

**PROGRAM REVIEW IMPLEMENTATION
PLAN PROGRESS REPORT
Department of Plant and Soil Sciences
2022 - 2023**

Recommendation 1.

Develop an overall vision and direction for the HPLS undergraduate degree considering future opportunities that will allow the department to compete successfully for potential students. Plan to engage stakeholders in this process.

Assessment method: We will use student metrics (incoming student numbers, student retention, graduation rates, graduation exit surveys, and employer surveys) to gauge how our new undergraduate degree program (Agricultural Ecosystem Sciences; AES) is performing.

Results: We decided in 2018 to withdraw from the HPLS undergraduate degree program. We launched our new undergraduate degree program (AES) in Fall 2019, as an option within the Agriculture Individualized Curriculum 'incubator program' within the College. This degree program was guided by extensive faculty input, market research, and interactions with stakeholders. All new coursework has been approved by the Senate. Student enrollment in the program has steadily increased (Fall 2019=7; Fall 2020=14; Fall 2021=19; Fall 2022=25; Fall 2023=27). The degree program graduated its first cohort Spring 2022 (n=3) with 4 more graduating in 2023. We have created a steering committee for the degree program, and three PSS faculty are actively advising/mentoring students in the program.

Analysis of results and reflection: PSS faculty are broadly supportive of the new AES degree program, as a much better representation of what we all do and where agriculture is headed than the old HPLS degree. Student recruitment is going well, though we will need it to continue to grow. We have high caliber students coming into the program. Through new courses, we are engaging with our stakeholders and getting the current students introduced to them and to jobs in relevant fields.

Ongoing improvement actions: We must increase our recruitment efforts and student numbers. We hope to submit paperwork to convert AES to an independent, stand-alone program (outside of the Ag Individualized Curriculum) within the next year or two. We need to build our alumni network and database and better track where our graduates end up.

Recommendation 2.

Explore ways to enhance scientific collaboration and transformative ideas by facilitating faculty interactions, particularly with extension faculty and new faculty hires.

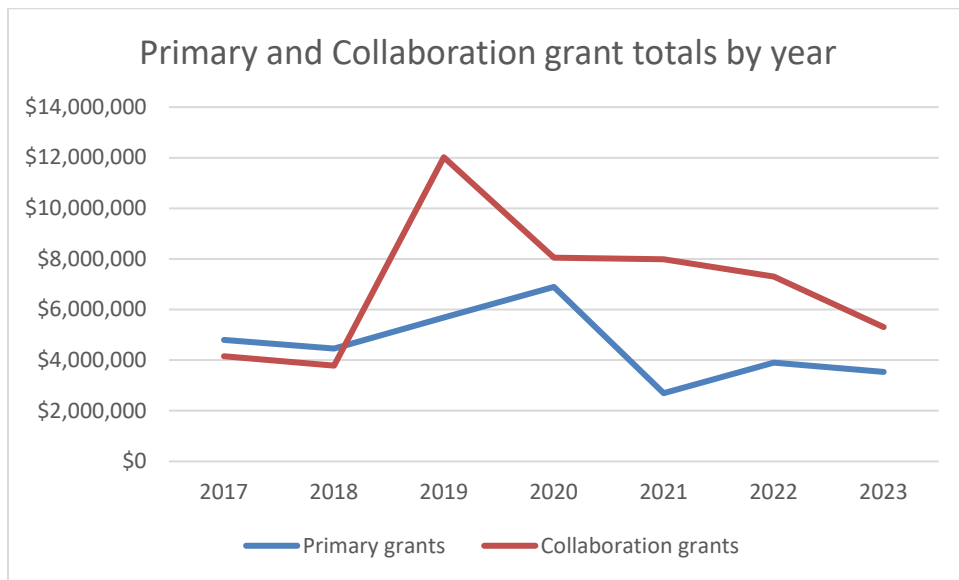
Assessment method: Track faculty participation in retreats, seminar series, and special initiatives. Track collaborative grant proposals and manuscripts.

Results: Since the last Department Review, the Department has supported six

faculty retreats, six academic calendar year seminar series, and occasional workshops and field days for PSS folks and other stakeholders. Faculty participation in these events remains strong. The Chair continues to support an annual Extension Faculty only meeting in December, which is also well-attended and appreciated/enjoyed. Additionally, the Department Chair supports internal calls for proposals yearly, and favors collaborative, multi-user proposals for funding. From these efforts, several successful grants have emerged that include new collaborations within the Department and beyond. During faculty interviews, we emphasize our collaborative environment and expectations therein.

Analysis of results and reflection: Faculty report liking our retreats and based on participation appear to see value in attending them. They want the Chair to continue with annual retreats and all extension faculty meetings in December. Our newest cohort of faculty report satisfaction with Chair's new on-boarding process and feeling included within our unit.

Ongoing improvement actions: Beginning with FY 2019, collaboration grant totals exceeded departmental primary grant totals and have continued to outpace primary grants each year. The Chair will continue to look for opportunities to stimulate and support scientific collaboration amongst the faculty.



Recommendation 3.

Construct a management plan and process for North Farm operations that will allow all faculty to have access to plots, equipment, and personnel.

Assessment method: In 2018, the Chair convened an 'ad-hoc' North Farm committee of relevant and diverse faculty and staff to figure out how best to move forward with this recommendation. Several priorities and actions came from this committee, which are detailed below. Moving forward, faculty and staff perceptions regarding the improvements at the North Farm will be obtained from periodic surveys.

Results: The Chair reconstituted the Land Use Management committee, and this group has developed and instituted an online 'land use request' form that aims to streamline aspects of planning and process at the North Farm. We have gone through six growing cycles with the new land use request form. Complaints have been few and it appears to be functioning well, though use is somewhat spotty and varies across faculty members. Several long-time staff retirements and/or resignations allowed for some reorganization and the creation of a new position – PSS North Farm Coordinator - as well as several other staff upgrades. This reorganization has contributed to the improvement of process, facilities, management, accessibility, inclusivity, and the culture of the farm. In 2019, we successfully transitioned the long-term no-till plots from single PI control to committee control, effectively broadening inclusion and transparency for how this Departmental resource is managed and is available for research. This committee is functioning well and has vetted and approved several new projects over the subsequent years.

Analysis of results and reflection: We have dismantled many of the barriers that existed at the Farm for new faculty and staff. We continue to actively work to improve the culture of the Farm: to have greater buy-in and regard for safety, to eliminate exclusionary practices, to improve access and transparency of various processes, and to correct a variety of farm employee issues that stem from limited supervision/oversight. We have improved our communication with Matt Peake and William Sympton, facilities and management staff overseeing the Farm.

Ongoing improvement actions: We continue to have issues regarding shared use equipment and use/upkeep of common spaces. Major changes with Foundation Seed this year are being worked through. The Chair and the PSS North Farm Coordinator will continue to work closely together moving forward to try to find solutions and continue to improve farm infrastructure and accessibility for everyone.

Recommendation 4.

Devise a departmental strategy for providing all staff with the opportunity for professional development, including participation in scientific meetings where appropriate.

Assessment method: Internally monitor the number of staff applying for the College-level staff professional development awards.

Results: In the first year of the College-level staff professional development program (2017), our Department had only one application, which was granted, to attend and present at a scientific meeting. In 2018, we had three staff members apply (and receive funds) for a diverse set of experiences: learning new techniques, better communication skills, and how to lead a state-wide water quality program. In 2019, we have had four staff members apply for a similarly diverse set of professional development opportunities and receive awards. We also received four staff-led Research Activity Awards in 2019. Due to COVID-19, no staff members applied for professional development awards in 2020, as frequently those awards involved travel. However, in 2020, we had a staff member lead a successful Sustainability Challenge Grant, at the University-

level. In 2021, we had four staff members apply for (and receive) professional development awards to attend scientific meetings. In 2022, three staff applied for (and received) College-level research activity and professional development awards.

Analysis of results and reflection: The College's Professional Development and Research Activity Awards have been beneficial for our staff. The Chair reminds them of the program at bi-annual staff meetings, and the Department has budget committed to match what they receive from the College. Staff value having these experiences, and the applications are easy to fill out.

Ongoing improvement actions: The Department will continue to support staff that apply for the College-level awards as well as other opportunities that arise.

Recommendation 5.

Explore opportunities for developing online courses for Extension Agents interested in pursuing master's degrees.

Assessment method: We will work with the Assoc. Dean for Instruction's office to help support the College-level effort to create an online MS in Agriculture – Scientific Translation and Outreach (STO). We will track our online course offerings and student enrollment.

Results: We had two faculty respond to the call for online course proposals put forward by the new online STO program in 2018. Drs. Henning and C. Lee developed online Forage Management & Use and Grain Crops courses, respectively. Both courses were taught, but only one is currently being offered (Forage Mgmt & Use). Additionally, Dr. Coyne was slated to create an online version of his Soil Microbiology course to be offered to STO students; however, with his retirement, this did not come to fruition. Several Extension faculty advise STO students, and Dr. Henning has taken over as the Director of Graduate Students (DGS) for the STO program.

Analysis of results and reflection: COVID changed the online course world dramatically, as all instructors were forced to go online. Many discovered there are some benefits to online instruction, though some challenges remain. While convenient, the data clearly indicate students do not learn as well online as in-person. Further, there is little incentive to entice faculty to develop online programming.

Ongoing improvement actions: Dr. Henning, DGS for the STO program, and the IPSS Steering Committee is working to encourage more faculty to have online classes available. We have discussed whether our primary MS/PhD program - IPSS - should have an online-only option and decided not to go this direction. We will stay involved in the College- and University-wide discussions regarding online education and try to think creatively about what additional offerings we can create and programs we can be involved in.

Recommendation 6.

Evaluate departmental committee structure and improve procedural transparency.

Assessment method: Every year, the Chair reviews the Departmental committee structure, checks with various committees to see whether they are still functioning or not, solicits input from faculty and staff, and makes appropriate revisions. The Chair also modifies and creates new policies, as needed, with input from faculty and staff, to improve procedural transparency. As part of our Departmental response to the UK@Work effort, we deployed a survey to staff asking a variety of questions regarding communication of information. The Chair has made efforts to increase procedural transparency by explaining things at both faculty and staff meetings.

Results: We now have fewer Departmental committees, and faculty and staff appear pleased with improved communication and procedural transparency. In an attempt to better incorporate staff in decision-making, the Chair created a 'staff advisory committee' that is tasked with advising the Chair on staff-related issues.

Analysis of results and reflection: So far the staff advisory committee has only met once. The utility of this committee in departmental decision-making is unclear. The Chair will continue to monitor and make changes as needed.

Ongoing improvement actions: Continue to assess effectiveness and usefulness of our committees and make changes where needed.

Recommendation 7.

Continue to evaluate space and equipment needs for the program and develop a long-term strategy for improving these aspects of the program.

Assessment method: The Chair works with various faculty-led efforts to improve space utilization and access to equipment. This includes holding spring calls for internal equipment proposals and infrastructure improvements, when the budget allows.

Results: The Chair has had annual internal proposal calls for over a decade. Staff, graduate students, and faculty are encouraged to submit proposals. Funds granted have ranged from \$30K - \$450K annually. The Chair makes sure these funds are dispersed equitably across our various missions and locations. The Chair continues to support the Departmental shared-use Nutrient Analysis Lab (Ag Science North S-104) by supporting the lab manager position associated with it and providing funds for needed equipment upgrades in the space. Currently, the Chair is working hard to make sure our space needs will be met in various new building projects underway.

Analysis of results and reflection: Our Department has been lucky to have funds available to help programs achieve space and equipment needs. These funds have stemmed from faculty and staff salary savings. With the new university policy to take back open faculty lines starting this FY (2024), our ability to invest in larger infrastructure needs moving forward is likely to be more limited than it has been in the past.

Ongoing improvement actions: The Chair will continue to help the faculty achieve their goals with regard to equipment acquisition and space utilization, as long as the budget allows for it.

Recommendation 8.

Work with the Office of Philanthropy and Alumni to develop specific goals and objectives for future philanthropic efforts.

Assessment method: Track gifts to the Department. Track reads/hits on the Alumni newsletter. Track participants of Alumni events.

Results: The Chair engaged with the Office of Philanthropy and is developing relationships with potential donors. We have garnered ~\$100K to date from donors to recognize and support graduate students. We worked with Philanthropy to generate an Alumni database and mailing list. We have produced four annual Alumni newsletters (2020-2023). These are delivered to ~500 people and the unique open rate has increased over time from 22.4% to 48.2%. We have reached 32 states and 5 countries. We threw our first-ever PSS Alumni Round-Up event in October 2021 - a catered evening dinner in the grounds between PSB and Garrigus. This has become an annual event, with ~30-50 people in attendance - a mix of current folks and alumni.

Analysis of results and reflection: We have had success engaging with our alums, which helps us build connections between our current students and our past. There is more that could be done in this arena.

Ongoing improvement actions: Continue discussions with Philanthropy and Alumni and watch for opportunities. Continue to hone plans to engage with alumni. Continue to offer annual newsletter and Round-Up event. Consider developing more frequent, shorter news clips for alumni dissemination.

Recommendation 9.

Consult with current and past graduate students on ways to improve the overall graduate student experience in the program.

Assessment method: We conducted a satisfaction survey of current IPSS graduate students in 2018 and 2022. In 2018, we created an exit survey to extract similar information from students moving forward. We are doing every other year analysis of the exit survey data.

Results: In 2018, the PSS Chair, working in conjunction with the Associate Deans for Instruction office, created a formal IPSS Steering Committee, which has representation from all IPSS Departments (PSS, Hort, FNR, soon Plant Pathology), one outside Department, and current graduate students. This committee has revised the IPSS handbook multiple times and completed several major curricula changes, including creating new specialty areas. We also created a new IPSS GSA Alumni Early Career Award to recognize the achievements of a recent IPSS graduate. This award is being administered by the IPSS Graduate Student Association (GSA) and occurs as part of the PSS

seminar series. The PSS Chair provides modest funds to the IPSS GSA to help support professional development opportunities.

Analysis of results and reflection: The summer 2022 satisfaction survey indicated that our students are more concerned about money and mental health than they were in 2018. This is not surprising, given the pandemic and persistent inflation. This information led us to raise our minimum stipend amounts by ~\$3K/yr. This change went into effect in August 2022, and though it pre-empted the University-mandated increase in graduate student stipends that is occurring now, we have further raises coming. The IPSS GSA remains remarkably organized and active. Incorporating Plant Pathology into IPSS will grow the IPSS program, making it even more transdisciplinary.

Ongoing improvement actions: The Chair will continue to support the efforts of the IPSS Steering Committee and Graduate Student Association moving forward.