

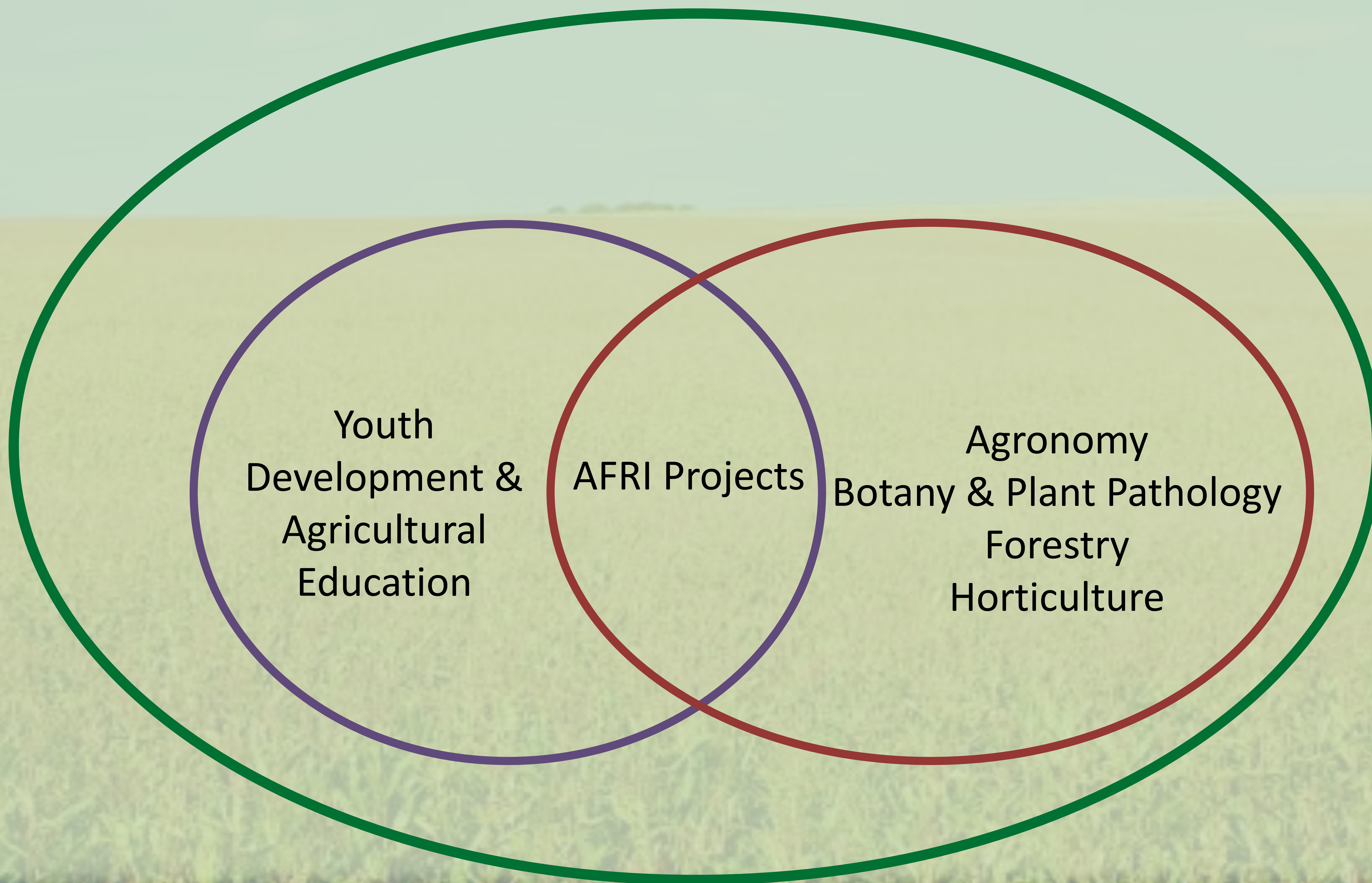
Transdisciplinary Knowledge Transformation by Graduate Students Engaged in an Outreach Experience

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Transdisciplinary

Plant Sciences Outreach Education



16 Graduate students

- 10 Agronomy
- 3 Botany & Plant Pathology
- 1 Forestry
- 1 Horticulture
- 1 Youth Development & Agricultural Education



- Campus-wide outreach event
- Free to public
- Displays vary (consumer education- research)
- Advertised as: “Spring Fest is an annual event showcasing the lighter side of higher education.”

Learning Station Development

In Class Activities

- Learner Centered Teaching activities: small groups within class
- Outcome Selection
- Objective Formation
- Learning Station Development

Outside Class Meetings

- Contacting Industry/Business Sponsors
- Informal group meetings (in person & electronic)
- Lab Encounters (casual discussion during work)

Event Days

- Learning Station Facilitation
- Inquiry learning facilitated by graduate students with public

1st Station

Where does our food come from?



2nd Station

Where did the seed originate?



3rd Station

Who's my wild relative?



Initial Thoughts/Quotes

- Hard to simplify facts
- Children will have difficulty with science concepts and terms
- Event is more for entertainment versus education
- Lots of misconceptions about agriculture in mainstream society

“You need to use a different vocabulary, you are not talking with other students or professors; you are talking with kids that probably have little knowledge of your area.”

“I assumed that spring fest was an event put together for little kids to eat bugs, draw plants, and pet animals, things that entertained them for a day or two.”

Planning vs. Volunteering

- Responsibility for content
- Group dynamics
- Planning schema reflection

“Even though I have attended the Springfest in past years as a visitor, being behind a stand is something totally different.”

“I’m used to working with my peers, so planning an activity for small children was an unfamiliar task”

(from her previous FFA activities),
“ I realized that the most successful activities were the ones that actively engaged students”

Communication Skills

- Communication skills
 - Impromptu speaking
 - Language
 - Confidence increased with communication practice

“I was forced to predict on the fly the educational level at which a participant could be expected to perform and plan out my spiel to them accordingly”

“It was difficult answering questions outside of my specialty area”

“The biggest challenge is the language skill”

Graduates self-identify skills

- Patience
- Work environment
(individual vs team)
- Time management
- Leadership

“I believe the greatest increase to my skill set to come from this weekend was the increase to my patience. Working everyday around other grad students and professors I don’t get much of an opportunity to work with a crowd that requires a lot of patience”

“As graduate students, we do not get the opportunity very often to step back and view the big picture of our research and I found this piece to be the most challenging of the entire process.”

Display Feedback

- Layout
- Audience Interest
- Take home message

“Most were very interested in the small seedlings we had on display to see how plants emerge & grow from the seed”

“...an elementary teacher said that she would like to implement an activity involving our activity to teacher her students about plant development and plant nutrition”

“A parent’s interest beyond that of getting the prize at the end of the booth for her son was inspiring and gave me a new perspective on how relevant knowledge is to even adults.”

Outreach Qualities

- Children are naturally curious & always have something to ask
- Young/ Old, Non-agriculture/ seasoned agriculturists: all enjoyed
- Hands-on activities are engaging

“Engaging with the participants changed my perspective however, while the field may be taken for granted it did not seem that people perceived it as outdated and irrelevant. Rather, the children, young adults and even some adults seemed genuinely interested and asked good questions and stimulating some good conversation.”

“I felt like this was a rewarding experience. I feel like we were able to impart some real knowledge; not just something cute like a baby chicken or icky like eating a cricket; but something that added to people’s understanding of the world they live in.”

Teaching/Engagement

“I am reinforced in my feeling that the learner centered style of teaching is a very effective style of teaching and that I will continue to incorporate hands-on activities when I present lessons or presentations throughout my career.”

“Another important key to the success of the activity was that we were able to take a few, small simple aspects of plant breeding and make them interesting to a large varied audience.”

“My best experience was with adults, they were as excited as the kids”

“I feel that each opportunity to interact with others enhances my ability to connect effectively.”

Questions?

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