

**PROGRAM REVIEW IMPLEMENTATION PLAN  
PROGRESS REPORT  
Department of Plant Pathology  
2016 - 2017**

**1. Create two new Regular Title Series tenure-track faculty lines in the department.**

**Assessment Method:** Numbers of regular, full-time Plant Pathology faculty in each title series.

**Results:** One new faculty line in the Extension Title Series was created and a new tenured faculty member was hired into that position. The new faculty member is based at the UKREC and new Grains and Forage Research Center in Princeton, Kentucky. Her distribution of effort is 20% Research and 80% Extension and other Service.

**Analysis of results and reflection:** The strategic plan called for a new faculty member in the Regular Title Series, who would normally carry a DOE with a majority of effort in research. The hiring of an Extension Title Series with 20% research effort does not fulfill the perceived need underlying this objective. This hire does, however, greatly strengthen the Extension team in Plant Pathology, doubles representation of the Department in the western Kentucky UKREC campus, and will contribute substantially to the new Grains and Forage Research Center there.

**Ongoing improvements:** Every effort will continue to be made to promote success of all faculty in the department, including Regular and Extension title series, as well as non-tenure-track faculty. Meanwhile, discussions will continue with the Dean and Provost about adding at least one, and preferably two, new faculty lines in the Regular Title Series, and means to do so will be explored. A proposal was recently presented to the Dean for a cluster hire associated with the Forest Health Research and Education Center (FHREC), based on the Lexington Campus, and that proposal includes a tenure-track Regular Title Series member of Plant Pathology, with emphasis on bioinformatics. The Department and FHREC await feedback on that proposal.

**2. Identify relevant laboratory space for the new faculty hires**

**Assessment Method:** Research laboratory space in each facility that is available to Plant Pathology faculty housed in that facility.

**Results:** Laboratory space currently available to both Plant Pathology faculty at UKREC is approx. 1160 sq ft. Until July 1, 2017, this space was dedicated to the program of one Extension Professor of Plant Pathology, and since then it has been shared between two Extension Faculty in the Department.

**Analysis of results and reflection:** The department continues to operate with a minimum of the space needed to maintain the research and extension programs on the Lexington Campus, and would benefit by gaining space at UKREC concomitant with the new hire. Both faculty at UKREC have substantial applied

research programs that involve considerable laboratory work year-round. With respect to the Lexington campus (Plant Sciences Building), additional laboratory space will be needed when and if a new faculty line is instituted to be based there.

**Ongoing improvements:** The UKREC is slated to undergo major remodeling, beginning in CY 2018, to be completed early in 2019. After the renovation it is anticipated that the Plant Pathology programs based there will continue to have access to an approx. 1160 sq ft. space, called the Plant Microbiology Lab, and also access to another space of approx. 535 sq ft, called the Clean Lab. The degree to which these spaces will be shared with other programs at UKREC is to be determined. Assignments of laboratory space at UKREC is the purview of the Director of that facility, with whom the Department Chair and faculty based in UKREC will keep lines of communication open about this and other relevant issues.

### **3. Provide startup funds for the new faculty hires, including adequate funds for major equipment.**

**Assessment Method:** Results of negotiation with new faculty hires.

**Results:** In connection with the new faculty hire in 2017, startup funds were provided to help with technical support, equipment, and current expense over the first three years from her start date.

**Analysis of results and reflection:** The College and University have recognized and accommodated the needs of the new faculty member hired into the department.

**Ongoing improvements:** For future hires, needs for startup funds will depend on distribution of effort and job responsibilities, especially in basic and applied research components. Therefore, negotiation of startup funds will continue to be an integral part of the hiring process.

### **4. Replace plant growth chambers with current, more efficient models, particularly in the containment suite.**

**Assessment Method:** Number of new growth chambers and total square feet.

**Results:** Three Conviron PGC-Flex plant growth chambers were purchased in FY2016.

**Analysis of results and reflection:** These new growth chambers allow studies of pathogens of rice, maize and sorghum with BSL2-level containment, greatly enhancing prospects for research, student training, and funding of the program.

**Ongoing improvements:** This recommendation has been met as of the FY2016 progress report. No further action is needed.

### **5. Avail institutional resources that have been implemented to help increase applications from traditionally underrepresented minorities.**

**Assessment Method:** Diversity of student applicants and recruits to the Plant Pathology graduate programs.

**Results:** The CAFE Office of Diversity assisted in identifying candidates for graduate study in Plant Pathology. One African-American candidate identified by the Office of Diversity was interviewed, then offered enrollment in the M.S. program with full funding, but ultimately declined. Another African-American prospect was identified by the Department Chair at a meeting at the Noble Foundation in Oklahoma. She is currently completing an M.S. at the Oklahoma State University, and has expressed interest and is being encouraged to visit the department and submit an application. In the past two academic years, the department has recruited a total of seven graduate students, of whom five are U.S. nationals and two are Chinese nationals. Of the U.S. nationals, four are white and non-Hispanic, one is Asian, three are female, and two are male. Of the Chinese nationals, one is female and one is male.

**Analysis of results and reflection:** Although the graduate student body remains diverse with respect to gender and, to some extent, nationality, underrepresented minorities are not well represented. The low number of students in the program (approx. 12)—which is largely due to the low number of faculty, especially in Regular Title Series (six)—makes it difficult to maintain broad diversity in all aspects at all times. However, the Department does appear to attract gradually increasing numbers of inquiries and applicants from well-qualified U.S. nationals, including members of traditionally underrepresented minorities. Success on the part of the CAFE Office of Diversity in identifying an African-American prospect bodes well for future interaction with that office as part of our recruitment efforts.

**Ongoing improvements:** Continued communication with the CAFE Office of Diversity, and encouragement of faculty to actively recruit promising and diverse graduate student prospects, are thought likely to be the most effective means of improvement.

## **6. Develop a comprehensive graduate student orientation program for both domestic and international students.**

**Assessment method:** Participation of graduate students in ongoing (PPA 784) and new (PPA 770) orientation programs.

**Results:** The PPA 784 course continues to be taught each fall term to all incoming graduate students (four in 2016, three in 2017). This course provides an overview of both the M.S. and Ph.D. programs, an introduction to library and database resources, tutorials on graphics and bibliographic software that is licensed to the University, best practices for laboratory research, notes and records, and scientific ethics. Also, the seminar course, PPA 770, has been altered to involve more formal exercises, including draft and final Abstracts, and two practice seminars, with the final seminar including the complete slide shows in ppt or pdf format. The instructor provides timely feedback on all exercises. The new PPA 770 format was used for three graduate students in 2016.

**Analysis of results and reflection:** In general, students and faculty seemed satisfied with the results of the new PPA 770 format. The effect of PPA 784 was

not formally assessed. Benefits to the students likely depend on timely utilization of the skills taught in the course, including software used as well as literature searches and active laboratory/field research by the students.

**Ongoing improvements:** The Department faculty should consider mechanisms to assess success or deficiencies in our orientation efforts, including structuring courses and research activities early in their programs to utilize and thus reinforce the skills taught in PPA 784. Additionally, the department must regularly reassess that course and the skills introduced therein.

**7. Promote an active social committee to foster interactions among all members of the department.**

**Assessment method:** Meetings of the social committee, and social activities.

**Results:** The Association of Plant Pathology Scholars (APPS) includes the graduate students and postdocs in the department, and organizes many of the social events. APPS met 1-2 times each quarter, and held three events: a breakfast and two dinner cookouts. These activities are among those documented in the Work-Life quarterly reports. The department also held its annual winter holiday luncheon, which is organized mainly by the staff and APPS leadership. Other parties included two baby showers, and a party honoring a retiring staff member.

**Analysis of results and reflection:** Within the limitations of time and resources, the Department has maintained an active social environment. All groups within the department are involved, and especially the enthusiasm of graduate students to organize and run events has been gratifying.

**Ongoing improvements:** With the many professional and personal demands on the time of all members of the department, it is difficult to envisage increasing social activities. Members of the department should continue to be encouraged to participate.

**8. Develop plans to promote travel to professional meetings by all graduate students in the department.**

To be addressed in 2018.

**9. Examine new sources of funding to support in-state travel for extension faculty and develop plans with the Associate Dean for Extension to adequately fund the extension programs within the Department.**

To be addressed in 2018.

**10. The Department should discuss with the college administration possible financial support for undergraduate research projects, where such support can aid in graduate student recruitment directed towards underserved minorities.**

No progress to date. To be addressed in 2018.

**11. Encourage faculty to take sabbatical leaves to improve their skill sets and refresh their perspectives on their careers.**

To be addressed in 2018.

**12. While the need for additional space may result in a college level analysis of space allocation, every effort should be made to keep the Plant Pathology research and extension faculty in the Plant Sciences Building.**

To be addressed in 2018.