

Linking Classroom to the Real-World through Engaging Students with Producers and Extension Faculty

In the 21st century, agriculture is changing rapidly and faces new challenging and exciting issues. With that, role of Agronomists has also changed from answering focused reductionist questions to the multi-disciplinary, whole-farm and system level analyses. To better equip the Agronomists of the future, they must learn the skills to tackle the complex situations. Research shows that students learn agricultural principles better through experiential learning than in a traditional classroom setting (Grover and Stovall, 2013).

Students also like to visit farmer fields to observe the crops and management practices first hand and learn about issues farmers are facing. While students get opportunity to first hand see or experience crop management through experiential learning and field visits, they don't get to know how the extension faculty help tackle the issues that growers are facing. Moreover, many students don't know about the extension service component of the agricultural sciences, they are often aware only about teaching and research activities that take place at an academic institute.

Furthermore, there are some sensitive topics such as organic agriculture, GMO where students might have their pre-conceived notions and are difficult to discuss. One way that an instructor can help is to provide opportunity and friendly environment through collaborative methods where students with contrasting views can exchange their points without being judged (Grover, 2014). This technique as discussed in detail elsewhere (Grover, 2014) helped students appreciate diverse views about sustainable agriculture concepts.

Another aspect of the student learning is to link them with real world through direct interaction with producers and extension personnel who help producers deal with real-world issues in meeting their sustainability goals. Linking the real world with classroom has been proposed and used as one of the guiding principles for sustainable agriculture education (Marr and Horn, 2006). An agroecology colloquium was introduced in a senior level course related to sustainable crop production. The objective of the current project was to bring growers as well as extension faculty into classroom and give students an opportunity to learn directly from the growers about the issues that they face in their sustainable crop production operations; and to learn how the extension faculty would address those issues and make recommendations.

Student teams were assigned different topics such as Cropping Systems, Ecological Weed Management, Integrated Pest Management, Soil and Water Management. Each student group asked at least two questions from their assigned topic and also answered at least one question asked by farmer or extension panelists. Growers provided background information about their farming operations including PowerPoint presentations. Some of the growers were also research collaborators with faculty and shared about their experiences of research on sustainable crop production topics such as cover crops and soil health. The formal discussion was followed by an informal *eat and meet* event where students had opportunity to interact with

panelists. This provided the students an opportunity to ask additional specific questions or even enquiries about internships at farmer fields or career opportunities in extension services.

Each student group submitted their reports after the panel discussions. The written reports included the specific questions that the group asked and the response/s that they received from the panelists. Student groups also included commentary about highlights or the things that they were most impressed with the panel discussion. Finally, the students summarized how the panel discussion with growers and extension specialists improved their understanding about real world and system approach to crop production.

This approach complemented well with other components of the course where students had visited farmer fields, had grown cover crops themselves in a semester long experiential learning project and have read about agroecology concepts in classroom- the panel discussion experience helped the students to put all the pieces together to appreciate the system level approach to sustainable crop production. The student feedback indicated a positive impact on student learning about the real-world issues in sustainable crop production along with an increased awareness and appreciation of the contribution of extension faculty in helping growers addressing those issues.

References

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