Graduate Program Review  
Texas Tech University

Program Reviewed: Graduate Program, Department of Agriculture and Applied Economics

Onsite Review Dates: February 11-12, 2014

Name of Reviewers

*Internal:*

*Please include name, title, and Department*

Stephanie J. Jones, Chair, Associate Professor and Program Coordinator, Higher Education
Jerzy Blawzdziewicz, Professor, Mechanical Engineering
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*External:*

*Please include name, title, and Department*

Azzeddine Azzam, Professor, Department of Agricultural Economics, University of Nebraska-Lincoln
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I. Academic Unit Description and Strategic Plan

Please evaluate the following:

*Vision, Mission and Goals*

__ Excellent   __ Very Good   __ Appropriate   _X_ Needs Improvement

*Strategic Plan*

__ Excellent   __ Very Good   __ Appropriate   _X_ Needs Improvement
Please elaborate if you have identified any items in this section as Excellent.

Click here to enter text.

Please elaborate if you identified any items in this section as Needs Improvement.

Provide recommendations in the area of Strategic Planning.

The 2011-2015 strategic plan for Agricultural and Applied Economics (AAEC) is the result of many years of iterations to meet prior needs that, in some cases, no longer apply (e.g., the need for an annual evaluation of the program). In its current state, it is cumbersome and confusing, and in some respects does not convey the strengths of the department.

The Mission statement for the AAEC department is too broad and sets unrealistic goals. When AAEC states that it is "committed to provide the highest standards of excellence," one is not sure what those standards are and relative to what or whom. Commitment by AAEC to work "on all aspects regarding the economics of regional, state, ...." is an unrealistic goal not just for AAEC at TTU, but for any other Agricultural Economics department in the country. One gets the impression that the Mission and Vision statements are purposefully left unspecific in order to accommodate the interests of everyone on the faculty. While that may create an atmosphere of inclusiveness, it does not offer a clear direction for the department and may, in fact, not do justice to the great accomplishments by its faculty.

The Vision statement for the AAEC department, which states that AAEC will work on economic aspects of "all current and emerging issues," is equally too broad and too ambitious. A vision statement should be able to stand the test of time and lend itself to measurable outcomes; however, in its current form it does neither. A more focused Vision statement, reflecting the fact that AAEC has limited resources would serve the department better.

Recommendations for Strategic Plan:

1) We recommend refocusing the Strategic Plan, and explicitly linking the plan to the University’s Strategic Plan (i.e., TTU Strategic Plan → College of Agriculture Strategic Plan → AAEC Strategic Plan → a few key measures to evaluate progress).

2) The Strategic Plan and AAEC Vision statement need to be more realistic on what can be accomplished given the resource constraints of the department.

3) The Strategic Plan needs to be simplified. This will make it easier to communicate and update, and would serve as a useful guide in managing the department.

4) The Mission and Vision statements for the department need to be more specific and should be aligned with the research thrusts mentioned in Objective 3.1 of the Strategic Plan. Obviously, those thrusts are there because they have attracted funding in the past and represent what the department is and has been successful at. However, in light of new hires, whose expertise and interests may not necessarily fall within those research thrusts, the recommendation is that the department identify broader specialties (i.e., Natural Resources Economics, International Trade, among others), and list some of the research thrusts as sub-specialties. This approach allows the department to accomplish multiple things:
a. it accommodates the interests and talents of all faculty ranks;
b. it tells the world what AAEC specializes in -- in broader terms; and
c. it makes the department more appealing to international student applicants who are less likely to be interested in narrower topics of regional relevance.

Other comments (optional)

II. Program Curriculum

Please evaluate the following:

Alignment of program with stated program and institutional goals and purposes
__ Excellent  _X_ Very Good  __ Appropriate  __ Needs Improvement  __ N/A

Curriculum development coordination and delivery
__ Excellent  __ Very Good  __ Appropriate  _X_ Needs Improvement  __ N/A

Program learning outcomes assessment
__ Excellent  __ Very Good  __ Appropriate  __ Needs Improvement  _X_ N/A

Program curriculum compared to peer programs
__ Excellent  __ Very Good  __ Appropriate  _X_ Needs Improvement  __ N/A

Please elaborate if you have identified any items in this section as Excellent.
Click here to enter text.

Please elaborate if you identified any items in this section as Needs Improvement.
Provide recommendations in the area of Program Curriculum.

AAEC’s graduate program is closely aligned with the department’s applied research orientation.

There are four (4) areas identified as needing improvement within the program curriculum:

1. strength of the PhD program;
2. relationship with Economics department;
3. expectations of dual graduate/undergraduate courses; and
4. under-utilization of capacity in the Master of Agribusiness program.
The weaknesses identified by the Committee and recommendations for improvements are described below:

1) Strength of the PhD program

The PhD program is a key part of the department, and the program quality plays a critical role in attracting and retaining skilled assistant professors and outstanding graduate students. The PhD program is not as strong as it could be for two main reasons: (i) a lack of coordination and synergy between AAEC and the Economics department (ECON); and (ii) a lack of funding.

The general practice by Agricultural Economics departments across the country is to have PhD students take core courses (microeconomic theory, macroeconomic theory, and econometrics) and prelims in ECON, and, after passing the Economics prelims, to migrate to Agricultural Economics (AGECON) to take courses that use the concepts in the economics core to address agricultural and food issues. AAEC, on the other hand, is trying to be self-sufficient by providing the core in the department. While that may be sufficient if the goal is to place students into non-faculty positions or faculty positions at universities that are ranked below AAEC, it is not sufficient to take the program to the next level that would permit AAEC to compete for more prestigious grants (e.g., NIFA and NSF, among others).

The second area of major concern for the PhD program is a lack of funding and the inconsistency in funding received for PhD students on assistantships. Currently, most funding for graduate student assistantships comes from “soft” money in the form of research grants. However, this money is often for only 1 - 2 years, and is dependent on the professor (and the PhD students he/she uses) providing specific “deliverables.” Ideally, each PhD student should be guaranteed funding for 1 - 2 years without the need to do any specific research project (although every student should be working on some research project). After the initial 1 - 2 years of funding, it would be easier to provide students with grant-related money for years 3 - 4. The Committee recognizes that providing dedicated funding to support PhD students requires finding appropriate resources; some ideas how to mitigate the current difficult funding situation are presented in the Recommendations section below.

2) Relationship with Economics department

Improvement is also needed in the area of collaboration between the AAEC and Economics departments. According to the Economics department, there is a lack of coordination with AAEC for two reasons: 1) the University budgetary system; and 2) the differences between the relative importance of teaching versus research assistance in the two departments.

With regard to the University budgetary system, the current incentive structure is such that it is not in the best budgetary interest of the Economics department to have their students take courses through the AAEC department. With regard to teaching versus research assistance, the practice in the Economics department is that new PhD students are on teaching assistantships and do not start PhD research until they finish the core and pass their prelims.
The practice in AAEC is that PhD students are on research assistantships and are expected to assist with research during their first year with no expectation of teaching. Lastly, but no less important, faculty within AAEC see theory courses in Economics as not serving the applied orientation of their research programs, and faculty in ECON see AAEC courses as too narrow because they focus exclusively on agricultural and food problems. However, ECON perceives AAEC courses as useful to their Economics students who want to have a specialty in Agriculture Economics.

3) Expectations of dual graduate/undergraduate courses

A third area of improvement is related to the number of dual courses offered by AAEC at the undergraduate and graduate (master’s) level (AAEC 4303/5315, AAEC 4317/5317, and AAEC 4316/5318), and their respective rigor at the graduate level. Cross listing of courses is an accepted practice at the Graduate School, as long as the graduate-level course is substantially more rigorous than the undergraduate course.

Feedback from AAEC graduate students suggests that this rigor has been incorporated into the course curriculum. However, review of appropriate course syllabi did not confirm that there were different expectations outlined for undergraduate and graduate students (e.g., ensuring that the graduate-level course requires significantly more writing and analysis than the undergraduate-level course).

4) Under-utilization of capacity in the Master of Agribusiness program

The final area of improvement is the under-utilization of capacity in the Master of Agribusiness program. This program appears to be unattended to at the current time, and lacks direction. Student enrollments are extremely low. It was the consensus of the Review Committee that this degree program does fulfill a need in the Agriculture Economic industry and has potential for growth.

Recommendations for program curriculum:

Recommendations for areas of improvement for program curriculum include:

1) Advance Collaborations with TTU Economics Department

The recommendation is to “reboot” the discussions with the Economics department and find ways to resolve the coordination issue engendered by the budgetary system and to minimize the cultural distance between the two departments. There are at least two concrete ways to do this:

a. hire faculty with joint appointments in both departments and/or have AAEC faculty teach microeconomics and econometrics in the economics core; and
b. identify specialties that include courses from AAEC and Economics (two that were mentioned by Economics were Industrial Organization and Natural Resources Economics).
2) Increase funding for the PhD program

The question is where this dedicated funding will come from – simply demanding more money is insufficient. There are some possibilities:

a. Cannibalize any existing faculty positions (lapse salaries) and move the money to fund PhD students (if policy permits).
b. Join with the Economics PhD program and offer a joint degree. Although this would provide access to funding to AAEC PhD students, it does not seem currently feasible because of the significant differences between the two departments. When asked about the relationship between the two departments, a consistent response received from both AAEC faculty and PhD students was that this would be very damaging to the AAEC PhD program. However, steps can be taken to realize possible synergies with the Economics department without merging the two programs.
c. Distance learning can be used to expand recruitment efforts and increase enrollments to generate more revenues, some of which could be put into the PhD program. However, there were concerns about the ability to deliver complex content successfully through distance learning from the senior faculty. It is recognized that incorporating distance learning will take some time to develop. It is recommended that AAEC faculty explore this option as there are alternatives for delivering content through distance technologies for complex concepts.
d. Allow PhD students to teach undergraduate courses. Currently, the AAEC has no funding for TA or GPTI (graduate part-time instructors) positions for its doctoral students. This redirection of sources for these positions would require approval from the College of Agriculture, which currently does not fund PhD students to teach undergraduate courses in AAEC; however, this has been a successful model in other schools (e.g., the Rawls College of Business; College of Arts & Sciences, College of Education, among others).

The last of the above recommendations has several positive aspects:

1. TA or GPTI positions will provide teaching experience to PhD students, who noted that they are at a disadvantage when competing for academic positions because they lack this experience;
2. it will free up faculty who would otherwise have to teach undergraduate courses to teach more advanced courses that would expand the breadth of the PhD program.

The costs involved in this transition require a shift in funding to support these positions.

3) Provide clear expectations for undergraduate and graduate students in dual courses

It is recommended that student learning outcomes and expectations in dual courses clearly articulate the expectations of undergraduate and graduate students. Though cross listing of courses is a standard practice in higher education, it is a concern if there is no clear indication to students what the differences in expectations are for undergraduate and graduate students. AAEC needs to establish a clear direction for dual courses; it will require direct discussion of the differences in requirements for these
courses. This will help prevent future concerns (from the Graduate School and accrediting bodies) over whether dual courses are sufficiently rigorous at the graduate level.

4) Improve under-utilized capacity of the Master of Agribusiness program

It is recommended that the department determine a direction and leadership for its Master of Agribusiness program. One consideration for the purpose of this program, besides fulfilling the needs of graduate students interested in Agribusiness, is to use it as a way to generate revenues for other programs (such as the PhD) in the department by delivering it through distance learning technologies.

Other comments (optional)

Click here to enter text.

III. Faculty Productivity

Please evaluate the following

__ Excellent   _X_ Very Good   __ Appropriate   __ Needs Improvement   __ N/A

Publications

__ Excellent   __ Very Good   _X_ Appropriate   __ Needs Improvement   __ N/A

Teaching Load

__ Excellent   _X_ Very Good   __ Appropriate   __ Needs Improvement   __ N/A

External Grants

__ Excellent   __ Very Good   __ Appropriate   _X_ Needs Improvement   __ N/A

Teaching Evaluations

__ Excellent   __ Very Good   __ Appropriate   __ Needs Improvement   _X_ N/A

Professional Service

_ X_ Excellent   __ Very Good   __ Appropriate   __ Needs Improvement   __ N/A
Community Service

__ Excellent  __X_ Very Good  __ Appropriate  __ Needs Improvement  __ N/A

Please elaborate if you have identified any items in this section as Excellent.

For a unit of its size, and for not being part of a Land Grant University, AAEC is an excellent department with highly qualified and reputable faculty. This is evidenced by the number of publications, national and regional research awards for students and faculty, and service of faculty on important national and regional committees. AAEC's newest hires are all from reputable institutions and have great potential to contribute to continued growth and excellence of the department.

Teaching load is quite high relative to other Agricultural Economics departments in the country, as is the average amount in awarded grants and contracts per faculty member.

Please elaborate if you identified any items in this section as Needs Improvement. Provide recommendations in the area of Faculty Productivity.

The Committee recommends that the College and Department develop incentives to encourage proposal writing, publication of research results in high profile journals, and develop interdepartmental collaborations that may lead to joint-funded research projects. In addition to the already mentioned interactions with ECON, such collaborations may combine, for example, the expertise of AAEC and biology. Incentives may include seed funding and reduction of teaching load for faculty performing outstanding research. Such recommendations are consistent with the officially stated TTU goal of becoming a tier one research university.

Other comments (optional)

The productivity of the AAEC faculty measured by the number of publications per FTE is exemplary. As for the quality of research outlets, there is always room for improvement.

Outcomes of competitive grant applications certainly hinge on the quality of research publications and that quality is associated with top ranked journals (e.g., American Journal of Agricultural Economics (AJAE)). During the period of self-study (2013-2014) there were three (3) AJAE articles, all published in the initial years of the new hires but none after that. It is recognized that it is very difficult to have articles published in AJAE, but the realities are such that articles give a slight competitive advantage when it comes to competitive grant applications.

Faculty qualifications are high relative to the overall ranking of the Department and to the teaching load that the faculty are expected to carry. There is also a high quantity of journal
articles published but not very many in top outlets (which is acceptable for a mid-tier department but hampers the potential for growth in prestige and ranking).

**Students and Graduates**

*Please evaluate the following*

**Time to degree**

- [ ] Excellent
- [ ] Very Good
- [x] Appropriate
- [ ] Needs Improvement
- [ ] N/A

**Retention**

- [x] Excellent
- [ ] Very Good
- [ ] Appropriate
- [ ] Needs Improvement
- [ ] N/A

**Graduate rates**

- [ ] Excellent
- [x] Very Good
- [ ] Appropriate
- [ ] Needs Improvement
- [ ] N/A

**Enrollment**

- [ ] Excellent
- [ ] Very Good
- [ ] Appropriate
- [x] Needs Improvement
- [ ] N/A

**Demographics**

- [ ] Excellent
- [ ] Very Good
- [x] Appropriate
- [ ] Needs Improvement
- [ ] N/A

**Number of degrees conferred annually**

- [ ] Excellent
- [ ] Very Good
- [ ] Appropriate
- [x] Needs Improvement
- [ ] N/A

**Support Services**

- [ ] Excellent
- [x] Very Good
- [x] Appropriate
- [ ] Needs Improvement
- [ ] N/A

**Job Placement**

- [ ] Excellent
- [x] Very Good
- [ ] Appropriate
- [ ] Needs Improvement
- [ ] N/A
**Student/ Faculty Ratio**

__ Excellent __ Very Good __ Appropriate __ Needs Improvement __ N/A

*Please elaborate if you have identified any items in this section as Excellent.*

*Please elaborate if you identified any items in this section as Needs Improvement.*

*Provide recommendations in the area of Students and Graduates.*

Overall, AAEC does a very good job in regard to student enrollments and graduating students within their Master of Science and PhD programs, relative to the amount of funding they receive.

Enrollment in the PhD is tied closely to funding. With diminished funding comes diminished PhD enrollment, and with diminished PhD enrollment comes diminished human capital for research, further weakening AAEC's ability to compete for the grants needed to replace lost funding.

The University can help in this regard. The Dean of the College of Agriculture has indicated that in the short term he is open to the idea of redirecting lapsed faculty salaries to graduate research support.

Graduate enrollment and degrees conferred are average relative to other Agriculture Economics departments in the country but need improvement to meet the strategic goals of increased graduate enrollments of the TTU Graduate School and University.

*Other comments (optional)*

Past enrollment is adequate but current enrollment is low relative to the goals of the University; however, it is average (on a per-faculty basis) for Agricultural Economics departments. Drop in enrollment seems to be due to the elimination of an important source of state funding for assistantships, in addition to a reduction in operating funds from the University. This drop, in part, could be made up with increased grants and contracts.

**IV. Facilities and Resources**

*Please evaluate the following:*

**Facilities**

__ Excellent __ Very Good __ Appropriate __ Needs Improvement __ N/A
Facility Support Resources

__ Excellent __ Very Good __ Appropriate _X_ Needs Improvement __ N/A

Financial Resources

__ Excellent __ Very Good __ Appropriate _X_ Needs Improvement __ N/A

Staff Resources

__ Excellent __ Very Good __ Appropriate _X_ Needs Improvement __ N/A

Please elaborate if you have identified any items in this section as Excellent.

Please elaborate if you identified any items in this section as Needs Improvement.
Provide recommendations in the area of Facilities and Resources.

Facilities look grim and, in some spaces, cluttered and poorly maintained. In the long term, AAEC could use more facility space. In the short term, AAEC could enhance the efficiency of the space they have at their disposal by replacing current student pods with more modern and spatially efficient ones that would accommodate more students within the available space.

The operations budget provided by the University, based on per faculty member and TAs available per credit hour generated, are very low relative to other Agriculture Economic departments in the country.

Recommendation:

Hallways, other general areas, and some classrooms and student offices are in need of major renovation or at least refreshing.

Other comments (optional)

VI. Overall Ranking

Overall Ranking

__ Excellent _X_ Very Good __ Appropriate __ Needs Improvement
Please provide summative conclusions based on the overall review.

In light of the constraints AAEC faces, namely diminished University funding and not having the Hatch funds available to departments in Land Grant institutions, AAEC has done remarkably well and matched and sometimes exceeded the performance of peer departments for the period we studied. However, as funding sources diminish, the PhD program, which is a viable component of research within AAEC and the University, is vulnerable to diminished enrollment unless additional funding sources can be identified and revenues to support the department are increased. Currently, since part of that increased revenue must ultimately come from external sources, AAEC must gear itself up to be more competitive for grants. A necessary condition for this is to target and hit higher ranked journals for faculty publications. The realities are that at the margin, grants with authors who publish in higher ranked journals are more likely to get a slight competitive advantage in the competition for grants.

The Review Committee has identified the following positives of the AAEC department:

1) Have managed to put together a strong and productive faculty even with the constraints they face (i.e., national standing and resources provided by TTU).
2) Applied but very productive department, particularly in terms of quantity.
3) Solid Master of Science program curriculum, but student quality seems bimodal.
4) Passionate about their graduate program.
5) Numerous recent awards and honors for their students.
6) Several well-funded faculty chairs.
7) Have been able to recently attract several highly qualified assistant professors.
8) Very high undergraduate student numbers relative to faculty size.
9) Very efficient in the use of available resources.

The Review Committee has identified the following areas of concern for the AAEC department:

1) Strategic Plan is not up-to-date and Vision statement and objectives are too ambitious given the resources available to the department. It is good to aim high, but AAEC must be realistic.
2) Faculty power structure seems to be top-down, with full professors dominating the conversation and other faculty ranks reluctant to provide input when in their presence. The future of the department is in the hands of the assistant professors, and they should have a voice in where the department is headed.
3) There seems to be resistance from some on ideas for change/improvement.
4) Graduate student numbers are low relative to stated TTU expectations.
5) Lack of communication/coordination with the Economics Department, which has resulted in a weak PhD curriculum, especially in the key field of microeconomic theory.
6) Some stated areas of research emphasis are too narrow to attract a wide range of quality faculty and students.
7) Lack of funding for the PhD program.
8) Although AAEC has been able to recently attract several highly qualified assistant professors, we are concerned that the lack of resources and large workload may discourage them from staying.
9) Little gender diversity in the faculty, which results in mentoring concerns for female students, and decreased diversity of perspectives in department decisions and direction.

Please provide summative recommendations based on the overall review.

AAEC’s Strategic Plan needs to have a clear connection to the College of Agriculture's and the University’s Strategic Plans. AAEC needs to revisit its Strategic Plan and consider revising its Mission and Vision statements so they are more specific and more aligned with resources and capabilities. In addition, the Mission and Vision statements should be able to stand the test of time. As presented, the statements and outcomes are too ambitious, some are unmeasurable, and set unrealistic goals.

AAEC needs to consider reconfiguring its research thrusts. The recommendation is to decide on broad research specialties such as Natural Resources Economics, Applied Econometrics, Industrial Organization, among others. Once the broad research specialties are identified, a list of subspecialties should be established within each broad specialty, and communicated. For example, Water Economics could be listed under Natural Resources Economics; Livestock Economics under Industrial Organization, among others.

AAEC needs to “reboot” its academic relationship with the Economics department and the two departments need to find common ground to advance the interests of the respective departments' faculty and students. The recommendation is to consider having the PhD core (microeconomics, macroeconomics, and econometrics) be taught in Economics during the first year of the PhD program.

AAEC should capitalize on courses in the Economics department to develop specific specialties for its students. These specialties may help attract more students to both the master's and PhD programs. The two suggested by the Economics department are Natural Resources Economics and Industrial Organization. We also present recommendations for improving funding for PhD students, especially by permitting them to teach undergraduate courses.

Although the prior publications record of AAEC faculty is solid, AAEC should strive to publish in highly ranked journals in Agricultural Economics and Economics. This is particularly important for assistant professors. Publishing in such journals is not inconsistent with an applied research program, and will also help with establishing a competitive edge for AAEC faculty when applying for competitive grants.

AAEC should consider the possibility of incorporating distance education as a delivery method for its Master of Agribusiness. Distance learning has shown positive results in increasing enrollment and as a source of generating additional revenues for many programs within the TTU
system and in programs across the nation. The Review Committee does note that additional resources are needed from the College of Agriculture and the University to support this recommendation.

In addition to improving on the previously discussed concerns for the AAEC department, the following recommendations are provided:

1) Attempt to improve the quality of outlets for journal articles – this will help secure competitive grants.
2) Increase Master of Agribusiness and PhD student enrollments.
3) Substantial refreshing of the facilities is needed with possible renovation of the entire building warranted.
4) Seek temporary (seed) funding (reallocated from lapse faculty salaries) from the Dean of the College of Agriculture for assistantships.
5) Explore funding for TAs and GPTI’s for AAEC, who has high undergraduate enrollment and credit hour generation.
6) Seek the restoring of recently lost operations funding from the University. The currently available funding is far below what is needed to effectively run a department of this size.