Structuring Undergraduate Agricultural Economics and Agribusiness Programs

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There are numerous advantages to having an undergraduate degree in Agricultural Economics / Agribusiness

Balanced degrees – economics, agriculture, business, science, liberal arts

Good starting salaries

Upward mobility

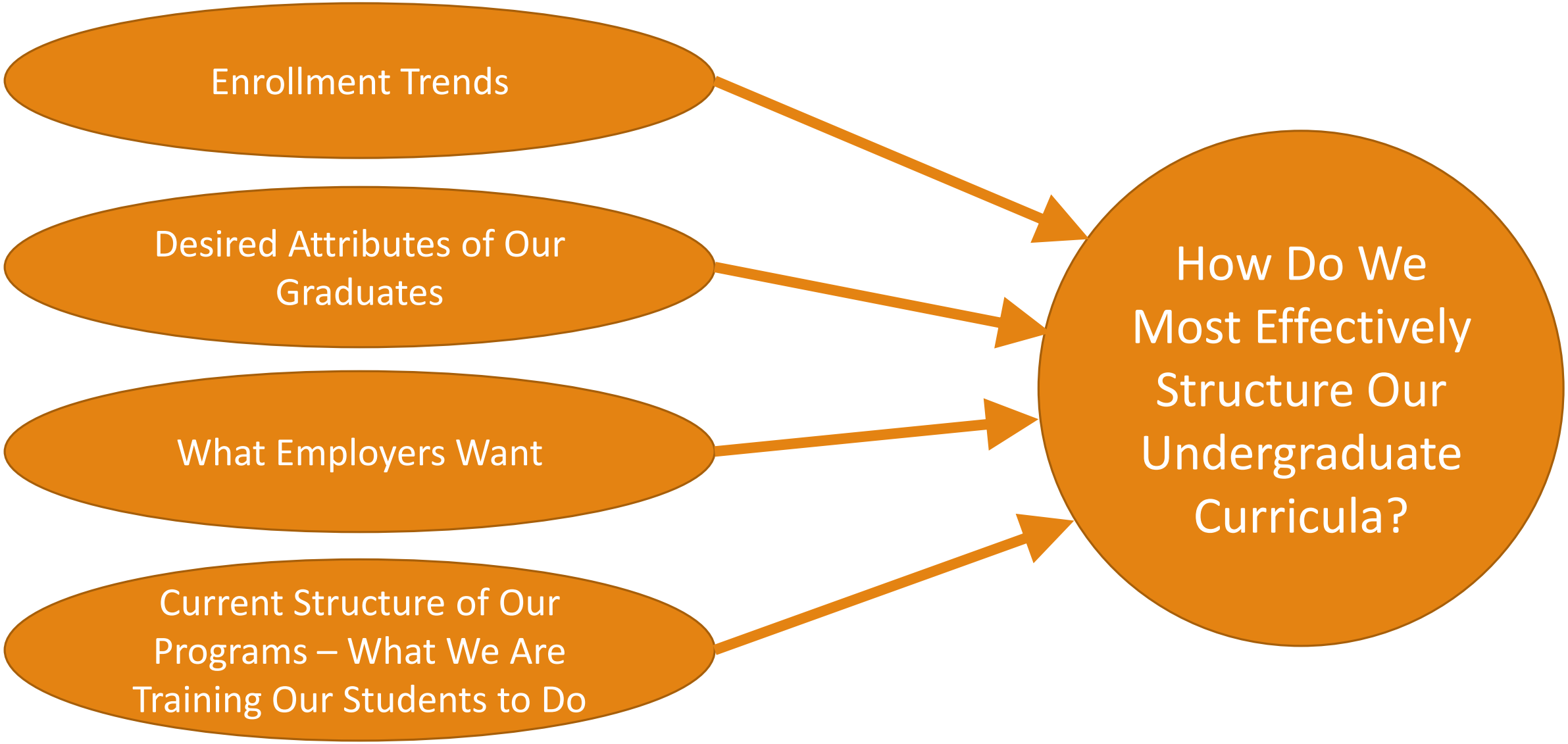
Strong employment rates[1]

But … relatively few people know what an agricultural economist is or what one does.

What are some issues we need to consider in structuring our degree programs?

[1]Georgetown University (2011)

For U.S. Undergraduate Agricultural Economics and Agribusiness Programs, Discuss:

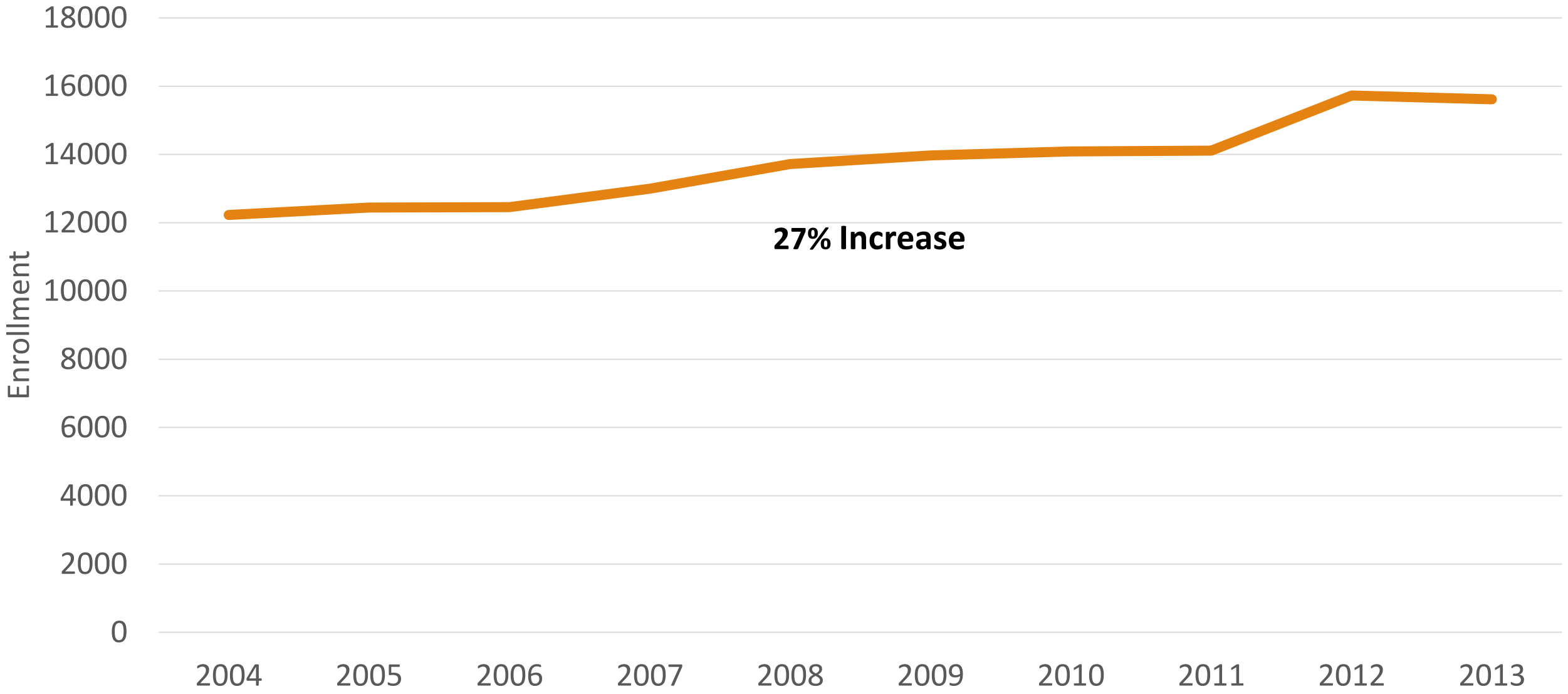


Enrollment Trends

Notable Trends

- Change from ***Agricultural Economics to Agribusiness*** programs over the past 40 years (Heiman et al. 2002; Perry 2010)
- Greater emphasis on ***written and oral communication skills, economics, and business***; lower emphasis on ***technical agriculture*** (Larson 1996)
- Growth in ***natural resources and applied economics***
- Enrollment trends:
  - ***1980s:*** Declining enrollment (Adrian 1990)
  - ***1990s:*** Increased Agribusiness enrollment more than offsetting decreased Agricultural Economics enrollment (Heiman et al. 2002)
  - ***2000s:*** Increased enrollment

Fall Enrollment, 106 U.S. State Universities with Agricultural Economics, Business, and Management Programs, FAEIS Database



What Is Generally Considered as We Structure Programs?

Internal Factors

- ***Desired attributes of college graduates***
- Observed student strengths and weaknesses
- Institutional factors, perspectives of attitudes of faculty
- ***Structure of other programs***

External Factors

- ***Employer feedback***
- Regional employment opportunities
- Alumni perceptions

Desired Attributes of College Graduates

What Are We Training Our Students to Do?

Be well-informed citizens so they can make better decisions.

- Broad general education
- Specific skills

Perform as agricultural business professionals in:

- Management positions in agricultural business firms
- Commodity, wholesale, and retail marketing
- Finance and banking
- Real estate, rural land appraisal
- Government and the public sector
- Production agriculture
- Agricultural policy and economic analysis
- Graduate school

Employer Feedback

What Do Agribusiness Employers Want?

Ratings Converted to Rankings of 16 Skills, Abilities, and Experiences Sought in New Hires (NFAMEC 2004)

1. ***Interpersonal communication skills***
2. ***Critical thinking skills***
3. ***Writing skills***
4. ***Computer skills***
5. ***Cultural / gender awareness / sensitivity***
6. ***Quantitative analysis skills***
7. ***Knowledge of general business management***
7. ***Oral presentation skills***
9. ***Knowledge of the food / agribusiness markets***
10. ***Knowledge of accounting and finance***
11. ***Intern / co-op work experience***
12. ***Knowledge of macroeconomics, trade, etc.***
13. ***Broad-based knowledge in liberal arts***
13. ***International experience***
15. ***Foreign language***
16. ***Production agriculture experience***

What Do Agribusiness Employers Want?

Conjoint analysis of 137 agricultural business employers showed ranking of importance of attributes of agribusiness graduates (Noel and Qenani 2013):

1. *Creativity*
2. *Communication skills*
3. *Critical thinking skills*
4. *Teamwork skills*
5. *Knowledge of marketing*
6. *Knowledge of finance*

Structure of Programs

Collecting Information about Agricultural Economics and Agribusiness Programs

Websites of U.S. 1862 and 1890 land grant universities

For universities with agricultural economics and/or agribusiness programs, record:

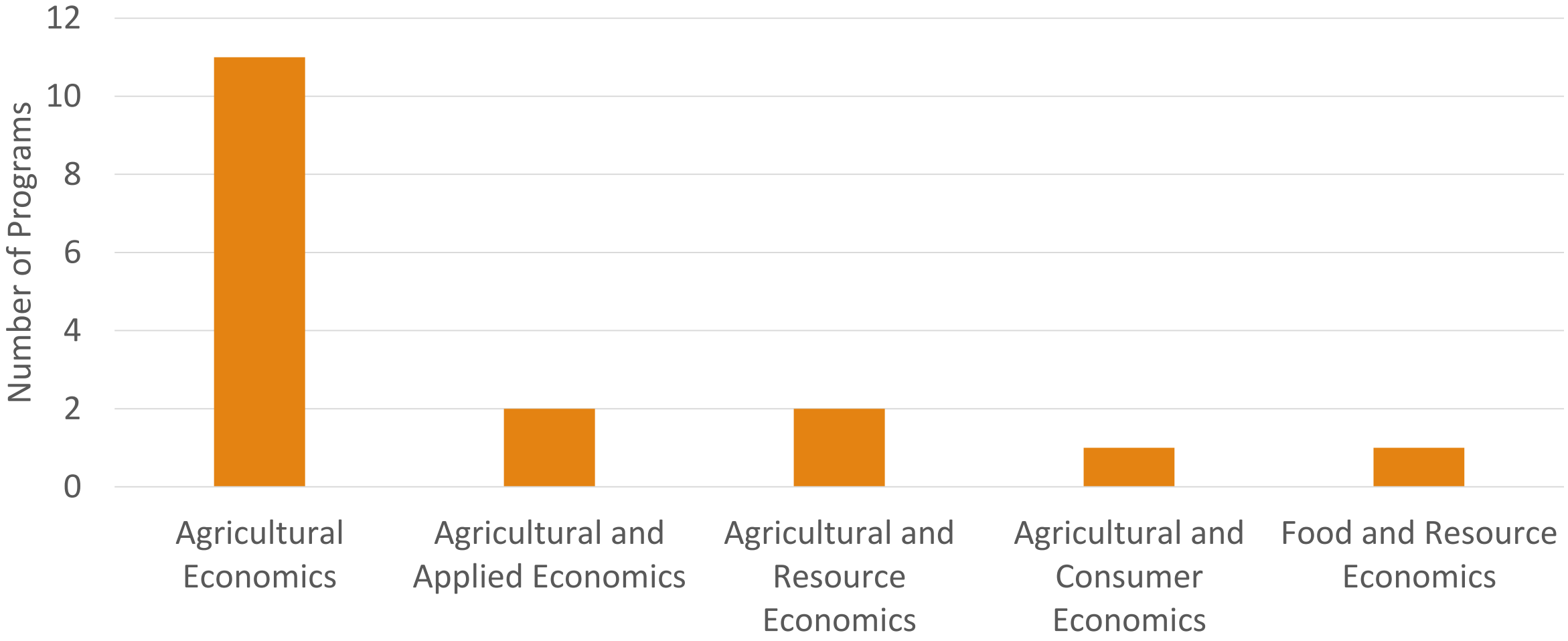
- ***Degree name***
- ***Areas of concentration***
- ***Coursework required***

Not included:

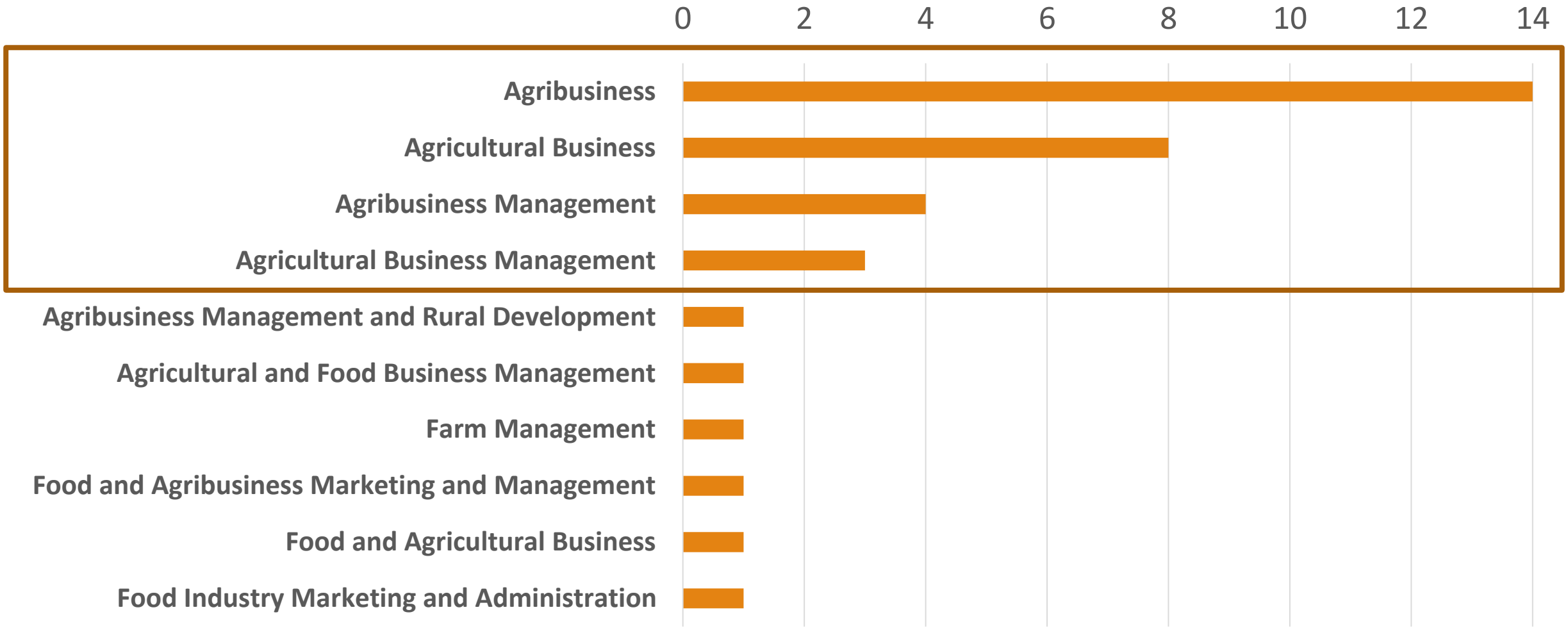
- B.S. in Agriculture with Agribusiness area of concentration
- B.S. in Resource Economics, etc., offered by agricultural economics departments

Limitation: content may be “hidden” in a required course

Names of U.S. Agricultural Economics B.S. Degree Programs, n=17



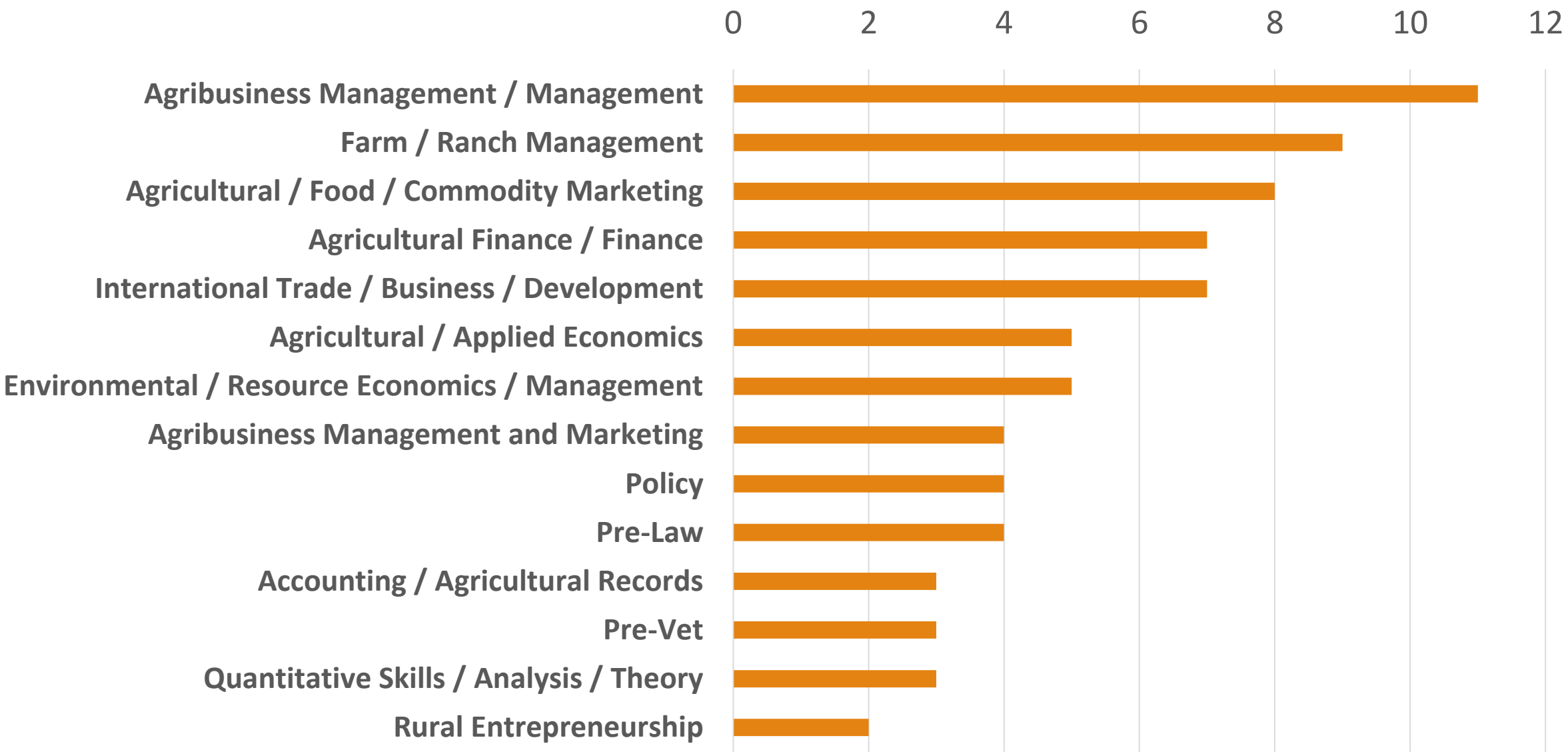
Numbers of U.S. Agricultural Business B.S. Degree Programs by Name, n=35



Names of “Hybrid” U.S. Agricultural Business and Agricultural Economics Programs (n=6)

Program Name
Agribusiness and Applied Economics
Agricultural Business and Economics
Agricultural and Food Business Economics
Agricultural Economics and Agricultural Business
Agricultural Economics and Management
Applied Economics and Management

Numbers of Programs Offering Various Areas of Concentration



Percentages of Programs Requiring Specific Economic Theory Courses

Class	% All Programs, n=58
Principles of Microeconomics	100
Principles of Macroeconomics	95
Intermediate Microeconomics	71
Intermediate Macroeconomics	43
Any Other Economics Course	24

"Any Other Economics Course" includes Production Economics; Managerial Economics; Farm and Food System Economics; Introduction to Economic Institutions, History, and Principles; and Introduction to Global Economic Institutions and Business Environment.

Percentages of Programs Requiring Specific Math and Quantitative Courses

Class	% All Programs, n=58
Calculus I	91
Calculus II	12
Statistics	93
Quantitative Methods in Ag Economics	45
Any Quantitative Methods Course	55

4 programs require 2 statistics courses.
12 programs require an econometrics course.
2 programs require an operations research course.

Percentages of Programs Requiring Specific Policy, Trade, and Law Courses

Class	Agricultural Business, n=35	Agricultural Economics, n=17	All Programs, n=58
Agricultural Trade			9
Agricultural Policy			34
Any Ag Policy, Trade, or International Econ Course			50
Business Law**	29	0	19
Agricultural Law*	31	6	22
Any Business and/or Agricultural Law Course***	60	6	41

***, **, and * indicate significance at the P ≤ 0.01, 0.05, and 0.10 levels, respectively.

Percentages of Programs Requiring Specific Accounting and Finance Courses

Class	Agricultural Business, n=35	Agricultural Economics, n=17	All Programs, n=58
Accounting I			93
Accounting II			52
Agribusiness Finance			24
Agricultural Finance			29
Finance (Business School)*	22	0	17
Any Finance Course***	85	35	71

*** and * indicate the percentages differ at the $P \leq 0.01$ and $P \leq 0.10$ levels, respectively.

Percentages of Programs Requiring Specific Management Courses

Class	Agricultural Business, n=35	Agricultural Economics, n=17	All Programs, n=58
Management (Business School)*	29	6	22
Agribusiness Management**	63	35	55
Farm Management**	40	12	31
Any Management Course***	91	53	81

***, **, and * indicate the percentages differ at the P ≤ 0.01, 0.05, and 0.10 levels, respectively.
22% of programs required 2 management courses.
17% of programs required 3 management courses.
2 programs required 4 management courses.

Percentages of Programs Requiring Specific Prices and Marketing Courses

Class	Agricultural Business, n=35	Agricultural Economics, n=17	All Programs, n=58
Agricultural Prices			22
Agricultural Marketing			67
Agribusiness Marketing			17
Marketing (Business School)**	34	6	26
Any Marketing Course*	97	71	86

** and * indicate the percentages differ at the P ≤ 0.05 and 0.10 levels, respectively.
22% of programs required 2 marketing courses.
10% of programs required ≥3 marketing courses.

Percentages of Programs Requiring Other Courses

Class	% All Programs, n=58
Any Development Economics Course	7
Any Resource or Environmental Economics Course	26
Any Professional Writing Course	53
Public Speaking / Communications Course	50
Technical Agriculture Course(s)	58

Observations on Structuring Undergraduate Programs

Observations – Name Recognition

106 programs at state universities

Top 3 names: Agribusiness Agricultural Economics, Agricultural Business

65 different names for areas of concentration

58 land grant undergraduate programs have **21** different names

<20% of high school students can name a job other than farming that an agricultural economics graduate might secure[1]

Contrast: Most universities offer economics, sociology, chemistry, and biology degrees.

How do potential students and employers respond to different degree names?

[1]Espey and Boys (2015)

Observations – Coursework Required

Standard Courses for Most (>90%) Agricultural Economics and Agribusiness Programs	Courses More Likely Required in Agribusiness than Agricultural Economics Programs
Principles of Microeconomics	Law
Principles of Macroeconomics	Finance
Accounting I	Marketing
Calculus I	Management
Statistics	

Most programs have rather extensive "choose from a list" of agricultural economics/business courses.

Observations – “Soft Skills”

Employers emphasize the importance of “soft skills:” communication, team building, etc. Are our programs adequately addressing these needs?

- Specific courses in communications, ethics, etc.
- How do we incorporate these skills into existing agricultural business / economics courses, particularly as class size increases?

Are there opportunities for increased experiential learning?

- Study abroad, internships, service learning, undergraduate research.
- Two programs require internships.
- One program requires experiential / interdisciplinary learning experiences.

Observations – Areas of Concentration

Examining the list of areas of concentration gives ideas for recruitment.

- **Pre-Law**
- **Pre-Vet**

Agricultural Economics curricula have more "select from a list of courses" requirements. Are more flexible curricula without areas of concentration[1] an improvement over more structured programs?

- Motivates students to identify interests / career path.
- Greater flexibility for selecting coursework that fits the career path.
- ***But … be careful to ensure competencies in core areas.***

[1]See Hurley and Cai (2012).

Closing Remarks

Agricultural Economics and Agribusiness undergraduate numbers are increasing.

Our graduates have strong skill sets: economics, management, marketing, team building, speaking, writing, technical agriculture.

Continue to adjust curricula to changes in the food industry and employer needs.

Demand for our graduates will continue to grow.

Most of the dollar spent for food goes to management and marketing, with new products always being introduced. Concentrate on Agribusiness.

Inform the public (potential students, parents, employers) of opportunities.

Thank You!

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