AY 2019-2020 update: Department of Crop Sciences, University of Illinois, 12/30/2019

For the UIUC Department of Crop Sciences (CPSC), the past year has seen considerable change and new initiatives in several areas, including faculty composition, resource use and educational program structure. The salient context for these changes is the Integrated and Value-Centered Budget model (https://provost.illinois.edu/budget/budget-reform/integrated-value-centered-budgeting/; IVCB), which debuted in AY 2018-2019.

The IVCB takes some of its structure from the RCM (Responsibility Center Management) family of budget models, which allow central campus a means of balancing needs and priorities among campus units. Beginning with a baseline measure of income and expenses for each unit, the model starts in year 1 by making each unit whole, and thereafter adjusting unit budget allocations up or down depending upon annual performance in relation to the baseline on three-year intervals. By explicitly quantifying the relative costs and benefits of different types of facilities, activities and personnel, the IVCB provides clear incentives for succeeding in the new budget environment. Unfortunately for CPSC, the IVCB incentives contrast with the department's historical strengths in stakeholder-driven research and graduate education. Instead, the IVCB emphasizes undergraduate enrollment and full-overhead basic research. The challenge for CPSC is to respond to these imperatives for success while maintaining its identity as a land-grant unit with a strong REE mission in agricultural plant sciences. To navigate this juncture, we are working assiduously on the following initiatives.

I. Strengthening undergraduate enrollment: There are currently 128 undergraduates and 124 graduate students in CPSC. This is roughly similar to where the department was a decade ago, however it is down from the department's enrollment high in 2015, and insufficient for the unit to flourish under the IVCB. We are pursuing two strategies to improve our undergraduate enrollment. First, we are reorganizing our undergraduate major offerings, which currently consist of Crop Sciences (with seven concentrations) and Computer Sciences + Crop Sciences, to make them more visible to applicants to the University of Illinois. Currently, students see only majors, and not concentrations on the 'pick list' in the application. We are therefore moving from the major/concentration system to a new system with five majors (Crop Sciences, Horticultural Food Systems, Computer Sciences + Crop Sciences, Crop Agribusiness and Plant Biotechnology) that will appear on the application. Second, we are undergoing a curriculum reform designed to both emphasize student learning outcomes and enable our faculty to teach more cost-effectively. Under the IVCB, the undergraduate to tenure-line FTE ratio determines the success of requests for new faculty hires, so the strength of the undergraduate education program and the department as a whole are bound together tightly.

II. Improved resource use efficiency: Charges for space and utilities have become more transparent under the IVCB, giving us the means to implement more efficient resource use and cost-recovery measures. We have conducted a thorough space inventory to facilitate equitable and efficient use of laboratory and office space. On our research farms, we have conducted a thorough analysis of what it costs us to do business, and are in the process of creating a new fee

structure that will help us to serve faculty research programs while better maintaining our research facilities. Finally, with help from a campus infrastructure grant, we are retrofitting our greenhouses with high efficiency lighting, heating and glazing, a measure that will annually save 10% of our current utility expenses.

III. Strategic faculty hires: Considerable generational turnover and faculty loss to external recruitment have made it challenging to keep up on the hiring front, and also resulted in a department that is 1/3 junior faculty. CPSC currently has 30 tenure-line faculty (down from 46 in 2009), 8 specialized faculty and 7 USDA-ARS affiliated faculty. Over the past two years, we have made 7 hires at the Assistant Professor level (5 tenure line and 2 specialized faculty). These hires have been split between replacing critical positions in areas of traditional strength (small grains breeding, specialty crops entomology) and exploring emerging areas (digital agriculture, controlled environment horticulture). We will continue this strategy of choosing which areas to invest resources in, rather than strictly refilling positions, especially if it becomes increasingly difficult for CPSC to mobilize faculty lines under the current budget model.

At the same time that the Department of Crop Sciences at UIUC is faced with a challenging budgetary landscape, we have a clear idea of what needs to be done, and the faculty are pulling together to make it happen. There is an uptick in collegiality and collaborative partnerships, both within CPSC and with other units, that bodes well for our ability to thrive under the new model.