

Trends in gender diversity American soil science classes: 2004-2005 to 2013-2014 academic years

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A diverse workforce has been viewed for a long time as a healthy workforce. Traditionally however Soil Science has been seen as a male dominated field. The total number of female students enrolled showed increasing trends in all classes investigated during this study, but the percentage of female students showed a decline when analyzed by total students enrolled and also declined in four of the seven individual classes investigated. While both total enrollment and female enrollment increased during the study, male enrollment increased more rapidly than female enrollment. Soil biology/microbiology classes had a trend of more than 45% female enrollment throughout the study period, but many classes had less than 40% female enrollment, especially after the 2008-2009 academic year, and some hovered around only 35% female enrollment. The percentage of female soil science students had increased in the USA and Canada from 1992 to 2004 (Baveye et al., 2006) and Miller (2011) reported an increase in the number of female students at Iowa State University in the early 2000s. Therefore, the decrease in percentage of female soil science students found in our study was disappointing, even though absolute numbers of female students increased. It appears there is still a need to find ways to better market soil science coursework to female students. One possible way to accomplish this is to take advantage of the fact that many schools are now focusing efforts on STEM training specifically for females in grades 5-12, whereby science projects, after school programs, and mentorship can substantively influence females to pursue science-based fields in college. Another possibility is to promote the trends in female employment. As an example female employment within the Soil Science Division of the USDA-NRCS has increased over the same period. It should also be noted that the number of females in leadership roles has also increased. As a profession, soil science should look to take advantage of these types of opportunities.

Baveye, P., A.R. Jacobson, S.E. Allaire, J.P. Tandarich, and R.B. Bryant. 2006. Whither goes soil science in the United States and Canada? *Soil Sci.* 171:501-518.

Miller, B.A. 2011. Marketing and branding the agronomy major at Iowa State University. *J. Nat. Res. Life Sci. Educ.* 40:1-9. doi:10.4195/jnrlse.2009.0037u.