

THE INCREDIBLE EDIBLE SALAD COMPETITION:

**AN EXPERIENTIAL HORTICULTURE PROJECT
TO ENHANCE STUDENT ENGAGEMENT AND LEARNING
IN A CROP AND FORAGE PRODUCTION COURSE**



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Synopsis



Our "Typical" Student at The University of Findlay

Take Crop and Forage Production as an elective

**Majors: Equestrian Studies (English or Western)
Equine Business Management**

Animal Science (General, Science or Pre-Veterinary)



**Has little knowledge or confidence in the area of crop and forage production
(3.15/10) (n=67) (self reported)**

**Believes experiential learning is important component of their education
(5.53/7) (n=36) (self reported)**

Synopsis

Crop and Forage Production (ANSC 330)



3 credits, 3 hours (2 one-hour fifteen minute meetings/week)

Fall semester

Elective that satisfies major degree requirements (alternative options)

~ 35 students

Covers growth characteristics, adaptation, and utilizations of different plant species for hay, pasture, silage, and land conservation. Also the plant, animal and environmental factors which relate to establishment, management, productivity and utilization of forage plants.

Student Learning Outcomes

- Name, list, and define key terms and concepts currently used in the study of forage and crop production

[KNOWLEDGE]

- Demonstrate knowledge by interpreting and solving problems and scenarios relative to forage and crop production

[APPLICATION]

- Compare and contrast various crops and forages after examining plant anatomy and physiology, soils, the environment, and cropping systems

[ANALYSIS]

- Compose and construct artifacts designed to evaluate and assess forages and crops based on learned knowledge, application, and analysis

[SYNTHESIS]

Rationale



- **96% of college students watch television regularly**

(Student Monitor, 2005)

- **11 hours/week on average (1.5 hours/day)**

(Nielsen Media Research, 2005)

- **Comedy Central and FOX are among top 5 watched stations**

(Student Monitor, 2012)

- **43% of adults (age 18 – 33) watch television shows about cooking very often or occasionally**

(Harris Poll, 2010)

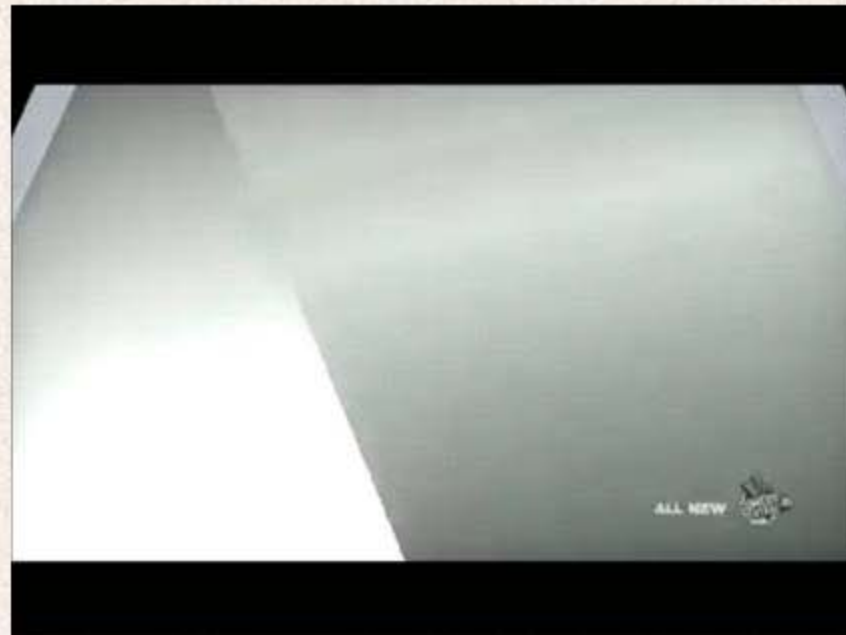
- **Incorporation of the laboratory into predominant lecture-style courses increases students' understanding of the material and concepts presented**

(Moebius-Clune et al., 2011; Baker et al., 2008)

- **Case-based and small-group learning is beneficial, however unequal group member participation is common-place**

(Turgeon, 2007)




Rationale



Objectives

Incredible Edible Salad Competition

Team competition was developed in a traditionally lecture-based course to:

-  illustrate concepts learned during lecture
-  provide the means to apply the concepts learned
-  allow students opportunity of ownership of their experiential learning



Experimental Design



students form groups of 3



small groups randomly paired
to create groups of 6



Experimental Design



selects 5-6 ingredients (from 21 possibilities)
to germinate, cultivate and harvest



use 4 – 5 of harvested ingredients to
plate a salad



\$5



Evaluation

- ✓ salads were graded independently from one another by the taste panel of judges
- ✓ group presented information about each ingredient to the class (PowerPoint)
- ✓ use of rubric to increase consistency (provided to students prior to projects)
- ✓ grade was “individualized” by including peer evaluations of each team member (10%)
- ✓ project grades were compared to exam and quiz grades covering corresponding material
- ✓ student response and perception of the projects was conducted anonymously
- ✓ seven-point Likert-scale from 1 = strongly disagree to 7 = strongly agree



Results: Student Learning

Graded Assignments

<u>Artifact</u>	<u>Mean Score (%)</u>	<u>Standard Deviation</u>
Project Midterm	98.75	1.69
Project Presentation	91.00	1.10
Project Final	92.00	2.31
Project Total	90.00	1.89
Corresponding Quizzes	81.20	2.16
Corresponding Exam	80.80	7.46

n = 36



Results: Student Learning



Student Perception

n = 36

Scale: 1 = strongly disagree, 7 = strongly agree

<u>Statement</u>	<u>Mean Response</u>	<u>Standard Deviation</u>
I feel like this project was appropriate for the course	5.89	1.08
I feel that this project improved my learning	4.47	1.65
I usually enjoy group work/projects	4.86	1.64
I feel like this project should be completed as a group project	5.89	0.55
I enjoyed this project	4.78	1.20
I think this project should be continued next time the course is offered	4.57	0.92

Results: Student Learning

Student Perception

n = 36

Scale: 1 = strongly disagree, 7 = strongly agree

<u>Statement</u>	<u>Mean Response</u>	<u>Standard Deviation</u>
I think that the hands-on component was an important component of this course	5.53	1.89
I think that the grade value for this project was appropriate	5.03	0.66



Conclusions

- ✧ **Students perform better on the team projects compared to individual quizzes and exams covering the same material**
- ✧ **Students think the hands-on/experiential component of learning is important**
- ✧ **Team projects strengthened learning outcomes and overall comprehension of the material**
- ✧ **Students are competitive (ownership)**
- ✧ **Adjustments to be made**

Questions??

