



1. NEW PROGRAM PROPOSAL FORM

Sponsoring Institution(s): Lincoln University in Missouri

Program Title: Integrated Agricultural Systems

Degree/Certificate: Master of Science

Options: Integrated Agricultural Systems

Delivery Site(s): Lincoln University in Missouri

CIP Classification: 030104

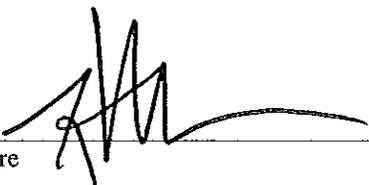
Implementation Date: Fall 2014

Cooperative Partners: N/A

Expected Date of First Graduation: 2017

AUTHORIZATION

Dr. Kevin D. Rome, President
Name/Title of Institutional Officer

Signature  Date

Person to Contact for

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Form NP – New Program Proposal



Office of Academic Affairs and Provost

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August 5, 2014

Missouri Department of Higher Education
215 Jefferson Street
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Attached is a New Program Proposal to create the Master of Science Degree in Integrated Agricultural Systems (030104). This proposal has been approved by the Lincoln University Board of Curators. Thank you for consideration of this request.

Sincerely,

Dr. Ruthi Sturdevant
Interim Vice President for Academic Affairs and Provost



2. NEED:

A. Student Demand:

- i. Estimated enrollment each year for the first five years for full-time and part-time students.**

STUDENT ENROLLMENT PROJECTIONS

Year	1	2	3	4	5
Full Time	5	5	6	7	9
Part Time	2	2	3	5	5
Total	7	7	9	12	14

The graduation cycle is estimated at 4-5 semesters with the majority being 4 semesters.

Please provide a rationale regarding how student enrollment projections were calculated:

Demand for this type of Masters Degree is evident. For example, a survey using the Rapid Response Technology (i.e., clicker system) was given in October, 2012, to a representative sample of fifty-five (55) undergraduate students for the fall 2012 semester that were enrolled in the BS in Agriculture degree at Lincoln University. The survey was aimed at assessing the extent to which undergraduate students were interested in and supported a Master’s Degree in Integrated Agricultural Systems. From this survey (see methodology and results in Appendix I) it can be concluded that a new Masters Degree in Integrated Agricultural Systems will have the support of students from within the University. We do not have the capability of conducting surveys like this in other universities, either within or outside Missouri. However, we strongly believe that if this degree could be offered starting in the fall of 2014, it would have adequate student demand even for the first year, and it would become a very successful and unique program in the Midwest. Also Lincoln University, being located in Jefferson City could attract state employees seeking a master’s degree in the field to enroll as part-time students.



Provide a **rationale** for proposing this program, including **evidence of market demand and societal need supported by research**:

Historically, agriculture has been the backbone of the economy of the Midwestern states. The need for the program proposed by Lincoln University was determined through in-class student surveys and through internet surveys of job and employment opportunities. See sections B and C under the Need area for more detail.

ii. Will enrollment be capped in the future?

No cap on enrollment is necessary at this time.

B. Market Demand:

i. National, state, regional, or local assessment of labor need for citizens with these skills

The U.S. Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook (2012-2013) indicates that the job outlook for agricultural and food scientists will increase by 10% or 3,500 jobs from 2010 to 2020. This increase in job vacancies is due to the retirement of many scientists, thus our proposed Masters degree will be instrumental in graduating trained professionals for filling those positions. A 2012 study by Georgetown University's Center on Education and the Workforce revealed that recent agriculture and natural resources graduates with bachelor's degrees have the third lowest rates of unemployment (7%), and that rate is even lower for graduates with advanced agricultural degrees (2.4%).

Domestic consumers are increasingly gravitating toward purchasing their agricultural products from farmers markets, community supported agriculture, and other locally grown food producers. Exports for agricultural products also are rising, reflecting international demand. Furthermore, demand continues to rise for organic farm produce—grown to a great extent on small-to medium-sized farms. The production of crops without the use of pesticides and certain chemicals is allowing farms of small acreage to remain economically viable. Employment in aquaculture had been growing steadily in recent years in response to growth in the demand for fish. (Bureau of Labor Statistics - <http://www.bls.gov/oco/cg/cgs001.htm>). In another example of increased competition and demand for agriculture graduates, Farm Credit Mid-America recruits on campuses at more than two dozen colleges and universities that offer four-year degrees in agriculture

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Form SE - Student Enrollment Projections

across various Midwestern states, highlighting the increased competition for the “best and brightest” agriculture and natural resources graduates.

Presently the number of minority students with Masters Degree in agriculture that meet the employment requirements of USDA and other agencies is not adequate. It is essential that more minority students are enrolled in graduate programs and acquire skills that would make them competitive in the job market. Lincoln University is uniquely positioned to fill some of this demand because of its status as the only historically black 1890 land-grant institution in the North Central Region. The primary mission of the Lincoln University Cooperative Research Program is “to enhance the quality of life for diverse, limited resource audiences through supportive research at state, regional, national, and international levels.” Consistent with Lincoln University’s mission the Department of Agriculture and Environmental Sciences seeks to advance the current state of sustainable agriculture through investigations of up-to-date scientific methods with the main aim of “improving the economic and social well-being of underserved Missouri residents with limited resources.” Effective training of future generations of scientists is another major goal of this program.

C. Societal Need:

i. General needs which are not directly related to employment

Evidence is growing at an alarming rate that we are degrading our environment and consuming resources at unsustainable rates. Biodiversity is disappearing at a pace unequalled since the end of the age of dinosaurs 65 million years ago. Irreplaceable topsoil erodes from farm fields, threatening global food supplies. Water pollution is a serious global concern, and development of sound management strategies to conserve and protect the health and integrity of water resources are urgently needed. Ancient forests are being destroyed and our climate is changing to a new regime that could have catastrophic consequences. Agriculture is a significant contributor to these, due to its use of land, fuels, water, pesticides, and synthetic fertilizers. At the same time, a typical American meal consists of foods that have been transported for thousands of miles. Development of new farming systems, featuring low inputs of resources, environmental stewardship, and economical viability, will require a significant level of integration and diversification of local production. Sustainability is a dynamic process that promotes exploitation of natural resources without destroying the ecological balance of an area. Sustainable agriculture is defined as an integrated system of plant and animal production that can achieve long-term supply of food and fibers, maintain high quality environment and life for farmers and society, and efficiently use resources available on farms (National Academy of Sciences, 2010).

In December, 2012, a report from President Obama’s Council of Advisors on Science and Technology, Agricultural Preparedness and the Agriculture Research Enterprise was released. This report addresses the scientific challenges facing the nation’s agricultural research enterprise and makes recommendations on how to refocus and rebalance the Federal Government’s support of agricultural research to enable U.S. farmers to meet the critical challenges facing U.S. agriculture in the 21st century. One specific

recommendation was to increase public investment in agricultural research to meet these growing challenges. Through the development and implementation of this Masters Degree in Integrated Agricultural Systems at Lincoln University, truly multi-disciplinary, systems-based, integrated systems will be researched and promoted, providing opportunities for varying levels of adoption by small farmers in Missouri and other US states while preparing highly skilled graduates that can compete for jobs in the global, national, regional, and local workforce.

Program Goals:

Lincoln University proposes to offer a Masters Degree program in Integrated Agricultural Systems. The program intends to explore agriculture from a different perspective, one that integrates animal, plant, and aquaculture production with management of natural resources such as nutrients, soil, and water. Students who major in agriculture and agribusiness are encouraged to enroll in this degree program.

Current graduate degree programs across the nation are focused on commodity areas such as vegetable, staple agronomic crops, orchard crops, vineyard production and other fruit crops, animal, or dairy production. Most of these programs address the needs of large-scale farms and farmers specialized in only one or two cash crops. Such specialization has higher energy and water demand per unit output compared with more diversified small-scale production systems; negative impacts on available agricultural soils and other natural resources, as well as the environment. Specialized farms are also prone to the risks of market fluctuations and underutilize many of the resources available locally. Even though Missouri has the second highest number of farms in the nation, about 96% of agricultural producers would be classified as small farmers based on the definition of the National Commission of Small Farms (i.e., <\$250,000 gross farm income). The average Missouri farm is only 277 acres, and diversified in livestock, crop, poultry, and dairy production. This group of farmers constitutes the stakeholders of Lincoln University.

Our Master's degree program in integrated agricultural systems is designed to produce graduates with the skills needed to succeed and be leaders in a century that will bring significant changes to agriculture. This Master degree program in Integrated Agricultural Systems is designed along five fundamental guiding principles:

1. Twenty-first century agriculture should not only provide a livelihood for farmers and food for consumers but also minimize its impact on the environment and natural resources as well as sustain stable local economies. Studying and developing solutions and policies to address the above require a sound and rigorous interdisciplinary approach. Continuous research, extension, and experimentation is needed to enable farmers to adapt their systems to the changing environmental, social, market, and policy conditions to ensure long-term sustainability while reducing off-farm inputs.
2. Students are more likely to receive a truly integrated agriculture education when the faculty and programs are committed to interdisciplinary education rather than isolated specializations.

3. The most effective way to produce and consume foods is to do so locally, which requires increasing the variety of local agricultural produce, diversification and integration of production systems on farms.
4. The most efficient farmers are those that integrate all resources and capabilities to achieve long-term environmental and economical sustainability.
5. The most efficient agricultural producers, professionals, researchers, consultants, and leaders are versatile and adaptable. These traits allow them to readily address new and challenging problems, as environmental, marketing, and agricultural realities change.

This program will produce graduates with production, consultancy, research, and service skills adaptable to addressing a variety of issues in modern agriculture: fuel efficiency, nutrient retention and cycling, organic and low input production, water, energy, and soil conservation, local and direct marketing, etc. The graduates will be able to effectively work and communicate with professionals in a wide variety of disciplines. Our graduates will be equipped with strong problem-solving and analytical skills in a sound interdisciplinary context, which will allow them to seek employment in federal and state agencies as well as the private sector. Potential employers of graduates of the program include the U.S. Department of Agriculture, Natural Resources Conservation Service, Missouri Department of Conservation, Soil and Water Conservation Districts, and consultancy and production companies.

D. Methodology used to determine “B” and “C” above.

United State Department of Labor, Bureau of Labor Statistics (www.bls.gov)

United States Department of Agriculture (www.USDA.gov)

USDA Economic Research Service (ERS) (<http://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/highlights-from-the-2013-farm-income-forecast.aspx#.UZkzRKKzeSo>)

Food and Agriculture Organization (www.fao.org)

United Nations Environment Program www.unep.org

GeorgeTown University Center on Education and the Workforce (<http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/Unemployment.Final.update1.pdf>)

Farm Credit Mid-America

(<http://www.e-farmcredit.com/CareersInterns/tabid/57/Default.aspx>)

National Academy of Sciences. 2010. Toward Sustainable Agricultural Systems in the 21st Century. Committee on Twenty-First Century Systems Agriculture Board on Agriculture and Natural Resources Division on Earth and Life Studies. National Academies Press, Washington, D.C.

3. DUPLICATION

Since there is no other dedicated, stand-alone graduate degree program in Integrated Agricultural Systems at the University of Missouri-Columbia or any other institution in the state of Missouri, duplication of programs or competition for students will not be an issue. The nearest institution with a similar program is Iowa State University but the program focuses on Organic and Sustainable Agriculture.

(<http://www.sust.ag.iastate.edu/gpsa/application.html>)



4. PROGRAM STRUCTURE

- A. Total credits required for graduation: 30 (thesis option); 33 (non-thesis option)
- B. Residency requirements, if any: None
- C. General education (total credits): All students would have previously completed a baccalaureate degree
- Core requirement: total credits: 10 (non-thesis option); 16 (thesis option)

Course Number	Credits	Course Title
AGR 520	3	Advanced Analytical Methods
AGR 590	1	Seminar
AGR 503*	3	Experimental Design
AGR 511	3	Advances in Sustainable Agriculture
AGR 599	6	Thesis Research

*Must take a Statistical Methods course or similar before taking Experimental Design

- D. Major electives: total credits: Minimum 17 (non-thesis option) and 8 (thesis option)

Course Number	Credits	Course Title
AGR 515	3	Soil Management for Sustainability
AGR 595	3	Current Topics in Integrated Agriculture
AGR 510	3	Economics of Sustainable Agriculture
AGR 528	3	Advanced Integrated Pest Management
AGR 512	3	Pasture-Based Livestock Production
AGR 516	3	Bioenergy
AGR 506	3	Management of Private Land for Livestock and Wildlife Production
AGR 555	3	Microbiology for Food and Water Safety
AGR 509	3	Plant Nutrition and Management
AGR 505	3	Nutritional Biochemistry
BIO 523	4	Ecology

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E. Other electives: total credits: 6

Up to six (6) credits of graduate courses approved by advisor on- or off-campus, related to the student's area of focus.

(Sum of C, D, and E should equal A.)

F. Requirements for thesis, internship or other capstone experience:

Six (6) credits of AGR 599-Thesis Research.

G. Any unique features such as interdepartmental cooperation:

This degree program is designed to be interdisciplinary.



6. PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

Institution Name: Lincoln University in Missouri
Program Name: Masters Degree in Integrated Agricultural Systems
Date: Fall 2014

Although all of the following guidelines may not be applicable to the proposed program, please carefully consider the elements in each area and respond as completely as possible in the format below. Quantification of performance goals should be included wherever possible.

1. Student Preparation

- Any special admissions procedures or student qualifications required for this program which exceed regular university admissions, standards, e.g., ACT score, completion of core curriculum, portfolio, personal interview, etc. Please note if no special preparation will be required.
- Characteristics of a specific population to be served, if applicable.

General Guidelines:

Integrated Agricultural Systems course requirements are listed below. The department has developed graduate core courses and electives for students enrolled in the program.

Graduate students may also take courses offered in other departments if the courses are relevant to agriculture and the student's professional goals. Students must maintain a cumulative GPA of 3.00 (out of 4.00) in all course work presented for the degree. Under the guidance of an advisor, graduate students must complete and defend a thesis to complete their studies. One credit hour of graduate seminar must be included in each student's graduate program. Students must present their research proposal to the public in a seminar at the beginning of their studies and the results of their work at the end of their studies to the public.

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Form PG – Program Characteristics and Performance Goals

Requirements for MS Degree and Thesis Option:

Students pursuing the MS in Integrated Agricultural Systems must successfully complete at least thirty (30) graduate credits (twenty-four (24) semester hours of course work and six (6) hours of thesis research), not less than twenty-one (21) of which must be earned at Lincoln University. A Master's thesis shall be written and defended under the supervision of a thesis committee.

Admissions Requirements:

Applicants seeking admission to the Master of Science in Integrated Agricultural Systems program must meet the following requirements:

1. Compliance with all of the eligibility requirements of the Lincoln University Graduate Studies Office as set forth in the Graduate catalog.
2. Acceptance to graduate study by the Department of Agriculture and Environmental Sciences and the Graduate Studies Office.
3. Candidates for the M.S. degree must have a baccalaureate degree from an accredited college with an undergraduate minimum grade point average of 2.75 on 4.00 scale.
4. Minimum verbal plus quantitative GRE score of 286. Students not meeting this score must maintain a 3.00 average for the first nine (9) hours of graduate credit before admission to candidacy. GRE scores must be on file in the Graduate Office before a student's application for admission will be evaluated. The GRE will be waived for applicants with a graduate degree (Master's or higher) from an accredited institution. Students must receive a minimum score of 500 (paper test) or 173 (computer test) on the TOEFL. Exempted from this requirement are those students for whom English is their official language.
5. Three letters of reference on the student's ability to do graduate work, submitted with the student's application for admission to the Graduate Studies Office.

Applicants must provide the Graduate Studies Office with official transcripts of all previous college and/or university studies and official copies of GRE and TOEFL (if applicable) scores. If the transcripts are not in English, certified copies of English translations must be included.

- Characteristics of a specific population to be served, if applicable

This program will serve students with academic backgrounds in Agriculture and other related sciences.

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Form PG – Program Characteristics and Performance Goals

2. Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.

Faculties engaged in the instruction of this degree program have degrees and training necessary to teach classes in the area. These faculties are presently advising or co-advising graduate students at other universities.

- Estimated percentage of credit hours that will be assigned to full time faculty. Please use the term "full time faculty" (and not FTE) in your descriptions here.

We do not anticipate a need for hiring new faculty to offer this degree program because we currently employ faculty and research investigators with appropriate expertise in the College of Agricultural and Natural Sciences.

Expectations for professional activities, special student contact, teaching/learning innovation.

Lincoln University has state-of-the-art farms that incorporate aquaculture, large and small ruminant production, greenhouses, vegetable and fruit production, integrated pest management, and row crops. Lincoln University has state-of-the-art labs including but not limited to Chemistry and Microbiology as well as a Geospatial Information Science Laboratory, which will all be available for the instruction of the Masters Degree program. In addition, students in the program will have the added benefit of taking online agriculture and environmental science graduate courses from University of Nebraska-Lincoln with which Lincoln University signed a collaborative memorandum of understanding in 2008 (copy attached).

3. Enrollment Projections

- Student FTE majoring in program by the end of five years.

The estimated number of full time graduate students at five (5) years after implementation is fourteen (14).

- Percent of full time and part time enrollment by the end of five (5) years.

Full time: 64%

Part time: 36%

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Form PG – Program Characteristics and Performance Goals

4. Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.

At three (3) years, the program will graduate about seven (7) majors and at five (5) years approximately ten (10). This program will prepare a cadre of graduates, including minorities, who will pursue doctoral degree programs or work for various governmental agencies.

- Special skills specific to the program

The skills developed will include areas such as:

1. Economics of sustainable agriculture; pasture based livestock production; management of private lands for livestock and wildlife production; biomass for energy; microbiology of safe food and water; integrated pest management; advances in sustainable agriculture; soil management for sustainability. This program will recruit students with diverse backgrounds within the state of Missouri, nationally, and internationally who are qualified to study Agriculture at the Masters level. This program will further provide students with quantitative and analytical skills that can be applied to a wide spectrum of agricultural challenges and will equip students with problem solving skills and the ability to anticipate them.

- Proportion of students who will achieve licensing, certification, or registration.

Not applicable, no certification or licensing.

- Performance on national and/or local assessments, e.g., percent of students scoring above the 50th percentile on normal tests; percent of students achieving minimal cut-scores on criterion-referenced tests. Include expected results on assessments of general education and on exit assessments in a particular discipline as well as the name of any nationally recognized assessments used.

Not applicable, there is no standardized exam for this degree.

- Placement rates in related fields, in other fields, unemployed.

Our degree program is designed to produce graduates with the skills needed to succeed and take on leadership roles in an ever-changing job market. This program will produce graduates with consultancy, research, and service skills adaptable to addressing a variety of issues. The graduates will be able to effectively work and communicate with professionals in a wide variety of disciplines. Our graduates will be equipped with strong problem-solving and analytical skills in a sound interdisciplinary context, which allows them to seek employment with federal and state agencies as well as the private sector.

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Form PG -- Program Characteristics and Performance Goals

Potential employers of graduates of the program include the U.S. Environmental Protection Agency, the Department of Agriculture, the Department of Energy, Natural Resources Conservation Service, U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, State Environmental Protection Agencies, Soil and Water Conservation Districts, and consultancy firms.

Anticipated rate of employment in government agencies is about 85-90%

Anticipated rate of employment in other fields is about 10-15%

Anticipated rate of unemployment or under employed is 0%

- Transfer rates, continuous study.

We anticipate a low rate of transfer from our program because of the uniqueness of the program and student population that we serve.

5. Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. **If there are no plans to seek specialized accreditation, please provide reasons.**

Lincoln University is accredited by the Higher Learning Commission of North Central Association. We are not aware of any accrediting agency reviewing similar programs to the proposed program.

6. Alumni and Employer Survey

- Expected satisfaction rates for alumni, including timing and method of surveys.

Student evaluations of the instructors at the end of each semester.

Students will also fill out a form to assess the quality of the program overall and the expertise of the instructors teaching the classes in the area of their expertise. Survey data will be gathered from alumni at year five (5). The expected satisfaction rate is 80-85%.

- Expected satisfaction rates for employers, including timing and method of surveys.

A questionnaire will be developed and mailed out to employers to gather their opinion of our graduates and their readiness for the work force. The expected satisfaction rate is 80-90%.

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Form PG – Program Characteristics and Performance Goals

7. Institutional Characteristics

- Characteristics demonstrating why your institution is particularly well-equipped to support the program.

See section 8 of this document entitled Institutional Characteristics.

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Form PG – Program Characteristics and Performance Goals

7. Accreditation: Not applicable

8. Institutional Characteristics:

- Please describe succinctly why your institution is particularly well equipped or well suited to support the proposed program.

Lincoln University is a historically black land-grant University, established in this capacity under the second Morrill act of 1890. The teaching, extension, and research arms of the land-grant mission of 1890 universities parallel those of the 1862 institutions, except for their focus on minority and underserved populations within their respective states. Lincoln University is the only 1890 land-grant university in the North-Central Region of the United States that will offer a degree in Integrated Agricultural Systems. All faculty participating in this program are involved in research.

Lincoln University has three research farms with the Busby Research Farm being certified for organic production. It is the largest organic research farm in the state of Missouri. Lincoln University has committed this farm for organic and integrated systems research. Currently, all three farms performs research related to either large and small ruminant livestock, aquaculture, vegetables, small fruits, biomass, composting, integrated pest management, soils, grazing, and forage production/utilization. These farms will be used for many projects related to this MS degree. Continuous research, extension, and experimentation by researchers and students on this farm will provide the toolkit necessary for farmers to adapt their systems to the changing environmental, social, market, and policy conditions to ensure long-term sustainability while reducing off-farm inputs including pesticide use (National Academy of Sciences, 2010) while providing extensive training to graduate students.

9. Any Other Relevant Information

APPENDIX I

Core requirements	10-16		
	AGR 520/ENV 520	Advanced Analytical Methods	3
	AGR 590	Seminar	1
	AGR 503/ ENV503/ SCI503*	Experimental Design	3
	AGR 511	Advances in Sustainable Agriculture	3
	AGR 599**	Thesis Research	Min 6

*Must take Statistics or similar before taking AGR503

**Thesis option students must complete 6 credit hours of thesis research

AGR electives	8-17***		
	AGR 515	Soil Management for Sustainability	3
	AGR 595	Current Topics in Integrated Agriculture	3
	AGR 510	Economics of Sustainable Agriculture	3
	AGR 528	Advanced Integrated Pest Management	3
	AGR 512	Pasture Based Livestock Production	3
	AGR 516	Bioenergy	3
	AGR 506	Management of Private Lands for Livestock and Wildlife Production	3
	AGR 555	Microbiology of Food and Water Safety	3
	AGR 509	Plant Nutrition and Management	3
	AGR 505	Nutritional Biochemistry	3
	BIO 423/523	Ecology	4

*** Minimum of 8 and 17 credits of approved electives for the thesis and non-thesis students, respectively

Other electives	6
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In addition, students in the program will have the added benefit of taking up to six (6) credits of graduate courses on campus or online agriculture and environmental science graduate courses from University of Nebraska-Lincoln with which Lincoln University signed a collaborative memorandum of understanding in 2008 (copy attached). Students must consult with their advisors before registering for these courses.

APPENDIX II

SURVEY RESULTS

A survey was implemented in the fall 2012, to fifty-five (55) students that were attending three (3) undergraduate courses in Agriculture and Agribusiness: (1) Integrated Pest Management (AGRL-328; n = 22 students, on October 23, 2012); (2) Introduction to Animal Science (AGRL-101A-01; n = 25 students on October 26, 2012); and (3) Introduction to Agricultural Economics (ABU-202-01; n = 8 students on October 26, 2012). For each class the students had not taken the survey previously.

Methodology. The survey was conducted using the Rapid Response Technology (i.e., clicker survey). It consisted of seven (7) questions structured in such a way that the responses could be categorized according to level. For instance, the responses provided by freshman (n = 15) and sophomore (n = 12) were combined into a single response category (freshman + sophomore, n = 27), and the responses of juniors (n = 13) and seniors (n = 15) were grouped into a separate category (junior + senior, n = 28).

Survey results: The first two survey questions were aimed at determining their overall interest in pursuing a Masters Degree and their motivations for that. When students were asked “How likely are you to continue with graduate school (Master of Science) once you complete your BS degree program?”, 72% of freshmen and sophomores responded that they were either likely or almost certain they wanted to pursue a Master of Science, while the combined response of junior + senior students was 53.4% (Fig. 1A). This indicates that the majority of the students are contemplating going to graduate school after completion of their BS. When students were asked about the reason(s) underlying their interest in pursuing a Master of Science degree, 60% of the freshmen and sophomores and 50% of juniors and seniors stated several reasons, not just one, motivated their interests. Each individual reason and their corresponding response values are presented in Fig. 1B.

Fig. 1A How likely are you to continue with graduate school (MS) once you get your BS degree?

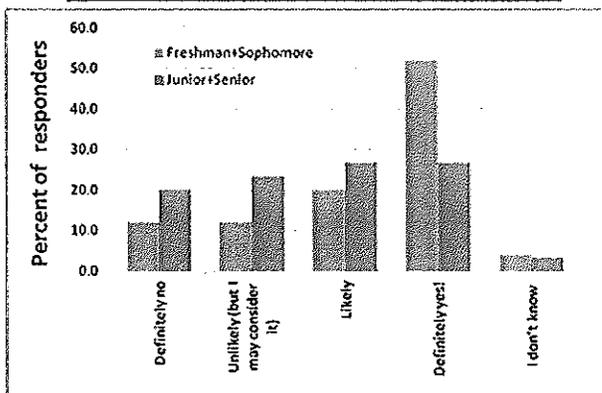
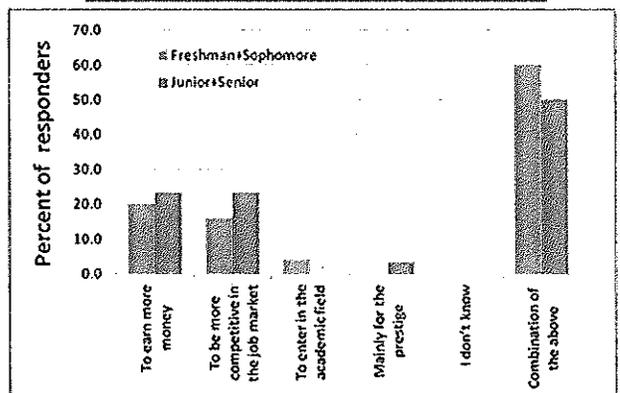


Fig. 1B Why would you, in general terms, be interested in pursuing a MS degree?



The objective of the following two questions was to determine their level of potential interest in the Master of Science degree in “Integrated Agricultural Systems” that faculty are trying to push forward, as well as the main factors potentially affecting their ability to enroll in this Master of Science. When students were specifically asked: “If you are considering doing a Master of Science degree, would you be interested in a Master of Science degree in “Integrated Agricultural Systems” (IAS) at Lincoln University?” 52 and 66.7% of Freshman + Sophomore and Junior + Senior students, respectively, expressed that they were “somewhat” or “very” interested in the Master of Science degree in “Integrated Agricultural Systems” (Fig. 2A). The main factor that may potentially limit enrollment was declared to be “lack of financial support” for Freshman and Sophomore students (56%) whereas the main reason was “finding a more appropriate program somewhere else” for Junior + Senior students (Fig. 2B). Afterwards, students were presented the following hypothetical scenario which was aimed at

Fig. 2A If you are considering doing a MS, would you be interested in a MS degree in “Integrated Agricultural Systems” (IAS) at Lincoln University?

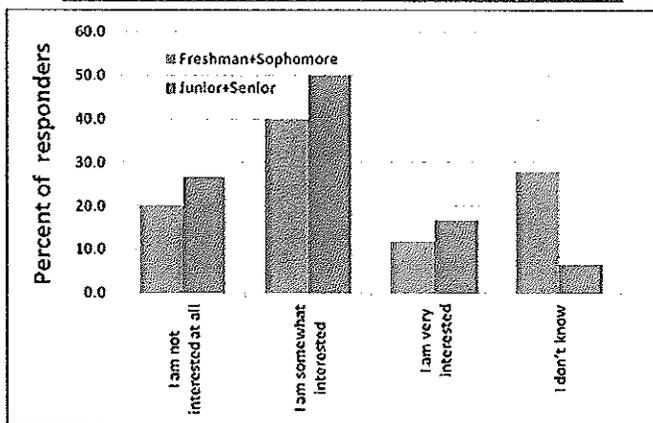
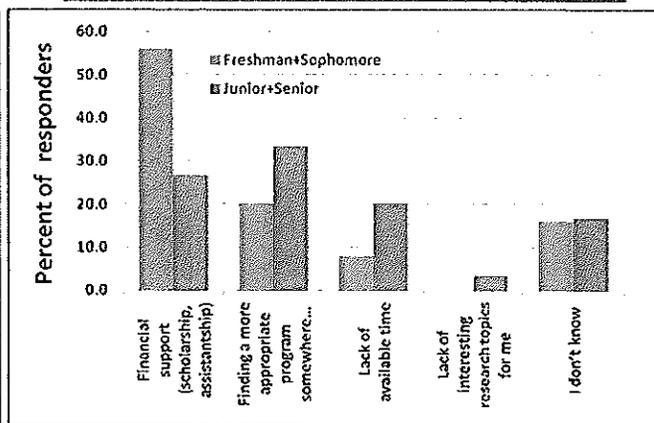
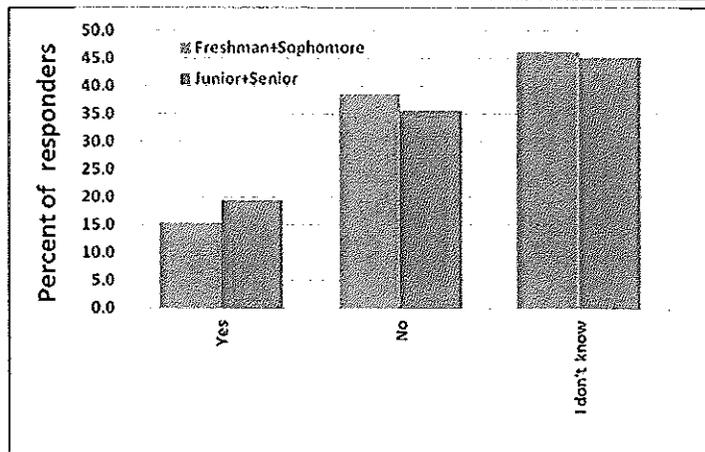


Fig. 2B Which of the following reasons would keep you from enrolling in a MS (in IAS) at Lincoln University?



determining to what extent they were really interested in this MS program even if they did not have support (i.e., extreme case): “Let’s assume that you want to enroll in the Master of Science program, but the supervisor you contacted already has students and the only option is that you pay for your own tuition. Would you still do a Master of Science degree at LU?”

Fig. 3 Let’s assume that you want to enroll in the MS, but the supervisor you contacted already has students and the only option is that you pay for your own tuition. Would you still do a MS (in IAS) at Lincoln University?

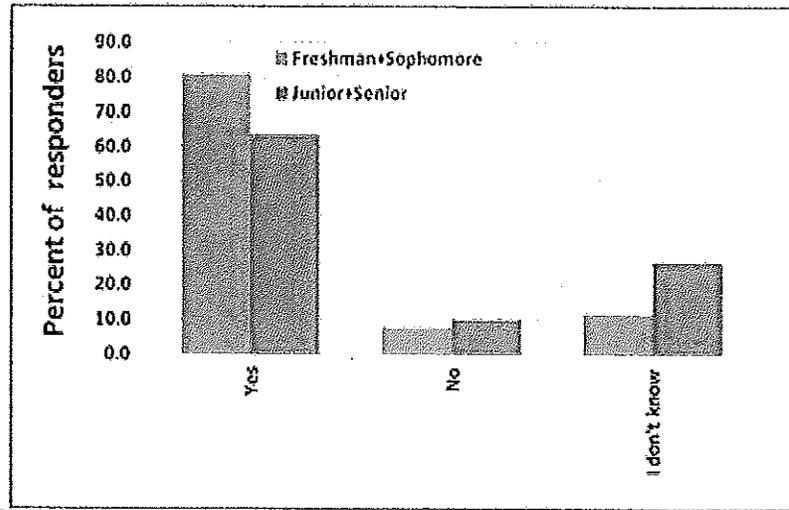


The answers to this question were very similar, regardless of their level: 15.4 and 19.4% of Freshman + Sophomore and Junior + Senior students, respectively, responded that indeed, they would still enroll in this Master of Science program even though they didn’t have financial support (Fig. 3). This is a very relevant answer that reflects that their intentions to enroll are actually very high at least for about 8-9 students (out of 55 sampled). The majority of students (46.2 and 45.2% for Freshman + Sophomore and Junior + Senior students, respectively) didn’t know if they would enroll if no financial support were available to them.

The last question asked was aimed at determining to what extent students thought that getting a Master of Science degree in “Integrated Agricultural Systems” would result in finding the job they really wanted. The great majority of students (80.8 and 63.3% for Freshman + Sophomore and Junior + Senior students, respectively) responded that, yes, they thought that this Master of Science program would substantially increase their chances of finding a good job after graduation (Fig. 4).

Fig. 4

Do you think doing a MS (in IAS) at LU will increase substantially your chances of finding the job you want?



Conclusions From this survey we can conclude that the student population currently enrolled in the BS in Agriculture expressed enough interest in the new Masters Degree program and thereby this information provides an excellent justification for the Master of Science degree. We do not have the capability of conducting surveys like this in other universities within or outside Missouri. However, we strongly believe that if it could be offered starting in the fall of 2014, it would have adequate student demand even for the first years, and it would become a very successful, unique program, in the Midwest.