Using Community Atlas Teams to Educate Youth on Emerging Precision Farming Technologies

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Introduction The adoption and diffusion of advanced technologies for the production of food and fiber products is needed to meet the needs of a growing world population. While precision farming has been widely adopted, and is producing substantial increased yields in developed countries, developing countries have been slower to adopt precision farming technologies (Shanwad, Patil, Dasog, Mansur, and Shashidhar, 2002). Two critical technology components of precision farming that inhibit adoption and diffusion in developing countries are global positional systems (GPS) and geographic information systems (GIS). It has been noted that technology competencies needed by future farmers are increasing (Alonge, 2004; Alonge 2001; Kotrlik, Redmann & Douglass, 2003). To prepare youth for the increasing use of advanced farming technologies (e.g. GPS and GIS), agricultural and extension educators must respond by incorporating more relevant, hands-on experiences into their curriculum.

One emerging model for educating youth about GPS and GIS technology is Environmental Systems Research Institute’s Community Atlas program. Through this program, youth learn how to use GPS systems and develop GIS maps and databases to address community issues such as production of food and fiber. One of the defining features of the program is the collaborative teamwork between youth, experts, NGOs, etc., to address the issue of concern.

Purpose The purpose of this poster is to illustrate the process of incorporating Community Atlas Teams into agricultural and extension education programs to teach youth how to use GPS and GIS technology to solve real-world problems.

Information to be Shared This poster will describe the requirements for developing a Community Atlas Teams and will explore the opportunities for teaching youth to use GIS and GPS technologies using practical Examples. Specifically, the poster will divide the development of a Community Atlas Teams into three phases: creation of the team/acquisition of equipment, application of skills and distribution of information. A completed Community Atlas Team project will serve as a visual model.

Conclusions The formation of a Community Atlas Team is one solution for educators looking to teach youth the necessary technology skills that will be highly desirable for many agriculture careers in the future. Additionally, youth may benefit from the teamwork and service learning aspects of the Community Atlas Teams. On a broader scale, teaching GPS/GIS technologies to youth may result in more highly qualified workers, eventually increasing the overall productivity of agricultural practices.

Educational Importance This poster raises awareness of a new way to teach technology to youth in agricultural and extension education. It also reinforces the ongoing need to incorporate instructional technologies into agriculture and extension curriculums, in order to provide youth with the most complete education possible.