Utilizing Distance Education to Teach Emerging Topics in Horticulture Science: A Report on Four Years of Teaching Introduction to Agricultural Biotechnology

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Abstract

Advances in biotechnology are rapidly changing the way we work and live, but are often met with controversy or raise ethical questions. Approaches that enhance learning and awareness of biotechnology are essential to increasing citizen understanding of these topics. Educators, both formal and informal, need skills to understand science associated with these technologies, as they may not have been previously exposed to the topics in their training, especially with the rapidly changing science. To address the need for unbiased agricultural biotechnology information, a graduate level Internet-based course was developed entitled: Introduction to Agricultural Biotechnology. This course focuses on Ag biotechnologies related to Horticulture and Plant Science. On-line courses are especially useful for students not able to travel due to various constraints, such as working full-time or being physically distant from campus. The goal is a population better able to understand the science behind rapidly advancing biotechnologies that is better equipped to make informed decisions regarding those technologies. Course assignments are designed to help students as they teach others about topics associated with biotechnology in both formal and informal settings, such as a high school class or an Extension seminar. 54 students (teachers, college instructors, or Extension staff) from across the U.S. have taken the course in the past 5 years. Course ratings have been consistently very good (avg. 4.45) on a 1-5 scale (1= very poor, 5=excellent). Former students indicated that they have better understanding of biotechnology and would be better able to relate it to others. Students also gained an improved awareness of resources available for teaching Ag biotechnology.