

REVIEW PANEL REPORT
Master of Science in Agricultural Education
Oregon State University
January 2011

Overall Recommendation

- Expand (possibly)
- Maintain
- Restructure
- Reduce
- Suspend
- Discontinue
- Other: _____

Summary of Findings and Recommendations

Overall, the review panel finds the Master of Science in Agricultural Education degree program at Oregon State University to be sound. Under **inputs**, its mission fits well with those in the College of Agricultural Sciences and University. Quality of the students, admissions selectivity, curriculum strength, and quality of personnel are high. Because of factors like a one-year program completion period and an emphasis on secondary teacher preparation in agriculture, the program is limited to non-thesis graduate students who advance through the required courses and experiences in a cohort. The program would benefit from increased financial support of students, additional infrastructure, and increased faculty FTE articulated below.

In terms of program **productivity**, level and quality of student and faculty performance and viability of the scholarly community within which students can interact are high. Again, students are currently solely non-thesis students preparing to be secondary teachers of agriculture. The model is effective in producing highly qualified teachers of agriculture, but limits student involvement in scholarly activity and hence, faculty scholarly productivity.

Finally, in terms of program **outcomes**, the professional viability of the graduates is first rate and the students and graduates are highly satisfied with the program. The Department Head and faculty are to be commended for their performance and positive relationships with their students and program graduates.

The **overall recommendation** of the review panel is to maintain the Master of Science in Agricultural Education degree program at OSU, keeping open the possibility for program expansion. There is potential and faculty/stakeholder interest in adding a second option in Business and Industry Education (BIE) to the existing option in Public School Teaching. BIE majors and graduate students in other departments would take courses in the new option. Courses in this option would also lend themselves to distance education or blended face-to-face/distance delivery modalities. BIE majors could be thesis students who contribute to the scholarly productivity of the faculty.

The greatest limiting factor for the BIE program expansion is faculty time. If the program could realize continuity in 12-month appointments for the two existing tenure-track faculty members after their start-up packages end and realize an undergraduate instructor/advisor to allow these faculty members to do more graduate-level teaching and advising, the panel feels a successful expansion into the second Master's option could be realized. The 12-month appointments help these faculty members meet their research and scholarly requirements for tenure and promotion. Across the nation, 12-month appointments for agricultural education teacher educators also foster successful stakeholder relations through outreach and engagement activities. So much of their outreach and engagement is with secondary agricultural education teachers, students, and programs, and this occurs during the summer months. This is unique to agricultural education among teacher education fields and is what drives stakeholder support for university agricultural education faculty and programs. Strong relationships between the university and these stakeholders pay big dividends in both directions and hence, are worthy of resource consideration.

Other recommendations for the AgEd graduate program are:

- Pursue an endowed professorship in agricultural education as another enabling resource in realizing program stature, excellence, stability, and growth.
- Find more student support through scholarships, fellowships [e.g., the University Graduate Laurels Block Grant Program (UGLBG)], and Graduate Teaching and Research Assistantships.
- Clarify faculty position descriptions to more realistically reflect engagement and outreach efforts.
- Put the graduate advising guide on-line to improve communications and recruiting potential. Advertise student funding support opportunities on the web.
- Expand the use of undergraduate agricultural education and selected undergraduate agriculture, food systems, and natural resource and environmental sciences classes as recruitment tools for the program.
- Expand graduate student enrollment and diversity by recruiting students from diverse states like Hawaii that may have limitations on producing highly qualified secondary teachers of agriculture.
- Utilize the Master of General Agriculture degree as a home for thesis students until the BIE Master's option is launched.
- Add a graduate student office with cubicles and a fourth faculty or instructor's office.

Detailed Findings

Introduction

The findings and recommendations of the review panel are derived from a thorough review of the self-study report for the Master of Science in Agricultural Education and other documents (e.g., faculty position descriptions, student portfolios, and the graduate advising guide). Interviews were held in Strand Agricultural Hall 237 on December 16, 2010 with the Department Head, two faculty, and one present and one former instructor in the Department of Agricultural Education and General Agriculture (who are also program graduates); two current graduate students and two recent program graduates; and two College of Agricultural Sciences Associate Deans who have had oversight responsibilities for the academic programs in the department. The review panel was also taken on a walk-through of the department's office, library, and classroom facilities in Strand Hall. The membership of the review panel was:

Dr. Thomas Dormody (Chair of the Review Panel)
Professor and Former Department Head
Department of Agricultural & Extension Education
College of Agricultural, Consumer and Environmental Sciences
New Mexico State University

Dr. Murray Levine
Professor
College of Oceanic and Atmospheric Sciences
Oregon State University

Dr. Joanne Tynon
Assistant Professor
Forest Ecosystems and Society
College of Forestry
Oregon State University

Also attending the review was Dr. Martin Fisk
Interim Dean
Graduate School
Oregon State University

Inputs

Fit of the Mission of the Program and Its Relationship to the College and University Missions

“As a land grant institution committed to teaching, research, and outreach and engagement, Oregon State University promotes economic, social, cultural and environmental progress for the people of Oregon, the nation and the world. This mission is achieved by producing graduates competitive in the global economy, supporting a continuous search for new

knowledge and solutions, and maintaining a rigorous focus on academic excellence, particularly in the three Signature Areas: Advancing the Science of Sustainable Earth Ecosystems; Improving Human Health and Wellness; and Promoting Economic Growth and Social Progress.”

“The College of Agricultural Sciences at OSU is Oregon’s principal source of knowledge relating to agricultural and food systems, and a major source of knowledge regarding environmental quality, natural resources, life sciences, and rural economies and communities worldwide. The College provides undergraduate and graduate education leading to baccalaureate and graduate degrees, and extended education programs throughout Oregon and beyond. Its research programs create knowledge to solve problems and to build a knowledge base for the future. It is a source of information and expertise in integrating and applying knowledge with benefits that are felt in domestic and international settings.”

The mission of the Agricultural Education Program at OSU “is to prepare qualified agricultural education personnel for a variety of roles in education and agriculture in Oregon, nationally and internationally.”

The departmental mission statement under which the AgEd graduate program falls fits well within both the college and university missions. Qualified agricultural education personnel who can educate others in agricultural and food systems, natural resources and environmental sciences, and related disciplines are needed throughout Oregon and beyond. They can advance the science of sustainable earth ecosystems and promote economic growth and social progress wherever they work. The current MS in Agricultural Education program that focuses on teacher education for secondary agricultural education as well as the potential second Master’s option in Business and Industry Education mentioned in the self-study report are consistent with the departmental mission statement.

Quality of Students

The MS in Agricultural Education is designed to be a one-year program with a cohort of students entering in Fall quarter. Incoming students have already achieved competence in an agricultural content area as demonstrated by having completed a BS degree, typically in Animal Science, Agricultural Resource Economics, Crop & Soil Science, Horticulture or General Agriculture. To ensure a significant breadth of understanding, students are also required to have taken 53 credits of diverse agriculture courses. This program is one of few in the nation requiring completion of a BS and breadth courses before admittance; it is believed by the review panel that these high standards have led to a high quality and successful student population.

In addition students are required to document 4,000 hour of work experience related to agriculture. This achievement will also satisfy a licensure endorsement for Career and Technical Education.

One measure of the quality of incoming students is their GPA. In the last 90 hours of undergraduate coursework their average GPA was 3.30; their average GPA for required agriculture related courses was 3.60. These results are based on the previous eight years and

a total of 68 students. All of these students over the same period exceeded the passing score (590) of the Praxis standardized test required for teacher certification, with cohort averages ranging from 695 to 755.

Admissions Selectivity

The AgEd Graduate Program has a rigorous set of admission requirements that follows the OSU Graduate School and is guided by the licensure standards set by the National Council for the Accreditation of Teacher Education (NCATE) and the Oregon Teachers Standards and Practices Commission (TSPC). Requirements include completion of standardized tests: CBEST, Praxis and ORELA (Oregon Educator Licensure Assessments); documented competency working with students 7-12 grade level; demonstrated effectiveness in oral and written communication; a statement of professional goals; an interview with a faculty committee; and verified 4,000 hours of work experience in agriculture.

The extensive list of admission requirements has resulted in students that are highly successful. Of the 143 students enrolled over the past 14 years, about 90% have graduated.

Recruitment is focused on Oregon students with the expectation that most will work in the state after graduation. The current and past students interviewed during this review suggested that offering a few undergraduate courses in Agricultural Education at OSU might be a useful mechanism to excite students who are undecided in their career path.

The review panel suggests that the range for recruitment might be broadened beyond Oregon's borders for purposes of expanding enrollment and increasing diversity. One possibility would be to see if there are any opportunities to recruit graduate students from Hawaii, given the state's historically close relationship with OSU and Hawaii's possible limitations on producing highly-qualified secondary teachers of agriculture. Also, recruiting might be helped by having more detailed information about the program on the department website. For example, having the graduate advising guide online could be useful for attracting students as well as a resource for existing students.

Level of Financial Support of Students

Due to the intensity of this one-year program, there are no graduate assistantships available. Students do apply for department and university scholarships and fellowships. Over the past five years about four students per year have received awards in the range of \$800-\$1500.

The review team suggests that the department explore additional opportunities for their students. The OSU Graduate School has several programs that may be applicable, including the University Graduate Laurels Block Grant Program (UGLBG). The department submits an application for a UGLBG; an internal process is established to select the recipients. This grant can be used to pay for some or all tuition charges. The award is made on the "basis of academic merit and/or a student's ability to contribute toward diversity in graduate education."

Curriculum Strength

The AgEd graduate program focuses on the pedagogy of teaching agriculture. The program and its curriculum are appropriately accountable to the OSU Graduate School, National Council on Accreditation of Teacher Education (NCATE), and Oregon Teacher Standards and Practices Commission (TSPC). The curriculum meets the specific requirements for each of these organizations including being grounded in a conceptual framework required by NCATE for OSU teacher education programs to be nationally accredited. Students admitted into the AgEd graduate program already have a Bachelor's degree in a technical agriculture field like Animal Science or General Agriculture and at least 53 credits of diverse agriculture related coursework. Hence, they are strong in content knowledge before entering the program. They also complete significant work experience in agriculture before licensing to teach (at least 4,000 hours).

The courses in agricultural education required to complete the graduate program are appropriate and cover the requirements from the three organizations listed above. The action research course is a unique offering that causes students to collect and reflect on data tied to their own teaching and the performance of their students in order to make informed improvements to their teaching. Practicum courses like student teaching are competency based and of high quality. Assessment methods and tools used to evaluate student learning in the Master's courses and experiences are variable, robust, and appropriately tied to learning the core competencies. Along with reflecting on the results of their student teaching action research, students keep a reflective journal throughout student teaching to inform and improve practice. The course competency matrix on page 22 of the self-study report makes it clear in which courses and experiences core competency areas are addressed. Finally, students have an opportunity to teach lessons to secondary students in an alternative education setting, exposing them to diverse learners in a nontraditional learning environment.

Overall, the review panel finds the curriculum of the Master of Science in Agricultural Education program to be excellent in scope and quality.

Quality of Personnel and Adequacy to Achieve Mission and Goals

A strength of the AgEd graduate program is the "energetic, enthusiastic, visionary faculty who are experts in the area of teaching and learning and who are dedicated to developing high quality teachers and programs for secondary students" (Self-Study Report, p. 13). The program lists five Graduate Faculty members: three tenure track or tenured faculty and two instructors one of whom has recently taken a position with the Oregon Department of Education. The graduate program is supported by an Office Coordinator and Advising Assistant position. Based on the evidence presented in the self-study report and interviews, the review panel feels that these personnel are of high quality and adequate to deliver the Master of Science in Agricultural Education degree program. However, faculty resources are inadequate for achieving consistency in scholarly activity, expanding the graduate program into the Business and Industry Education (BIE) option that is more appropriate for thesis students than the current teacher preparation option, and meeting the outreach and engagement responsibilities of the department with Oregon agriculture teachers and secondary agricultural education students/FFA members.

The program challenges listed on pages 13 and 14 of the self-study report and discussion during interviews assisted the review panel with this assessment. Continuity in 12-month appointments for the tenure-track faculty and an instructor/advisor for undergraduate courses would enable these faculty to achieve consistency and excellence in research and scholarly activity; develop and teach courses, and advise students (including thesis students) in a proposed Business and Industry Education (BIE) option to the graduate program; and meet their outreach and engagement obligations to secondary agricultural education teachers, students, and programs, many of which occur during the summer months.

Level and Quality of Infrastructure

The MS in Agricultural Education graduate program is part of the Agricultural Education and General Agriculture Department. The Department is housed in Strand Agriculture Hall, built in 1909. A small suite of offices on the first floor serves the Department Head, faculty, and staff. The program's primary classroom, STAG 033, is an enhanced classroom and is suitable for courses with enrollments of 18 or fewer students. The program does not control other facilities used by the program.

The AgEd program needs more dedicated office and teaching space if the program is to grow. The College of Agricultural Sciences has plans for constructing a new Livestock Pavilion in the next two years. This will greatly increase facility capacity for AgEd.

Common areas for AgEd graduate students are limited to the use of a classroom and small library on the basement level; there are no graduate student cubicles. Students have access to shared computers and printers, although most have their own personal computers. It is expected that the new building will alleviate capacity problems. All in all, the physical infrastructure of the AgEd graduate program has been nicely renovated and is better than that of many other OSU programs.

Quality of Organizational Support

The Department Head holds a 1.0 FTE appointment, with 45% of his time allocated to teaching graduate courses and to advising both undergraduate and graduate students. In keeping with a general trend at OSU, AgEd has two 9-month tenure-track faculty on 1.0 FTE appointments. These positions are structured at 50% teaching, 20%-25% scholarship, 20% advising (both graduate and undergraduate students), and 5-10% service, respectively. Both faculty members have 2-3 years' startup support for summer salary. Both teach five or more courses per year in addition to summer courses. During winter term, faculty conduct supervised visits to schools across Oregon where graduate students are engaged in their student teaching requirement. Each student is visited six times in the winter term. When startup support ends for the tenure-track faculty, it is not clear what will be sacrificed. The current structure does not allow much uninterrupted time for scholarly activity. By necessity, research is clearly tied to teaching. There is some support for travel to supervise student teachers and travel to professional meetings.

There is one full-time instructor. There are no graduate research assistants and there are no

graduate teaching assistants, although graduate students can get course credit to serve as teaching assistants.

The job market for secondary agricultural education teachers in Oregon does not limit graduate program growth; it is limited by the size of the faculty. The tenure-track faculty would like to expand the non-thesis Master's degree to include research efforts. While this change would enhance opportunities for faculty research productivity, it is not clear how this can be facilitated at present.

There is concern that tenure-track faculty are not getting the support they need to meet the expectations for scholarly output as defined by the tenure and promotion guidelines in the OSU faculty handbook. Delegating some of their responsibilities to others would help. An additional undergraduate instructor would free up time for AgEd tenure-track faculty to teach graduate level courses. Providing funded graduate assistantships to help with teaching and research efforts would also support faculty efforts. Position descriptions for tenure-track faculty should clarify outreach efforts to more realistically account for engagement with secondary teachers and others. Finally, the addition of an endowed chair in AgEd would enhance the program's ability to secure research funding, attract high caliber graduate students, and increase the professional profile of the program.

Productivity

Level and Quality of Student Performance

Incoming students must meet several programmatic benchmarks (e.g., CBEST and PRAXIS test performance, GPA scores). Once here, student performance is assessed through coursework exam scores, including a final oral exam, and through PRAXIS assessment. This includes an assessment of the students' professional teaching portfolio and their student teaching performance. Grade point averages for AgEd students have been consistently high, ranging from 3.75 to 3.97 for the last eight years.

Very few students who start the program do not finish, primarily because of work or personal commitments. The dropout rate appears quite low. It is more often the case that, instead of dropping out, students take additional time to complete their degree.

While there appears to be congruence between student and program expectations, having a formalized graduate advising guide is nevertheless recommended. A web-based advising guide can be especially useful to help potential students understand the curriculum and it can also serve as a recruitment tool for interested others. Another recruitment tool that has found success in other departments is providing (and advertising via the web-based guide) more scholarship and fellowship support for graduate students.

Level and Quality of Faculty Performance

The review panel finds the faculty and instructors in the AgEd graduate program to be highly productive and of high quality. They have a combined 43 years of secondary teaching experience in agricultural education and role model outstanding pedagogy in their university teaching. All have received significant teaching and/or advising awards in agricultural education. Faculty members are evaluated on their teaching through student evaluation of teaching (SET) questionnaires. SET data are used in annual and cumulative (tenure and promotion) performance evaluations. Faculty members also prepare documents for review that reflect on their performance in all assignment areas.

The faculty has been prolific in research and scholarly activity. The Department Head was the 5th most prolific author in the Journal of Agricultural Education from 1996-2005. All three tenured or tenure-track faculty have received awards for their research and scholarly activity. All are prolific publishers; it is particularly noteworthy how many papers and presentations the junior faculty has to its credit as early career professionals. All are involved in their professional associations. The two instructors also have recent papers and/or posters to their credit; one instructor received three poster and a paper presentation awards in 2008.

Viability of Scholarly Community Within Which Students Can Interact

Students in the AgEd program are very engaged with teachers and teaching. They learn about pedagogy from faculty members who practice and demonstrate pedagogy in the classroom. They become competent to teach in broad content areas. Because they are not required to conduct research for their degree, their scholarly community is different from that of students obtaining a thesis Master's. Nevertheless, the students' cohort model serves to keep them in touch with one another and helps them build relationships with teachers and other community members through conferences, supervised classroom instruction, and FFA.

Outcomes

Professional Viability of Graduates

The AgEd program has done an outstanding job of tracking the progress of its graduates. In part, this is because Oregon agriculture teachers and the AgEd faculty attend the Oregon FFA Convention, State Fair, and other events together. Also, the Department Head has elected to track where all graduates since 1996 are employed.

Graduates of the AgEd Master's program currently teaching were surveyed in spring 2010. Responses were received from 44 out of the 55 graduates surveyed. Fully 100% of the alumni who responded were employed as high school teachers. Most (85%) found employment in less than six months. Employer evaluations ranked AgEd graduates favorably compared to other teachers.

Satisfaction of Students and Graduates

The review team had the opportunity to meet with four students, two currently enrolled in the

program and two recent graduates. All the students were very positive about their experience. It was clear that the cohort model and the detailed lists of requirements kept them busy and created an atmosphere conducive to group learning and support.

The results of a 2010 department survey of 44 alumni showed overwhelming satisfaction with their experience and achievements in the Agricultural Educational program. In response to the levels of satisfaction in the categories of “departmental advising/guidance”, “major professor mentoring”, and “overall quality of graduate instruction”, over 60% of the graduates were very satisfied and 25% somewhat satisfied. Lowest satisfaction was with “courses taken outside the department” and “level of financial support”. The “overall satisfaction level” received a ranking of very or somewhat satisfied by 90% of the graduates.

As another measure of satisfaction, graduates were asked if they were starting over, would they consider this program again. Over 90% replied they would attend OSU again for the same degree with the same major professor. The graduates replying to the survey all are currently employed as high school teachers with 95% as Agricultural Science and Technology instructors.

Rankings/Ratings

Periodically, there has been survey research published in the Journal of Agricultural Education that has attempted to rank agricultural education departments in U.S. universities. These rankings have favored Ph.D. granting departments over those like Oregon State University’s Department of Agricultural Education and General Agriculture that are offering Bachelor’s and Master’s degrees only. Hence, the rankings are not useful in determining program strength relative to peer programs that offer only Bachelor’s and Master’s degrees in agricultural education.

One instructor we interviewed has been delivering teacher professional development workshops across the nation on new secondary curricula in agricultural sciences education. It is his opinion that the Oregon agriculture teachers who have graduated and licensed to teach under the Master of Science in Agriculture Education at OSU have been the best prepared teachers coming into these workshops and hence, the most prepared to succeed with the new curricula. Part of the rationale for this endorsement was that all of the graduates of the OSU AgEd graduate program already possess a Bachelor’s degree in an agricultural science discipline.

Conclusions

Overall, the review panel finds the Master of Science in Agricultural Education degree program at Oregon State University to be sound. The overall recommendation of the review panel is to maintain this graduate degree program, keeping open the possibility for program expansion. There is potential and faculty/stakeholder interest in adding a second option in Business and Industry Education (BIE) to the existing option in Public School Teaching that could be realized with additional resources. The Department Head and faculty stewarding the Master of Science in Agricultural Education are to be commended for the soundness of

the program, performance of their students, and positive relationships with their students and program graduates.

The review panel would like to thank the Department of Agricultural Education and General Agriculture and the College of Agricultural Sciences at OSU for all that they did to prepare for the review and educate the review panel on the graduate program. Along with Dr. Martin Fisk, Interim Dean of the Graduate School and Dr. Greg Thompson, Department Head of Agricultural Education and General Agriculture, the review panel wishes to thank Nagwa Naguib, Executive Assistant to the Dean of the Graduate School and Sara Williams, Office Coordinator and Advising Assistant for the Department of Agricultural Education and General Agriculture for their logistical support.