan Publishing, New York, NY.

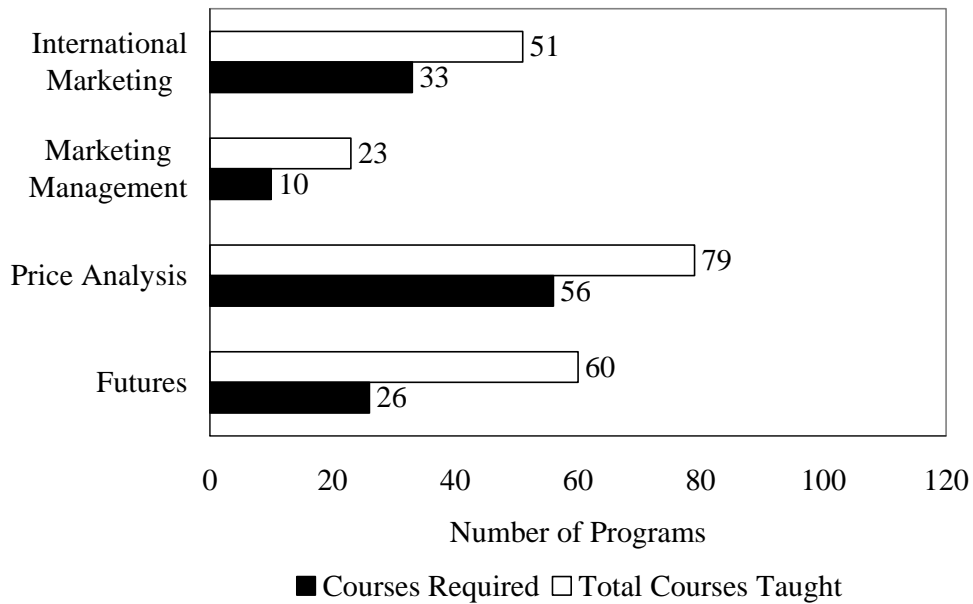
¹⁰ Schaffner, D.J., W.R. Schroder, and M.D. Earle. 1998. *Food Marketing: An International Perspective*. McGraw-Hill, New York, NY.

Figure 2. Food and Agribusiness Marketing Textbooks Being Used in 2003 (N=37)



Marketing management was an advanced marketing class that required business marketing as a prerequisite and focused on the management function of marketing. Price analysis courses focus on how prices were derived with some statistical or regression analysis used in the course, which differentiated these from broad descriptive futures markets courses. International agricultural marketing included courses in international trade or global food marketing. These are shown in Figure 3.

Figure 3. Baccalaureate Programs with a Required Course in International Marketing, Marketing Management, Price Analysis, and Futures



Source: National Food and Agribusiness Management Education Commission

Futures marketing and price analysis were required by 19 and 39 percent, respectively, for the BSABM, compared to 18 and 40 percent of the BSA. The percentage of BSABM and BSA that had a required course in international agricultural marketing was 25 and 22 percent, respectively. Marketing management was required by 14 percent of the BSABM compared to only 12 percent of the BSA.

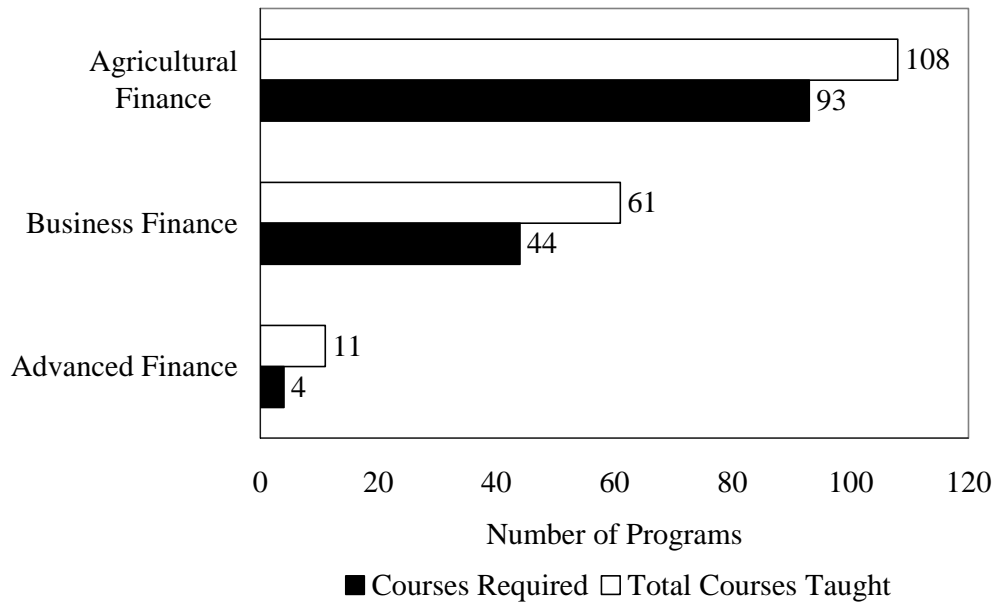
With the exception of two programs, all 140 BSA and BSABM taught an agricultural marketing or food and agribusiness marketing course. In addition, almost half of both programs taught a separate course in futures marketing.

Finance Courses

Many programs offer a course in agricultural finance, which is distinguished from business finance because of its emphasis on examples related to agriculture relative to

more traditional business or corporate finance. Several agricultural economics programs offer an advanced course in agricultural finance and at least two programs had courses in risk. Figure 4 shows that agricultural finance is widely taught in many programs.

Figure 4. Number of Baccalaureate Programs with a Required Course in Agricultural Finance, Business Finance, and Advanced Finance



Source: National Food and Agribusiness Management Education Commission

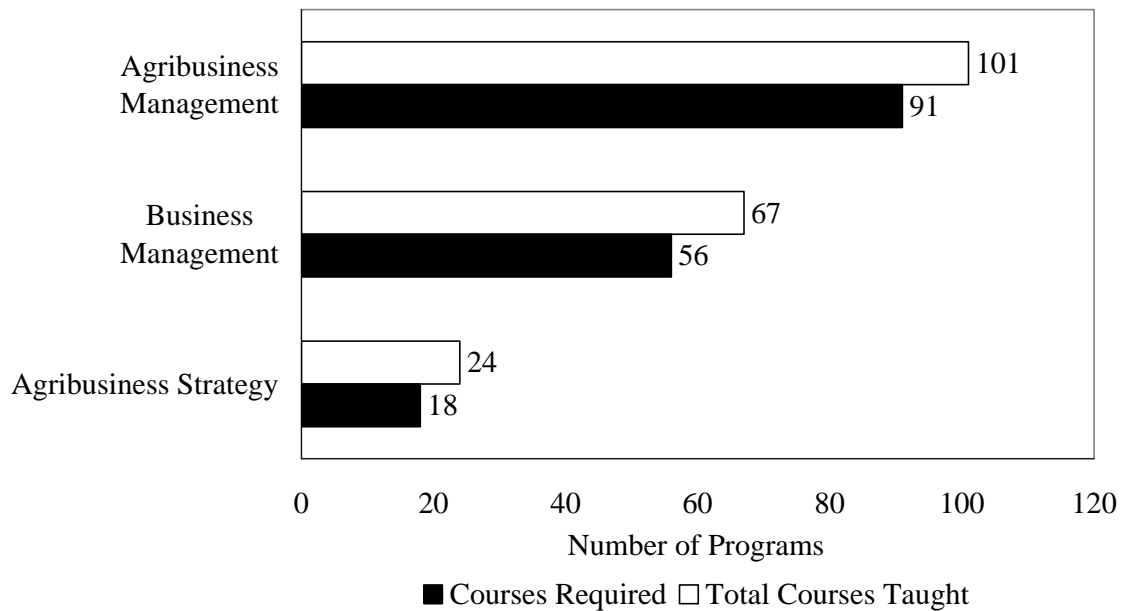
Agricultural finance was required in 66 percent of both the BSA programs and BSABM programs. However, BSABM programs required business finance in 45 percent of their degrees relative to 19 percent in BSA. About half of the BSABM required a course in agricultural finance and business finance.

Management Courses

Agribusiness management, business management, and strategy courses were required by 64, 50, and 19 percent of the BSABM (Figure 5). These percentages were 65, 31, and 8 percent for BSA. The Beierlein et al. textbook (33 percent) and Erickson et al. (27

percent) textbooks are widely used in the major programs (Figure 6).^{11,12} Of the 17 courses in agribusiness management strategy, Thompson and Strickland (18 percent) and Besanko et al. (12 percent) were the most widely used textbooks, although a variety of other texts were also being used (Figure 7).^{13,14}

Figure 5. Baccalaureate Programs with Required Courses in Agribusiness Management, Business Management, and Agribusiness Strategy



Source: National Food and Agribusiness Management Education Commission

¹¹ Beierlein, S.G., K.C. Schneeberger, and D.D. Osburn. *Principles of Agribusiness Management*, 3rd edition., Waveland Press, Inc., 2003.

¹² Erickson, S.P., J.T. Akridge, F.L. Barnard, and W.D. Downey. 2002. *Agribusiness Management*. 3rd edition, McGraw-Hill, New York, NY.

¹³Thompson, A. and A.J. Strickland. 2003. *Strategic Management*. 13th edition, McGraw-Hill, New York, NY.

¹⁴ Besanko, D., D. Dranove, M. Shanley, and S. Schaffer. 2004. *Economics of Strategy*. 3rd edition. John Wiley and Sons, Hoboken, NY.

Figure 6. Food and Agribusiness Management Textbooks Being Used in 2003 (N=47)

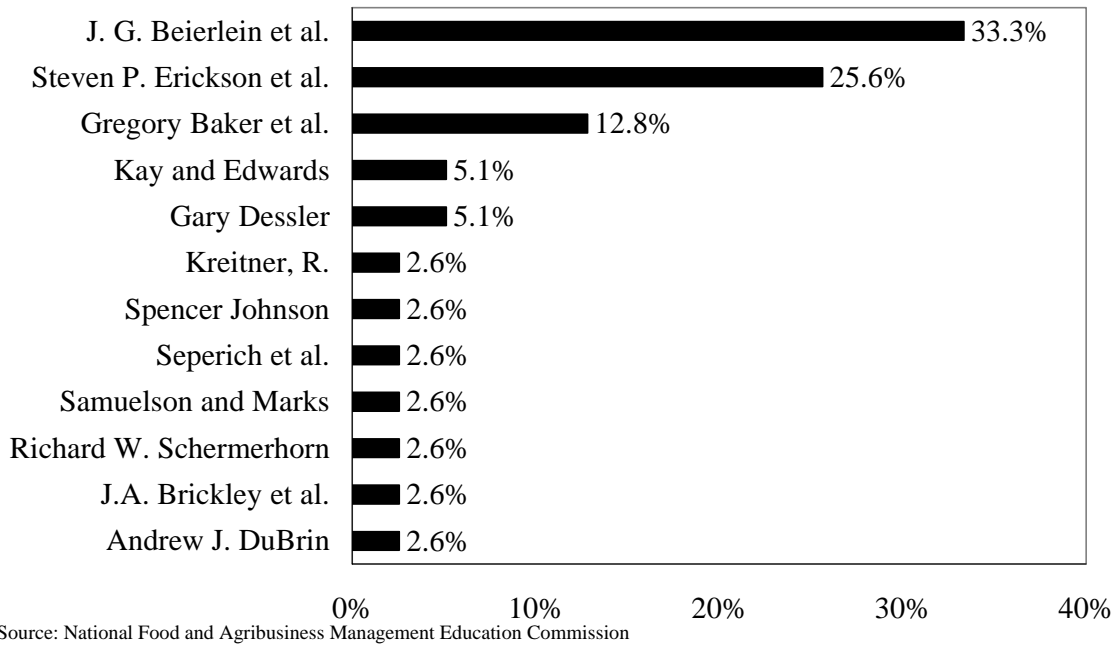
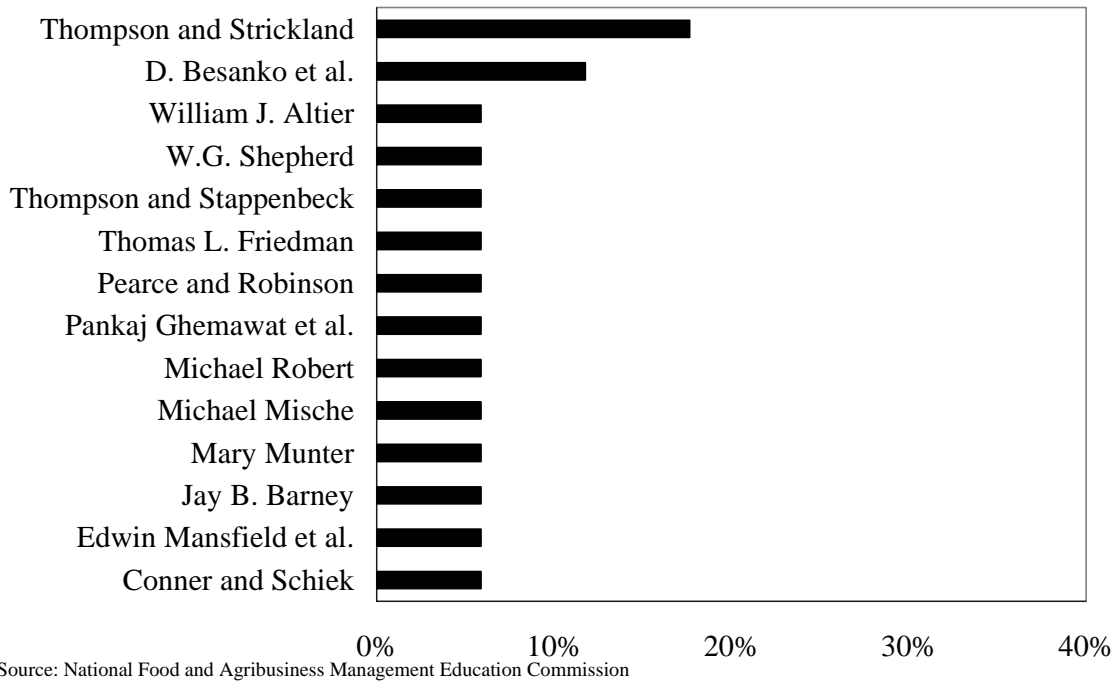


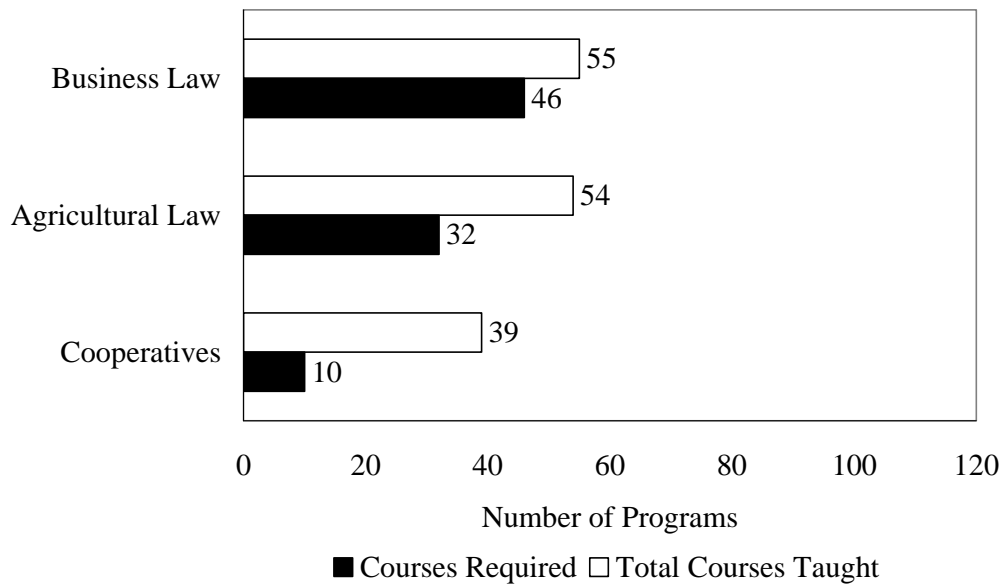
Figure 7. Agribusiness Strategy Textbooks Being Used in 2003 (N=17)



Other Courses Unique to Agriculture

Agricultural or business law was a required course for 25 and 34 percent of BSABM compared to 21 and 30 percent of BSA (Figure 8). Eight percent of BSA and 6 percent of BSABM required a course in cooperatives. However, 39 programs reported offering a course on cooperatives.

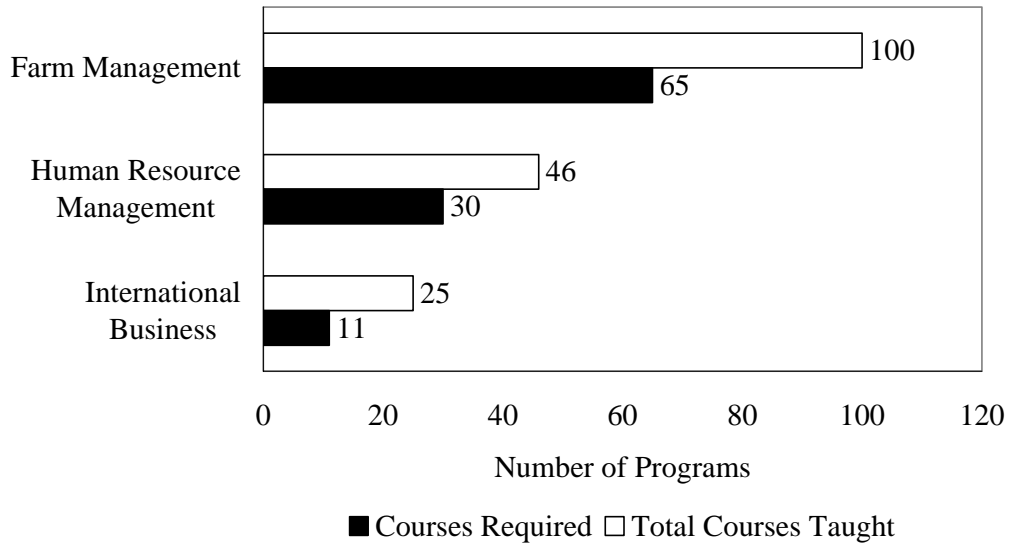
Figure 8. Number of Baccalaureate Programs with a Required Course in Business Law, Agricultural Law, and Cooperatives



Source: National Food and Agribusiness Management Education Commission

Similarly, human resource management was a required course by 25 percent of the BSABM relative to 18 percent of the BSA (Figure 9). Finally, 10 percent of the BSABM had required courses in international business management. Only 5 percent of the BSA had such a required course.

Figure 9. Number of Baccalaureate Programs with a Required Course in Farm Management, Human Resource Management, and International Business

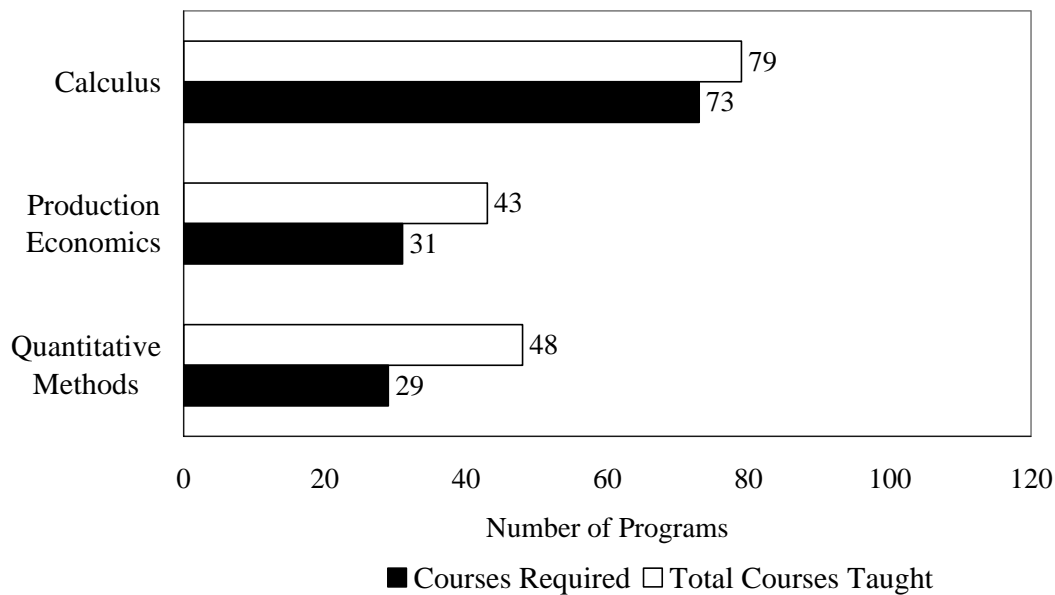


Source: National Food and Agribusiness Management Education Commission

Farm management was the third most widely taught course after agricultural marketing and agricultural finance. It was a requirement in 55 and 36 percent of all BSA and BSABM. A course in agricultural policy was taught in 97 programs. It was required by 48 and 52 percent of BSABM and BSA.

Calculus was a requirement in 53 and 50 percent of the BSA and BSABM programs. Production or managerial economics or intermediate microeconomics was a required or elective course for 17 and 26 percent of the BSABM and BSA, respectively (Figure 10). A quantitative methods course was required in 25 and 16 percent of BSA and BSABM.

Figure 10. Baccalaureate Programs with a Required Course in Calculus, Production Economics, and Quantitative Methods



Source: National Food and Agribusiness Management Education Commission

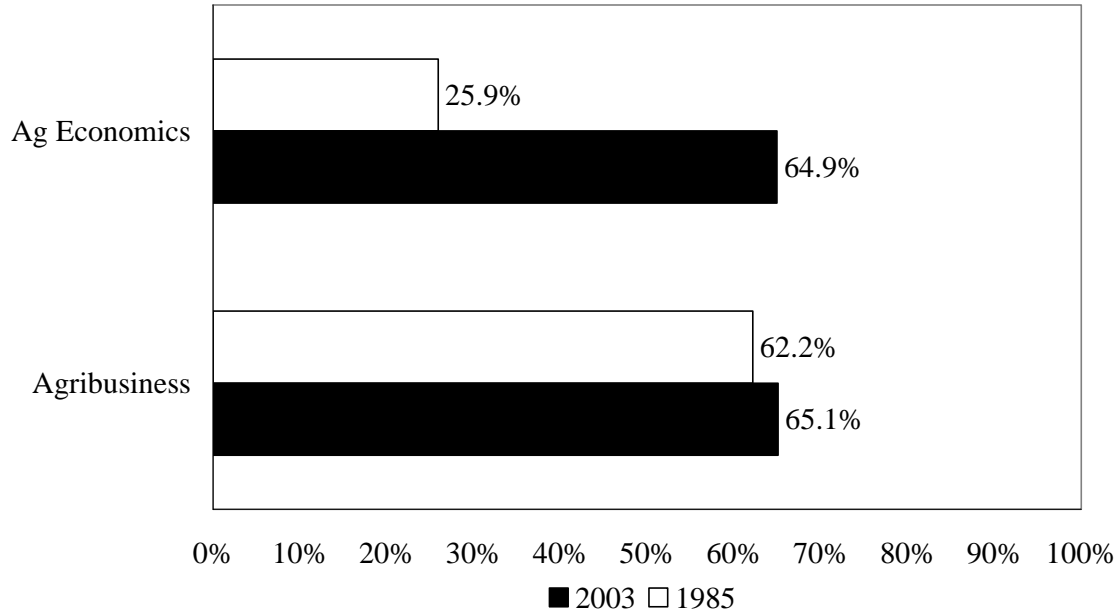
Comparison of BSABM and BSA Programs in 1985 and 2003

Two surveys conducted in 1985 and 1986 described curriculum requirements for 43 (Franklin) and 57 (Carmen and Pick) agricultural economics departments in the United States. In the Franklin study, 27 and 37 BSA and BSABM programs were summarized while the Carmen and Pick study summarized 31 and 35 BSA and BSABM programs. We compare the 1985 requirements against those from our survey. Business courses were not reported in the 1985 survey so our comparison is for agricultural economics courses.

The number of agribusiness management courses required for a BASBM has remained fairly constant since 1985 but increased from 25.9 to 64.9 percent of BSA programs over the 1985 to 2003 time period (Figure 11). A required course in farm

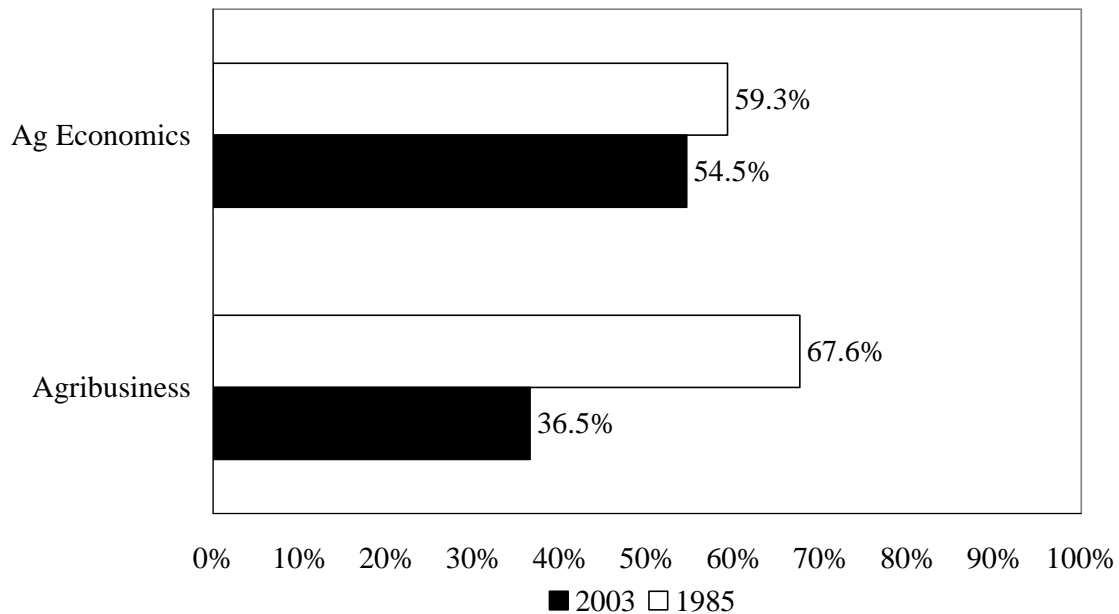
management decreased from 67.6 to 36.5 percent in BSABM programs over the same time period and remained almost the same in BSA programs (Figure 12).

Figure 11. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Agribusiness Management, 1985 and 2003



Source: National Food and Agribusiness Management Education Commission

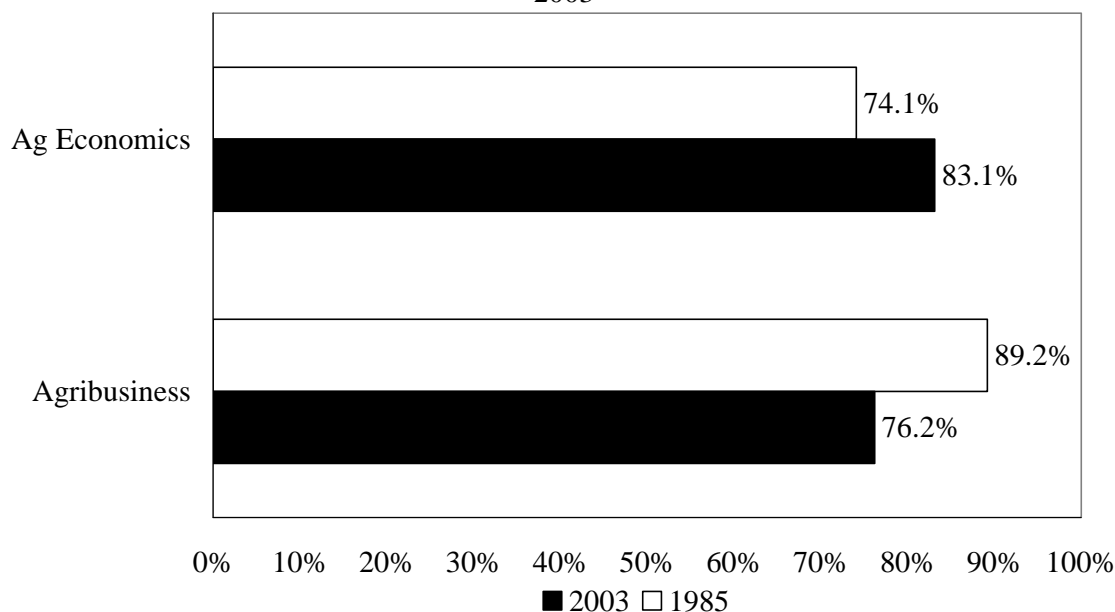
Figure 12. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Farm Management, 1985 and 2003



Source: National Food and Agribusiness Management Education Commission

The number of BSA programs that required an agricultural marketing course increased from 74.1 to 83.1 percent over this time period but decreased 13 percent for BSABM programs (Figure 13). This decrease is likely due to the increase in the number of food or agribusiness marketing courses. None were reported in the 1985 survey while 22 such courses were found in 2003. It is likely that BASBM programs have substituted such a course rather than an agricultural marketing course.

Figure 13. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Agricultural Marketing, 1985 and 2003

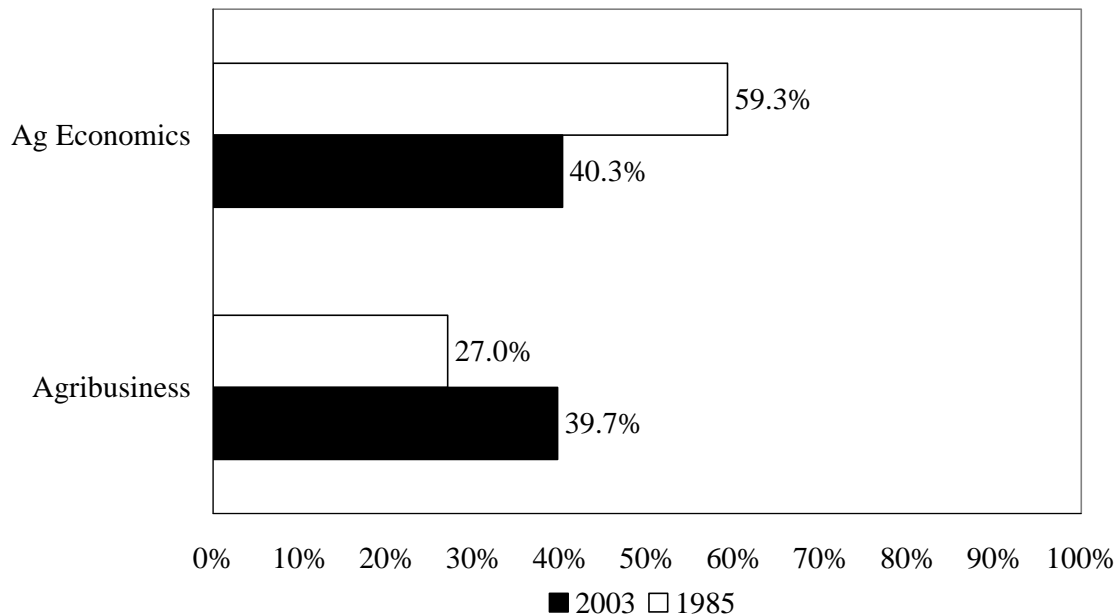


Source: National Food and Agribusiness Management Education Commission

The percentage of BSA programs that required price analysis declined from 59.3 to 40.3 percent but increased from 27 to 39.7 percent for BSABM programs (Figure 14). This may be due to the increase in BSABM programs over this time period and some departments with limited course options for a formal degree.

The percentage of BSA programs that required agricultural finance increased from 37 to 66.2 percent but only increased 9.9 percent for BSABM programs (Figure 15). A calculus course requirement decreased from 81.5 to 53.2 percent and 62.2 to 50.8 percent for BSA and BSABM programs over this time period (Figure 16). Calculus is often a prerequisite for production economics, managerial economics, and intermediate microeconomics courses. In some universities calculus is a school program requirement and in others it is a departmental requirement. Not surprisingly, the percentage of programs requiring production economics decreased from 1985 to 2003. Figure 17

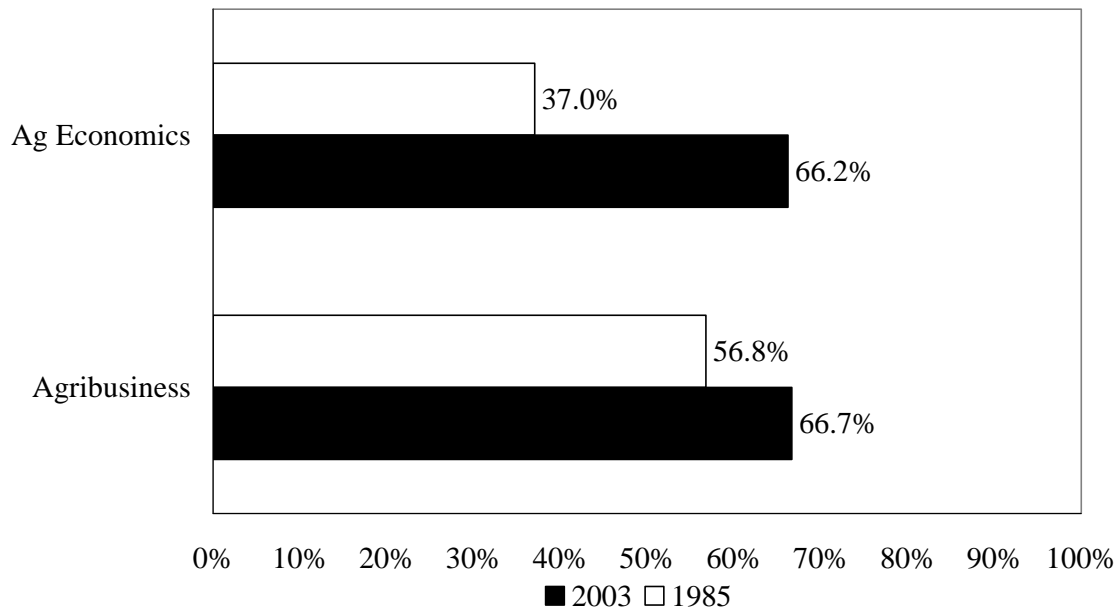
Figure 14. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Price Analysis, 1985 and 2003



Source: National Food and Agribusiness Management Education Commission

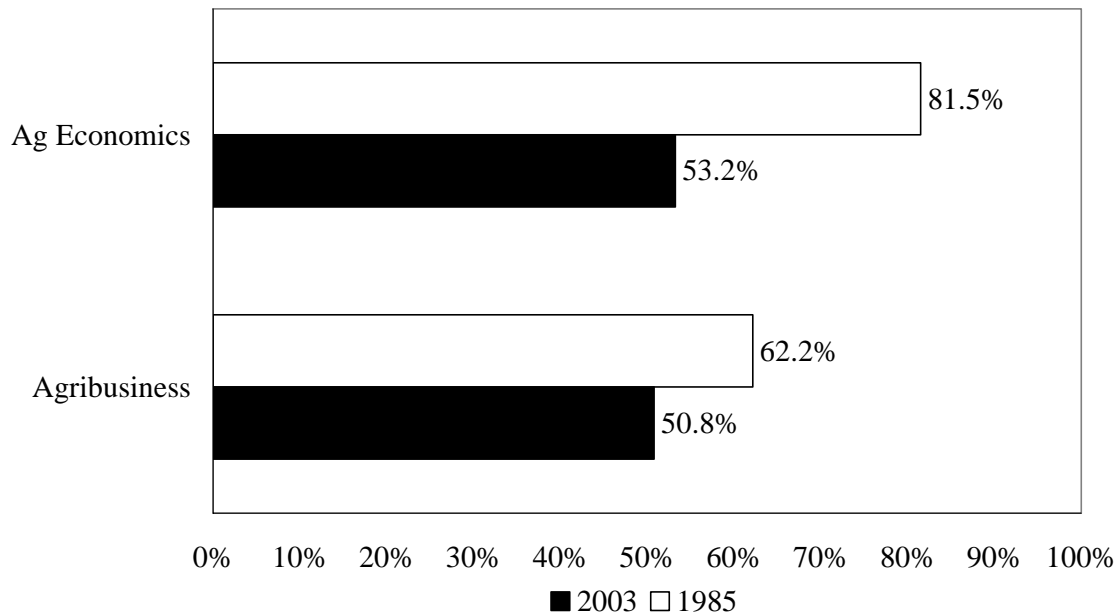
shows a decrease from 51.9 to 26 percent for BSA programs and a 40.5 to 17.5 percent decrease for BSABM programs. Finally, quantitative methods course requirements decreased from 40.7 to 24.7 percent and 21.6 to 15.9 percent for BSA and BSABM programs, respectively, over this time period (Figure 18). This reflected increased requirements for courses in statistics rather than a course in agricultural statistics and a decrease in linear programming courses. Linear programming is now taught within advanced farm management courses or computer classes.

Figure 15. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Agricultural Finance, 1985 and 2003



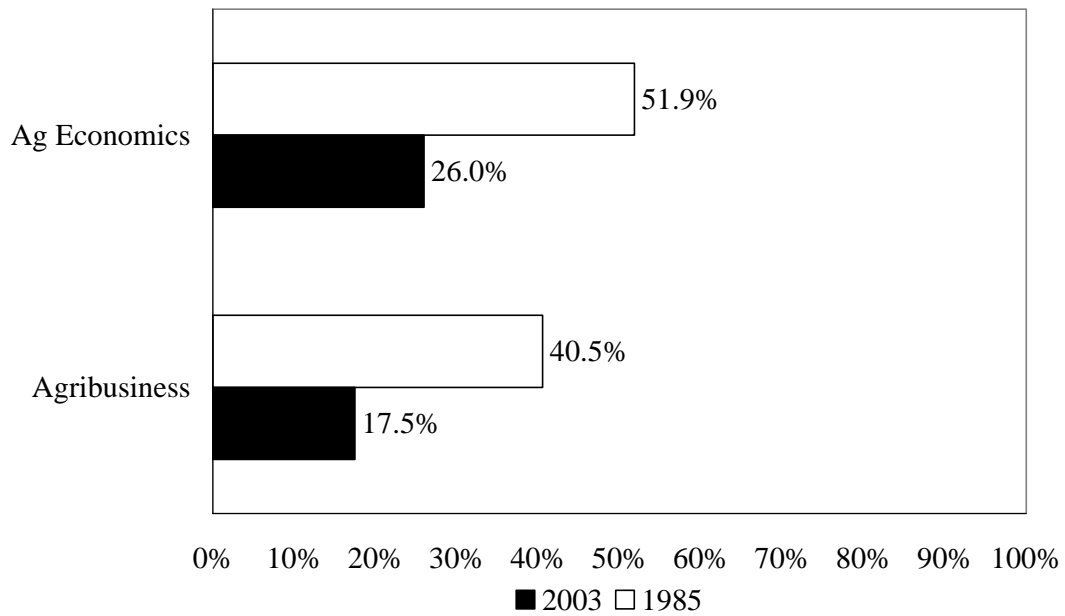
Source: National Food and Agribusiness Management Education Commission

Figure 16. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Calculus, 1985 and 2003



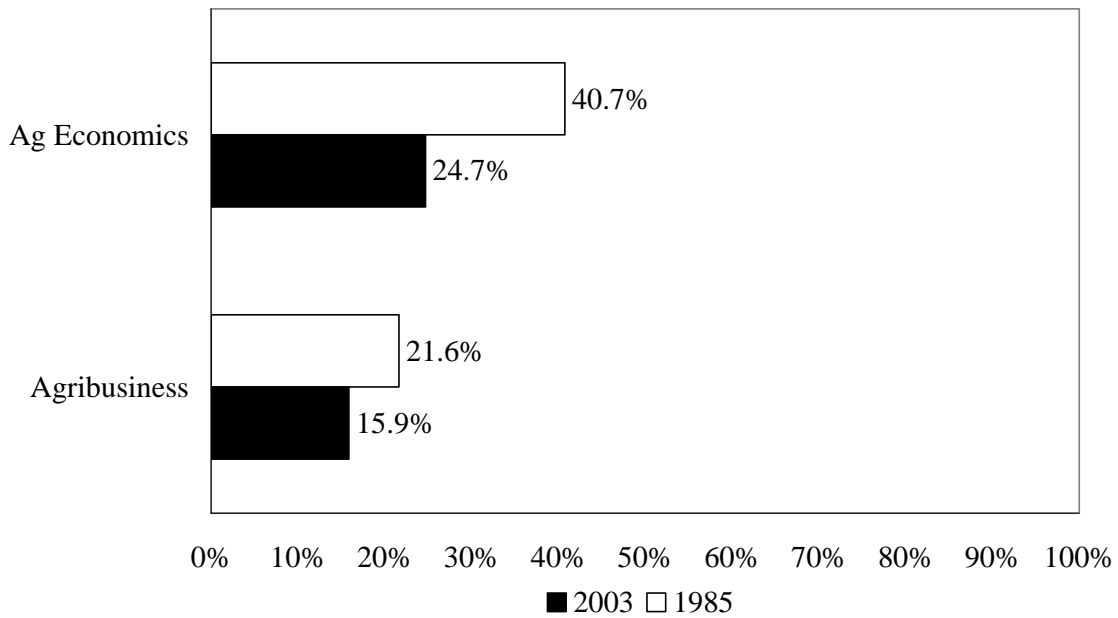
Source: National Food and Agribusiness Management Education Commission

Figure 17. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Production Economics, 1985 and 2003



Source: National Food and Agribusiness Management Education Commission

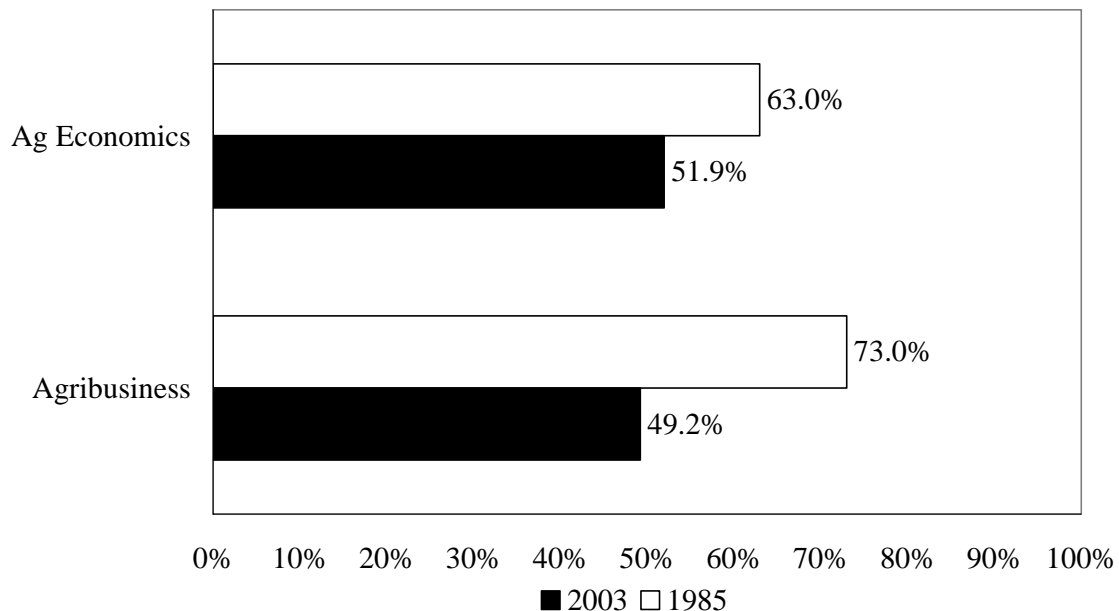
Figure 18. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Quantitative Methods, 1985 and 2003



Source: National Food and Agribusiness Management Education Commission

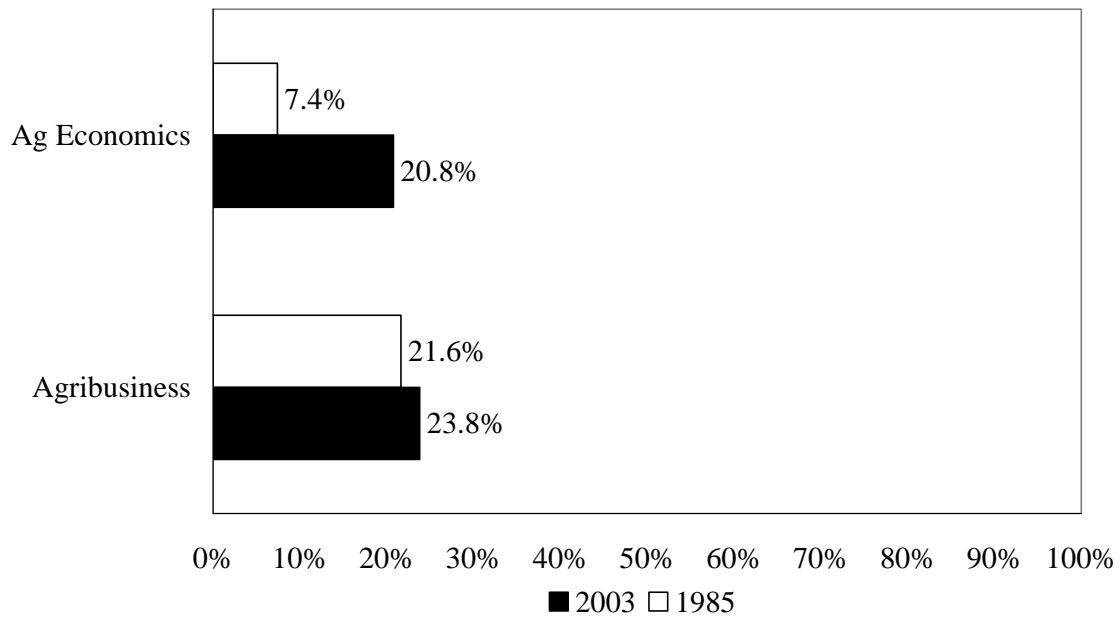
Other courses reported in the 1985 survey included agricultural policy, agricultural law, and resource economics. A required course in agricultural policy decreased from 63 to 51.9 percent in BSA programs (Figure 19). A more significant decrease was found in BSABM programs where the decrease was 73 to 49.2 percent, which may reflect the lessening of government intervention in agriculture production during this time period and the desire to substitute a historical agricultural policy class with a business elective or other agribusiness management course. A required course in agricultural law increased from 7.4 to 20.8 percent in BSA programs and a small increase from 21.6 to 23.8 percent was found in BSABM programs (Figure 20). A required course in resource economics declined from 51.9 to 16.9 percent in BSA programs and from 21.6 to 7.9 percent in BSABM programs (Figure 21).

Figure 19. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Agricultural Policy, 1985 and 2003



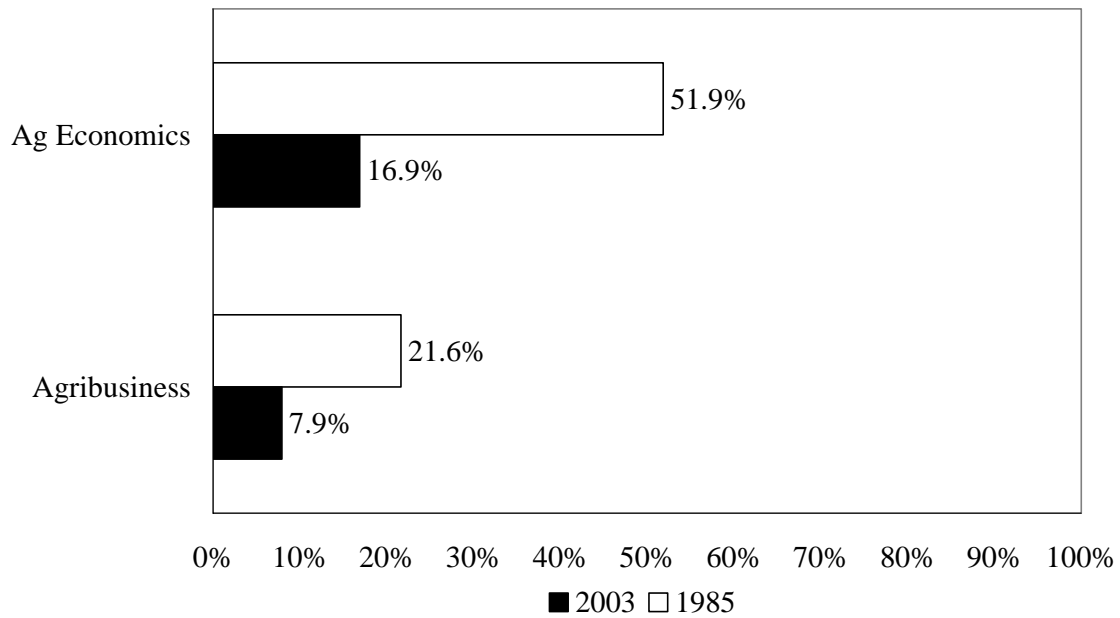
Source: National Food and Agribusiness Management Education Commission

Figure 20. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Agricultural Law, 1985 and 2003



Source: National Food and Agribusiness Management Education Commission

Figure 21. Percentage of BS Degrees in Agribusiness and BS Degrees in Agricultural Economics Requiring Resource Economics, 1985 and 2003

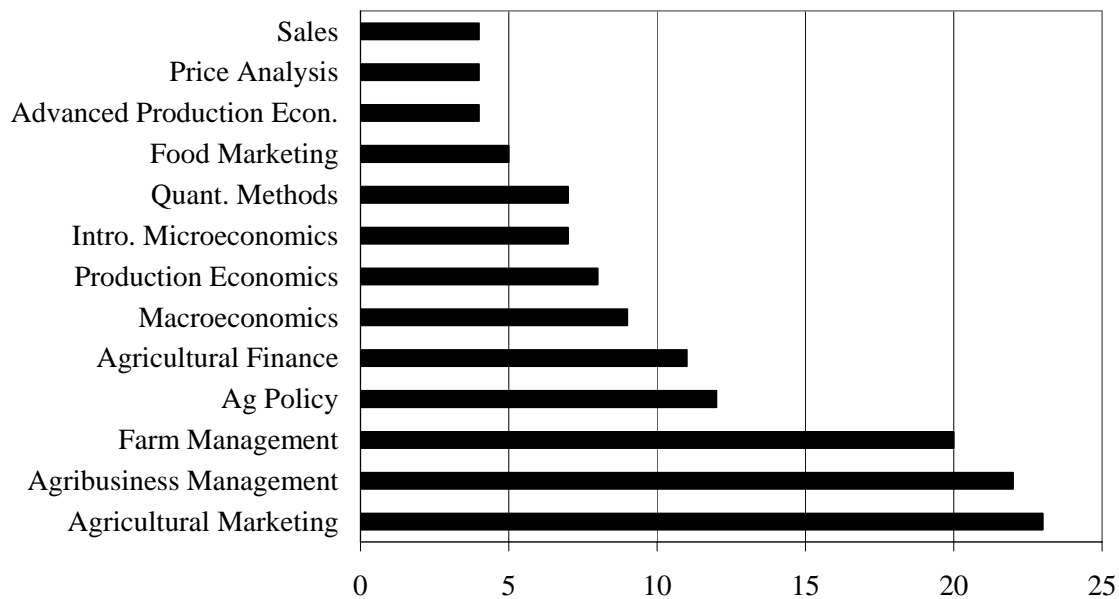


Source: National Food and Agribusiness Management Education Commission

Requirements for Minors in Agricultural Economics and Agribusiness

Course requirements for minors in agricultural economics and agribusiness were found in 50 programs. Course requirements were highly variable, but Figure 22 shows the most popular courses that are required in these minors. A typical minor required 15 semester credits. However, some caution must be required when using this figure as many of the courses have prerequisites such as calculus and an introductory microeconomic theory course.

Figure 22. Popular Requirements for Minors in Agribusiness and Agricultural Economics

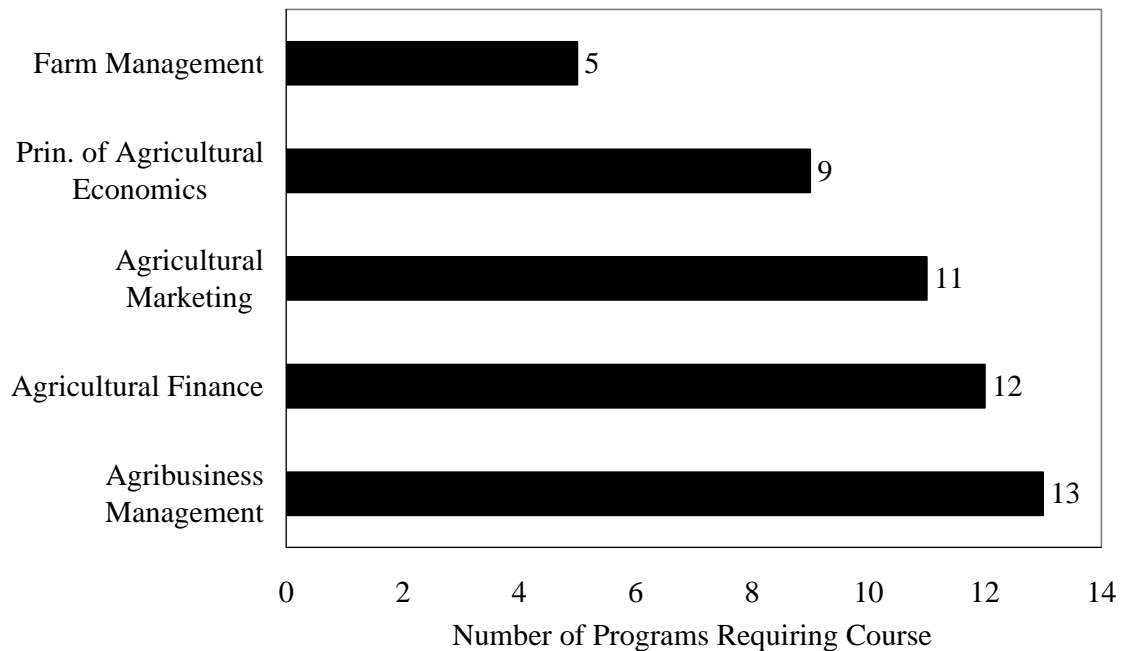


Source: National Food and Agribusiness Management Education Commission

Figure 23 (24) shows the five most required courses in an agribusiness (agricultural economics) minor. A major difference is that agricultural finance is more often required in an agribusiness minor relative to an agricultural economics minor. One surprise was the lack of a requirement in intermediate microeconomics, production economics, or managerial economics in agribusiness minors. Close examination of this minor showed

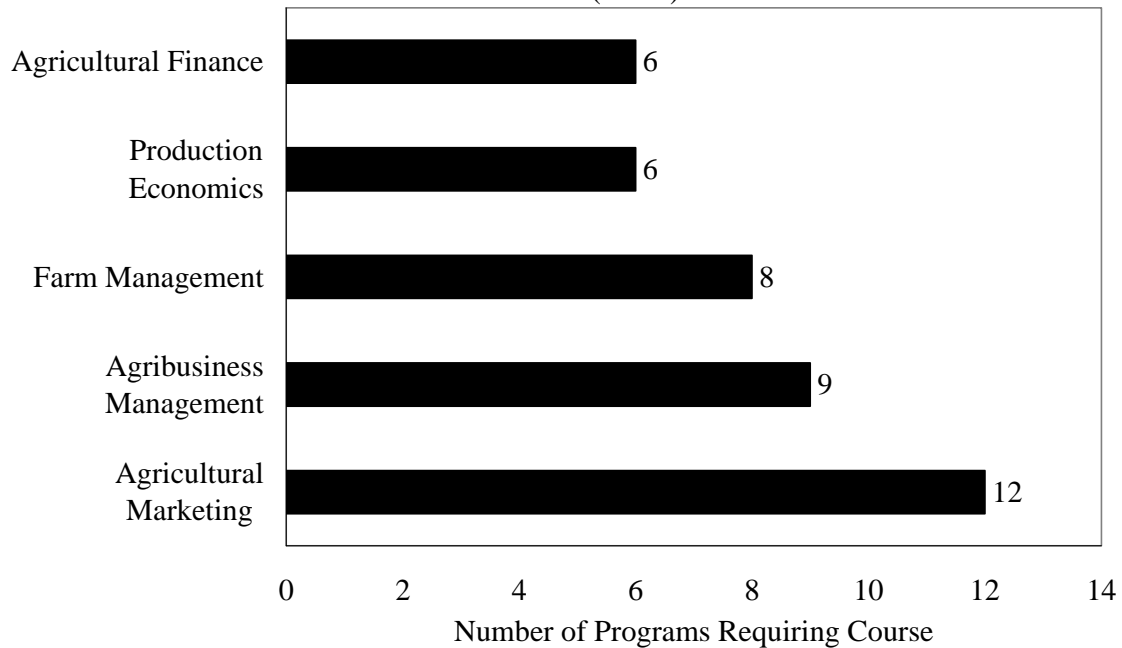
that many programs attempt to differentiate that minor so that other majors might seek to take the minor. Because agricultural economics programs typically are the only department in colleges of agriculture to require calculus, it is likely that departments do not require an intermediate microeconomics, managerial economics, or production economics course in an effort to make it easier for students in other majors to take the agribusiness minor.

Figure 23. Top Five Required Courses for Minor in Agribusiness (N=50)



Source: National Food and Agribusiness Management Education Commission

Figure 24. Top Five Required Courses for Minor in Agricultural Economics (N=41)



Source: National Food and Agribusiness Management Education Commission

Discussion

Almost twice as many BSABM required a management course relative to BSA. A course in agribusiness management was required by more than 65 percent of BSA and BSABM. A required course in agribusiness management increased from 25.9 to 64.9 percent over the 1985 to 2003 time period for BSA programs. However, more than half of the BSA programs required farm management compared to 37 percent of the BSABM. In fact, farm management was more commonly required for BSA and BSABM degrees in 1985. By 2003, this was reversed. Agribusiness management was virtually tied with agricultural policy for the third most taught class (after agricultural marketing, agricultural finance) in agricultural economics programs. Clearly, agribusiness management is an important course in agricultural economics programs.

These results suggest that BSABM may have substituted a business management course for a farm management course. BSABM were almost three times as likely to require business finance compared to BSA programs (45 to 19 percent). This result suggests that business finance has likely replaced an agricultural economics elective within BSABM.

Strategy usually was taught as a senior level course due to its integration of different management concepts. This course was twice as likely to be a required or elective course in BSABM. Seventeen courses in strategy were taught within colleges of agriculture in 2003 but none were reported in the 1985 survey. Strategy is a course that integrates many management concepts. Such integration through a strategy course was highly ranked in the Schneider and Litzenberg (1989) study and is a requirement in most accredited AACSB programs. Yet 84 percent of the programs did not require such a course. Thus, strategy courses offered within colleges of agriculture likely have been developed to provide integrative training and education in agribusiness management.

It was also evident that many BSABM have likely substituted a business marketing course for an agricultural marketing course. Some BSABM programs also required a marketing management course to improve agribusiness student skills in marketing. These courses are taught in colleges of business, which suggests that courses in marketing management are not likely to be taught by agricultural economists.

In addition, BSABM were more likely to have a required or elective course in international agricultural marketing relative to BSA. Most programs offered courses in trade, global food policy, or a related topic and this was more likely to be taken by BSABM students. International business management courses taught within the college

of business were four times as likely to be a required or elective course for BSABM students. Courses that explore the global and international nature of management are required in AACSB accredited programs. However, the majority of BSA and BSABM programs do not require a course that explores the international dimensions of marketing, management, or finance. Thus, exposure to global and international aspects of management are inadequate in many programs despite their importance as recognized by the AACSB and in the study by Schneider and Litzenberg (1989).

Some programs meet the AACSB criteria. However, not all have undergone the rigorous accreditation process. These include Abilene Christian University, Arizona State University, California State Polytechnic University at Pomona, California State Polytechnic University at San Luis Obispo, Cornell University, Fort Lewis College, Illinois State University, Michigan State University, South Carolina State University, Tennessee State University, Texas A&M University, Texas Tech University, University of Nebraska at Lincoln, and University of Wisconsin at Madison. Not surprisingly, most of these programs are offered jointly with the College of Business.

Six other programs are missing one of the AACSB requirements (not including business or agricultural law). These are Alabama A&M University, Mississippi State University, University of Connecticut, University of Idaho, University of Minnesota at Crookston, and University of Nebraska at Kearney. It is interesting to note that 11 BSABM programs that have the word “management” in their degree name are missing two or more of the AACSB requirements.

Summary

Many formal baccalaureate degrees in agribusiness management have been developed since the National Agribusiness Education Committee released its findings in 1989. In many cases, programs have begun to respond to Sonka's call for integration of economics and management and address the needs expressed by managers in the Schneider and Litzenberg survey. But many agribusiness management programs are still missing some key components. In particular, international and global dimensions of agriculture, an integrative management course such as strategy, agricultural or business law, and human resources are missing in many programs. The agribusiness management literature has found that these are important topics for students and should be an integral part of any agribusiness management degree. Curriculum is clearly influenced by faculty resources. Limited resources, an inability to reallocate resources, and lack of knowledge may be a limiting factor in those programs that have not adopted these topics.

Attachment A

University (63 total)	Degree (agribusiness management)
Abilene Christian University	BS in Agribusiness
Alcorn State University	BS in Agribusiness Management
Arizona State University	BS in Agribusiness
Berea College	BS in Agribusiness
California State Polytechnic University - Pomona	BS in Food Marketing and Agribusiness Management
California State Polytechnic University - San Luis Obispo	BS in Agricultural Business
California State University - Chico	BS in Agricultural Business
College of the Ozarks	BS in Agriculture
Colorado State University	BS in Agricultural Business
Delaware Valley College	BA in Agribusiness
Dickinson State University	BS in Agricultural Studies
Dordt College	BA in Agriculture
Eastern New Mexico University	Bachelor of Business Administration
Eastern Oregon State University	BS in Agricultural Business Management
Florida A&M University	BS in Agribusiness
Fort Lewis College	BA in Business Administration
Freed Hardeman University	BA in Business Administration
Iowa State University	BS in Agricultural Business
Kansas State University	BS in Agribusiness
Langston University	BS in Agricultural Science
Lincoln University of Missouri	BS in Agribusiness
Louisiana State University	BS in Agricultural Business
Louisiana Tech University	BS in Agricultural Business
Michigan State University	BS in Agribusiness Management
Mississippi State University	BS in Agribusiness
Missouri Valley College	BA in Business Administration
Montana State University	BS in Agribusiness
Murray State University	BS in Agribusiness Economics
Nicholls State University	BS in Agricultural Business
North Carolina A&T State University	BS in Agribusiness
North Carolina State University	BS in Agricultural Business Management
North Dakota State University	BS in Agribusiness and Applied Economics
Oklahoma State University	BS in Agribusiness
Oregon State University	BS in Agricultural Business Management
Pennsylvania State University	BS in Agricultural Business
Rocky Mountain College	BS in Business Administration and Economics
South Carolina State University	BS in Business Administration
Southeast Missouri State University	BS in Agribusiness
Southern Arkansas University	BS in Agribusiness
Southern Illinois University - Carbondale	BS in Agribusiness Economics
Southwest Missouri State University	BS in Agribusiness
Southwest State University	BS in Agribusiness Management
SUNY Cobleskill	Bachelor of Technology in Agricultural Business
Tabor College	BA in Business Administration
Tarleton University	BS in Agribusiness Management
Tennessee State University	BS in Agricultural Sciences

Texas A&M University	BS in Agribusiness
Texas A&M University - Commerce	BS in Agribusiness
Texas Tech University	BS in Agribusiness
University of Delaware	BS in Food and Agribusiness Management
University of Louisiana at Monroe	BS in Agribusiness
University of Minnesota	BS in Agricultural and Food Business Management
University of Minnesota - Crookston	BS in Agricultural Business
University of Missouri	BS in Agribusiness Management
University of Nebraska at Kearney	BS in Agribusiness
University of Nebraska at Lincoln	BS in Agribusiness
University of Northwestern Ohio	Bachelor of Business Administration
University of Wisconsin - Madison	BS in Agricultural Business Management
University of Wisconsin - River Falls	BS in Agribusiness
University of Wyoming	BS in Agricultural Business
Utah State University	BS in Agribusiness Management
Washington State University	BS in Agribusiness
West Virginia University	BS in Agribusiness Management

Attachment B

University (77 total)	Degree (agriculture)
Alabama A&M University	BS in Agricultural Economics
Alcorn State University	BS in Agricultural Economics
Arkansas State University	BS in Agriculture
Arkansas Tech	BS in Agriculture
Auburn University	BS in Agricultural Economics
Austin Peay State University	BS in Agriculture
Brigham Young University	BS in Economics
California State University - Fresno	BS in Agricultural Economics
Cameron University	BS in Agriculture
Central Missouri State University	BS in Agriculture
Clemson University	BS in Agricultural and Applied Economics
Colorado State University	BS in Agricultural Economics
Cornell University	BS in Applied Economics and Business Management
Delaware State University	BS in Agriculture
Eastern Kentucky University	BS in Agriculture
Fort Hays State University	BS in Agriculture
Fort Valley State University	BS in Agriculture
Illinois State University	BS in Agriculture
Kansas State University	BS in Agriculture
McNeese State University	BS in Agriculture
Middle Tennessee State University	BS in Agriculture
Mississippi State University	BS in Agriculture
Morehead State University	BS in Agriculture
New Mexico State University	BS in Agriculture
North Dakota State University	BS in Agriculture
Northwest Missouri State University	BS in Agriculture
Northwest Oklahoma State University	BS in Agriculture
Ohio State University	BS in Agriculture
Oklahoma Panhandle State University	BS in Agriculture
Oklahoma State University	BS in Agricultural Economics
Prairie View A&M University	BS in Agriculture
Purdue University	BS in Agriculture
Rutgers University	BS in Environmental and Business Economics
Sam Houston State University	BS in Agriculture
South Dakota State University	BS in Agriculture
Southern University	BS in Agricultural Economics
Southwest Texas State University	BS in Agriculture
Stephen F. Austin State University	BS in Agriculture
Sul Ross State University	BS in Agriculture
Tarleton University	BS in Agriculture
Tennessee Technological University	BS in Agriculture
Texas A&M	BS in Agriculture
Texas A&M at Kingsville	BS in Agriculture
Texas Tech	BS in Agricultural and Applied Economics
Truman State University	BS in Agricultural Science
University of Arizona	BS in Agricultural and Resource Economics
University of Arkansas	BS in Agricultural, Food, and Life Sciences

University of Arkansas at Monticello	BS in Agriculture
University of California - Davis	BS in Managerial Economics
University of Connecticut	BS in Resource Economics
University of Florida	BS in Food & Resource Economics
University of Georgia	BS in Agriculture
University of Guam	BS in Agriculture
University of Hawaii	BS in Agriculture
University of Idaho	BS in Agricultural Economics
University of Illinois - Urbana-Champaign	BS in Agriculture
University of Kentucky	BS in Agricultural Economics
University of Louisiana at Lafayette	BS in Agriculture
University of Maine	BS in Resource and Agribusiness
University of Maryland	BS in Agricultural and Resource Economics
University of Maryland Eastern Shore	BS in Agriculture
University of Massachusetts	BS in Resource Economics
University of Missouri	BS in Agricultural Economics
University of Nebraska at Lincoln	BS in Agriculture
University of Nevada at Reno	BS in Agricultural and Applied Economics
University of Tennessee - Knoxville	BS in Agriculture
University of Tennessee - Martin	BS in Agriculture
University of Wisconsin	BS in Agricultural Sciences
University of Wisconsin - Platteville	BS in Agriculture
Utah State University	BS in Agricultural Economics
Virginia Polytechnic Institute and State University	BS in Agricultural and Applied Economics
Virginia State University	BS in Agriculture
Washington State University	BS in Agricultural Economics
West Texas A&M University	BS in Agriculture
Western Illinois University	BS in Agriculture
Western Kentucky University	BS in Agriculture
Wilmington College	BS in Agriculture
