

Agriculture faculty to student gender reflection

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Introduction

- Understanding baseline information regarding gender diversity in agriculture STEM faculty is essential to the development of initiatives to address diversity within the land-grant system.
- Researchers suggest that students may identify faculty as role models more readily when gender matched and thus choose to pursue similar instructional careers as those faculty, effectively persisting the gender dominance in that field. Gender composition is compared between undergraduate students, graduate students and faculty in common department types.
- The U.S. Department of Education's National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS) supplies faculty data at an institutional level but does not get to the level of granularity that would help make this analysis specific to agriculture STEM.
- The Food and Agriculture Education Information System (FAEIS) is a nationwide survey of student and faculty data. FAEIS faculty data was merged with an automated scrape of 98 colleges of agriculture to compare faculty and student gender ratios across various departments.

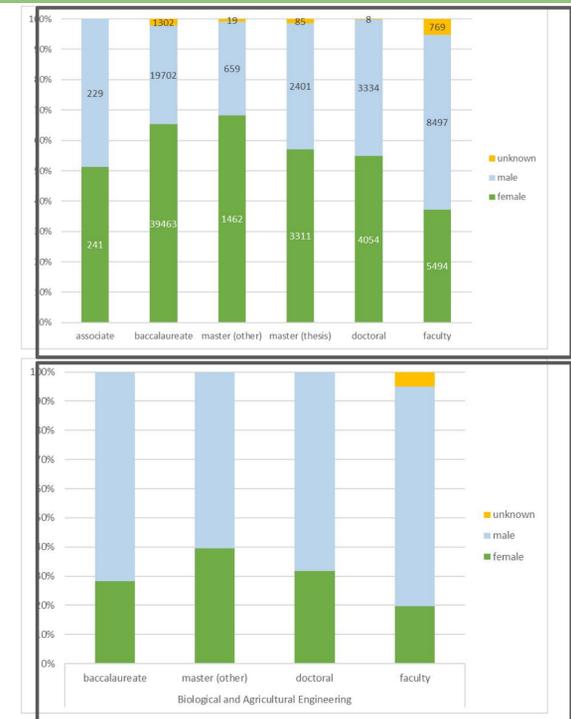
Methods

- In an effort to augment response rates to faculty within the FAEIS survey the FAEIS team used an automated program to collect 22,369 faculty and staff records with rank, name and department from public directory websites in 98 colleges of agriculture and 713 of their departments.
- Faculty directory websites containing Agriculture were identified. For each of 707 websites, a custom script was written for the browser automation tool, Cypress. The script selected html elements for each faculty identifying the full name, position title, department, and image url.
- The FAEIS helpdesk inspected and coded gender on all 22,370 faculty records using the image. When name and any available image failed to identify a faculty with any certainty as male or female, the record was coded as unknown.

Results

Statement 1: For all departments representing agriculture STEM, females tend to be present in higher proportions in non-thesis masters degrees followed by baccalaureate degrees. Faculty populations in every department type have more males than the respective student population. When filtering to tenure and tenure track positions, the male proportion increases.

Statement 2: A case study of an individual department's student gender composition to its faculty shows the highest female population present at the masters level.



Conclusions

- Comparing faculty gender ratios to student gender ratios across multiple departments shows that faculty is not always reflective of the student population they teach. The difference is more pronounced at the undergraduate level than the graduate level.
- Faculty data is readily available on most departmental and college directories. However, differences regarding what faculty information is provided within colleges and across institutions makes it difficult to compile the information. Manual coding of various variables is necessary to clean up the directory scrapes.
- FAEIS data provides strong evidence for the need to address faculty gender diversity in the agriculture discipline.