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Added Programs**

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# **An Assessment of University Agri-Entrepreneurship and Value Added Programs**

**By**

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## **The Issue**

A recent trend in land-grant university programs has been the emergence of entrepreneurship as a content topic for teaching, research and extension. This emergence is likely related to the so-called “value added” movement in agriculture over the last decade. Value-added ventures were encouraged by government policy and by market opportunities to create more consumer-oriented, niche products by transforming agricultural commodities right on the farm or through producer-owned processing. A focus on entrepreneurship was a logical part of developing such ventures.

A number of land-grant universities have programs that deal with agri-entrepreneurship and value added agriculture. However, there has been very little work done on the structure, services offered and effectiveness of these programs. Parcell and Sykuta analyzed the interest in agri-entrepreneurship at the undergraduate level at the University of Missouri, and Ulmer *et al* analyzed the economic impact of firms assisted by the Oklahoma Food and Agricultural Products Center. One of the few, if only, studies that assessed more than one state program was carried out by Woods and Hoagland that analyzed seven programs located primarily in the Midwest and South.

Given the growing interest in agri-entrepreneurship, there is a need to expand the analysis of such programs beyond the limited research done to date. This paper is based on a survey of land-grant and related universities. The analysis of the structure of agri-entrepreneurship programs and how performance is measured is provided, as well as an accounting of the universities that offer some type of agri-entrepreneurship and value added program.

## **Methodology**

An internet search was conducted to obtain the names of contact persons at every land grant university, both the 1862 and 1890 schools, as well as selected universities that were known to have departments of agricultural economics, agribusiness or similar departments. A questionnaire was mailed to the contact person. A total of 70 questionnaires were sent with 18 responses. Of the 18 respondents, six are located in the South, three are located in the West, one is from a Mid-Atlantic state, two are from the Northeast, and six are located in the Midwest. Of the six Southern schools, two are 1890 institutions. All but one represent public universities, and there is one public university that is not part of a land grant institution.

The questionnaires focused on the following topics: whether the department or unit offered a program in agri-entrepreneurship or value added agriculture, what other entities offered a program in entrepreneurship at the university, what majors, minors or classes were offered by the department or unit, the level of interest and focus of research in entrepreneurship and the size and scope of extension programs in entrepreneurship and business development. These questions were designed to assess the level of activity in the three traditional roles of a land grant college: teaching, research and extension. The activities carried out by the respondents are shown in table 1.

<b>Activity</b>	<b>Number of Respondents</b>
Teaching Only	1
Research Only	0
Extension Only	0
Teaching and Research	0
Research and Extension	6
Teaching and Extension	0
Teaching, Research and Extension	5

Most of the respondents (12 of 18) carry out at least one of the activities, and all but one of these carry out two or more. The most common activity was research and extension which was carried out by six departments, with teaching, research and extension carried out by five additional departments. It should be noted that several of the extension programs were undertaken by extension staff in the field, and were not necessarily formal extension programs carried out by the department itself. Courses taught in business schools or other departments were not included. Some departments did not have any program in entrepreneurship or venture development or were not easily categorized by the analysis.

Additional questions focused on the structure of the program, sources of funding, and what performance criteria was used to assess the success of the program. A copy of the questionnaire is attached as an appendix.

## **Results**

### ***Who Offers Programs***

Of those universities that responded to the questionnaire, 12 offered some type of program. Six universities offer courses through their agricultural economics program, of which one university in the Northeast has entrepreneurship as a primary focus of their department. (Six other universities offer classes in entrepreneurship through their

business schools but are not counted in Table 1). Research is carried out by 11 departments, and extension and outreach programs are carried out by 11 departments.

Additional programs are offered through other outlets. One southern university works with its business school and a community leadership department, and another southern university offers extension services through a different department. A Midwestern university offers extension services through an off campus program located in a different city.

### *Courses*

Most courses are either basic introductory courses in entrepreneurship or are courses offered through the business school sometimes at the MBA level. One university offers a course in Agribusiness Entrepreneurship; one offers a seminar in entrepreneurship with an average enrollment of 18 students. A Midwestern university offers a course in the fundamentals of entrepreneurship with an average enrollment of 15 and is developing courses in Intermediate Entrepreneurship Theory and a PhD level seminar in Entrepreneurship.

A Northeastern university offers an introductory course in entrepreneurship that attracts 200 students, a course in marketing entrepreneurship (70 students), a strategic planning entrepreneurship course (70 students), a decision making entrepreneurship course (50 students), and a financial management for entrepreneurs course (50 students). This is the only university that submitted a completed questionnaire that has a complete major offered by its agricultural economics department. The department has 80 majors and 35 minors in the field.

A university in the Midwest offers a minor in entrepreneurship with a wide range of course offerings: Human Resource Operations in Entrepreneurship (28 students on average), Intellectual Property in Entrepreneurship (10), Finance Venture Capital in Entrepreneurship (23), Legal Issues/Business Structure in Entrepreneurship (22), Taxation in Entrepreneurship (19) students on average, Financial Analysis/Record Keeping/Acct in Entrepreneurship (16) , Ecommerce in Entrepreneurship (21), Marketing/Promotion in Entrepreneurship (19), International and Global Marketing in Entrepreneurship (11), Strategy/Pricing/Location in Entrepreneurship (13), Selling in Entrepreneurship (16), Harvest in Entrepreneurship (16), Entrepreneurship I (61), Entrepreneurship II (45), and Business Plan Writing and Competition (14) . There are 35-40 students that are minors. It should be noted that this department is a joint economics/agricultural economics department that offers courses in accounting as well. The minor is offered through a separate unit within the university, but courses are primarily taught by faculty members in the department and are therefore included in the analysis.

Generally speaking these courses are offered once a year. The university in the Northeast that offers a wide range of courses in entrepreneurship offers classes every semester. This university offers classes online as well as in a traditional classroom location. The other universities offer their classes in a traditional classroom setting. The Midwest

university with a minor offers its courses every semester and offers courses in a classroom setting both on campus and off campus.

### ***Research***

Research in the realm of entrepreneurship is not a major activity in most of these departments. The number of faculty that conduct research on entrepreneurship in the 11 university departments that conducted research on entrepreneurship, and venture development varied between one and five. One Midwest university that had four faculty members that conduct research on entrepreneurship and venture development two were tenured faculty members and two were not on the tenure track. The Midwest university with a minor has four faculty members that conduct research, two of which consider entrepreneurship their primary research focus. There are four universities that have at least one faculty member whose primary research focus is entrepreneurship; one in the west, two in the Midwest, one in the south and one in the northeast. Only two universities, the one in the Northeast and one in the Midwest had more than one faculty member whose research was geared primarily to entrepreneurship.

There is a great deal of variation in the type of research conducted. Research in rural or agri-entrepreneurship or rural development is carried out at five universities. Market research is carried out by one department. Research in new venture creation and development is carried out by three departments. One department carries out research in value added agriculture, tourism, local food and organic agriculture. Two departments carry out research in entrepreneurship and cooperatives. One department does research on small business management and farm management. Another department carries out research on the characteristics of entrepreneurs, and entrepreneurship in the supply chain. One university with several faculty members who do research in entrepreneurship focuses on the areas of entrepreneurial approaches to the firm, contracting and organization, as well as organization and behavior of biotech startups. One department does research in managing risk with respect to entrepreneurship. One Midwest department carries out research on rural women entrepreneurs, value-added ventures, and business start-ups.

### ***Extension/Outreach***

One-on-one business counseling is offered by nine universities. Twelve universities (11 land grant universities, and one non land grant not included in table 1) offer business development services, the most common type of service offered. Six universities offer marketing analysis. Five departments offer product development services often with the support of other departments such as food science. Four universities offer extension and outreach assistance in packaging and labeling. Three departments offer legal and regulatory support, at least one with the assistance of the university's Law School.

Several departments offer additional extension and outreach services. One department with the help and support of the food science department does nutritional analysis for clients. Another department located in the West offers training and community development to create and sustain an entrepreneurial environment. One department located in the Midwest publishes a newsletter geared towards agri-entrepreneurs. This

department also offers venture capital to business start-ups in the value added agriculture, business incubator services, and outreach programs tailored to small businesses.

Most of these departments use extension personnel. The most common use is one-on-one counseling (nine universities). Extension personnel at six universities also help arrange and offer conferences and meetings. Extensions personnel offer courses through four universities. At one Southern university extension personnel also do business planning as does a university in the Midwest, feasibility studies and applied market research. Extension at one Western university provides programmatic coordination of training and services. Surveys and data analysis are conducted by extension personnel at one Midwest university.

Programs are offered by independent extension staff at five universities, although at one Southern University extension staff are also part of a small state or regional group of experts. Two other universities also have small state or regional entrepreneurship extension programs, and three universities have a statewide or regional network of extension personnel.

### ***Structure and Funding***

There are several different organizational forms for these programs. One university located in the South has an informal ad hoc faculty group. Another Southern university has an informal faculty group as well as individual faculty initiatives. Three universities have individual faculty initiatives. Three universities have an informal or ad hoc faculty group, individual faculty initiatives, and a formal program or center. This may be the final stage before creating a formal program or center. Five universities have centers (3) or a formal program (2) devoted to entrepreneurship and business development.

Levels of funding vary widely. Universities without formal programs receive no funding. One Southern university has several million dollars at its disposal and one university in the Midwest has an annual budget of \$2 million. Another university receives \$50,000 to \$75,000 with an additional \$150,000 forthcoming to support an endowed professorship. A program at a smaller Midwestern university receives \$10,000 of in kind contributions to promote entrepreneurship with additional funding apparently from fee-for-service. One Western university receives \$100,000 as does a university located in the South. The university in the Northeast that has the major receives \$45,000 to support its educational programs. The Midwest university with a minor receives \$75,000 for its program.

Just as there is several different organizational forms there are also several ways in which these programs are funded. One Southern university receives 90 percent of its funding from grants, primarily from Tobacco Settlement Funds with an additional 5 percent each from Extension and the Experiment Station. Another Southern university receives a grant to fund its program. A third Southern university receives funding from extension and from grants. A public university from the West that is not a land grant college receives funding from fee-for-service activities. A Midwestern university with a large program receives 60 percent of its funding from extension, 21 percent from the

experiment station, 4 percent from the university general fund, 8 percent from grants and 7 percent from fee for service.

Another Midwestern university that is still in the process of developing its entrepreneurial program receives all of its funding from endowments. A third Midwestern university with a fairly large program receives funding from extension, the experiment station, the university general fund, grants, fee for service and endowment. The university in the Northeast with a large teaching program receives funding from extension, the experiment station, the university general fund, and grants. The Midwestern University with a minor receives 96 percent of its funding from the university general fund and 4 percent from grants. The Midwestern university with a small program receives 50 percent from extension and 50 percent for fee for service.

### ***Measuring Performance***

Performance measures tend to follow the way the programs are structured and funded, although in some cases they are not separated from other aspects of the activities carried out by the department or university. One department's program is too new for assessment. Student credit hours generated are counted for those universities that have courses on entrepreneurship. Three universities, one in the Midwest that offers its program through the business school, one that offers a separate minor, and the university in the Northeast with a major also include the number of majors and minors in the program to assess performance. A small Midwestern university does not separate out its business development and entrepreneurship activities from its general extension program.

Research is a component of performance in two large Midwestern universities, and a smaller university located in the Midwest that offers a minor. Journal articles, papers presented at professional meetings, and other publications are all included in measuring performance. The same also holds true at the Northeastern university that has a large entrepreneurship program. The two 1890 schools that responded to the questionnaire also count papers, and journal articles as part of measuring performance. One Southern university considers other publications in measuring performance.

Extension programs offered were counted by six programs. New ventures and businesses started are used as performance measures by six universities, of these six, three also considered the number of jobs created and two consider the jobs retained, these two universities also consider the revenues generated by the new ventures. Three departments also measure the funds generated by the programs. The program at a large Midwest university considers private firm collaboration and financial support from other departments at that university. One Southern university also counts hours of community service through its outreach.

## Discussion

There are a wide variety of programs focused on entrepreneurship and new business development throughout the country. However, relatively few have a totally integrated full service program that offers courses, extension and research. Extension or some type of outreach program is the most common type of activity carried out by these programs. However, formal structure seems to be the exception rather than the rule. A small group of faculty or extension staff appear to provide services and programs on a rather ad hoc basis.

However, at several locations programs appear to be evolving into more formal structures. One department has essentially transitioned into an entrepreneurship business development department. Four Midwest universities have fairly extensive programs, although one is just beginning, and another offers courses as a separate unit within the university. A Southern university is using Tobacco Settlement Funds to create a program. It is likely the trend to continue as departments look for ways to maintain relevance in the face of the continued long term decline for traditional production agriculture courses and service, provided sources of funding can be identified.

Generally speaking the larger the program the greater the diversity of performance measures. Smaller more targeted programs have fewer performance criteria that need to be met. These programs tend to be more focused on extension and outreach. From the responses there appears no program that has a major teaching, research and extension emphasis. However, there is one university in the Midwest that does have teaching, research and extension although the courses are offered by the business school. Another large Midwest university has a major extension component and a research component.

Despite the apparent growth of entrepreneurship and business development programs within colleges of agriculture funding may be a concern. Grants and fee for service are becoming more common and the results of the survey points this out. These programs also generally have some degree of support from the public sector, especially the experiment station and extension. It is interesting that two programs have endowments; a new program is completely funded by endowments. In an era of declining public resources, and increasing competition for grants, endowments may be a viable alternative for entrepreneurship and business development programs.

One interesting finding of the research is that the two departments that have the most developed programs at the undergraduate level, one in the Northeast and one in the Midwest are from small states, with the one in the Midwest being a large farming state with one city of any real size and the one in the Northeast also without a large metropolitan area. It may be the case that these departments offer these programs as a response to need in the state, and an effort to foster economic development especially in rural areas.

## Conclusion

It appears that the interest in offering programs that focus on entrepreneurship and value added ventures is growing. However, many of these programs are in their developmental stage. There is no standard program or structure that has yet emerged. Course offerings are often found in the College of Business and not the College of Agriculture. With two exceptions the course offerings within the College of Agriculture are rather limited.

It is difficult to generalize extension programs. Some are formal and well connected with a department. Some programs are more ad hoc and are generated by field staff. Research programs are also variable; however, the larger the program and the greater the emphasis on entrepreneurship, the greater the research component.

Given likely budget restrictions for many land-grant universities and the wide variety of funding sources seen across respondents, funding for these programs is probably a significant issue. Without new funding sources these programs will only develop from internal funds if other missions or activities receive less funding, always a difficult proposition given existing university priorities and limited expansion of public funds. External funding sources, most likely fee-for-service, endowments, or some type of earmarked funds such as Tobacco Settlement dollars, may be necessary if these programs are to be funded.

These conclusions obviously represent the 18 respondents. No attempts were made to examine by other means (e.g. direct website searches) what the non-respondents (52 universities) may be doing. As a result, the conclusions are preliminary.

The 12 universities that were identified by the survey and have either formal programs or program elements in agri-entrepreneurship represent a critical mass of programming in their own right. Perhaps they should work together to learn from their individual experiences and to foster the emergence of full programs of excellence in this arena.

## References

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Ulmer, A., R. Holcomb, M. Woods, C. Willoughby and D. Tilley. *An Assessment of the Economic Impact of Firms Assisted by the Oklahoma Food and Agricultural Products Center*. *Journal of Food Distribution Research* 36 (3) November 2005 (9-17).

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## Appendix: Questionnaire

### A. General Questions

1. Which of the following does the department or unit, or organization offer in the area of entrepreneurship?  
 Course(s)  
 A major in entrepreneurship  
 A minor or specialization in entrepreneurship  
 Extension or Outreach programs for new ventures/entrepreneurs  
 Research in Entrepreneurship
2. If your department or unit does not offer courses or a program in entrepreneurship or if additional departments or units offer courses or a program in entrepreneurship what units within the College of Agriculture offer them?

### B. Questions on Teaching

3. If courses are offered in entrepreneurship please list titles number, and average enrollment  

<i>Course Number</i>	<i>Title</i>	<i>Average Enrollment</i>
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4. How often are classes in entrepreneurship offered?  
 Every semester or quarter  
 Every year  
 Less often
5. If a major is offered how many students are majors?
6. If a specialization or minor is offered how many students are in the specialization/minor program
7. How are classes offered? (check all that apply)  
 Traditional classroom setting  
 Online  
 Off campus classroom setting

### C. Questions Concerning Research

8. How many faculty members do research on entrepreneurship?
9. How many of these consider entrepreneurship their primary research focus?
10. What areas or topics within entrepreneurship has been the focus of their research efforts?

**D. Questions Concerning Extension/Outreach**

11. What services are provided to entrepreneurs by your program? (Please check all that apply)
- Business development services (business plans, feasibility studies etc.)
  - Marketing analysis
  - Advertising assistance
  - Product Development
  - Legal and regulatory services
  - Packaging, labeling, nutritional analysis, etc.
  - One-on-one business counseling
  - Other (Please Specify)\_\_\_\_\_
12. What role do Extension personnel play
- None
  - Offer courses
  - Offer one-on-one counseling
  - Offer one time conferences/meetings etc.
  - Other (Please Specify)\_\_\_\_\_
13. How are Extension personnel used?
- As part of a statewide or regional network of counselors
  - Individual Extension staff offering independent programs
  - As part of a small state or regional group of experts in entrepreneurship

**E. Questions Concerning Organization, Funding, etc.**

14. What is the structure of your entrepreneurship program?
- Informal or ad hoc faculty group
  - Individual faculty initiatives
  - Formal program
  - Center
  - Institute
  - Separate Department
  - Other (Please Specify)\_\_\_\_\_
15. What is the approximate annual dollar value of resources committed to your entrepreneurial program (from all sources)?

16. How is the organization funded (please put percentages next to the relevant category)?

- Extension
- Experiment Station
- University General Fund
- Fee for Service
- Endowment
- Grants
- Other (please specify) \_\_\_\_\_

**F. Question Concerning Performance**

17. How is performance of the entrepreneurship program measured? (check all that apply)

- Student credit hours generated
- Number of majors
- Number of minor/specializations
- Extension programs offered
- New ventures/businesses started
- New jobs created
- Jobs retained
- Journal articles written
- Papers presented at professional meetings
- Other publications (staff papers, popular press articles, etc.)
- Revenues generated by the new ventures/businesses
- Revenues generated by the organization
- Other (please specify) \_\_\_\_\_