Experiential Learning in Animal Science

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Challenge within Animal Science

• Student demographics
  • Rural < Urban
    • Farm < Non-farm
  • Male < Female
    • Major shift in last 20 years
    • NC State > 85% female
  • Livestock industry < Veterinary medicine
    • NC State < 15% students with interest in livestock
    • Less student background in livestock
    • Many career openings available with livestock
• Increasing enrollment
  • More students per laboratory
  • Lack of increasing resources at farms (livestock numbers)
  • Less livestock based laboratory experiences
Traditional Experiential Learning

- Types of traditional experiential learning opportunities

<table>
<thead>
<tr>
<th>Experiential Learning</th>
<th>NC State CALS Graduates</th>
<th>NC State CALS Seniors</th>
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</thead>
<tbody>
<tr>
<td>Research</td>
<td>36%</td>
<td>27%</td>
</tr>
<tr>
<td>Internships</td>
<td>54%</td>
<td>40%</td>
</tr>
<tr>
<td>Teaching assistance</td>
<td>18%</td>
<td>20%</td>
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<tr>
<td>Independent study</td>
<td></td>
<td>27%</td>
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<tr>
<td>Extension education</td>
<td></td>
<td>12%</td>
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- Perceived value of experiential learning opportunities
  - Helpful to securing jobs after graduation
  - Student growth
Creating new experiential learning opportunities in Animal Science

- External learning experiences associated with course credit
- 3 examples from NC State
  - Have You Herd- Ambassadors of Beef
  - Dairy Farm Experience
  - Techniques of Animal Care- Special Project
- Conducted student survey to measure value of the experiential learning
Experiential Learning - Have You Herd

- Beef Management
  - Junior and Senior level course
- Semester long project
- 4 components
  - Poster Development
  - Activity Page
  - Community Engagement
  - Article Writing
- 30% of course grade
- Each component reviewed and graded

Growth Promoting Implants in Beef Cattle
By Nanci Andrews and Lauren bachnik
NC State Department of Animal Sciences
ASU 415 Beef Management

Growth Promoting Implants are small pellets that increase the circulating levels of naturally present Growth Hormones.

Releasing these implants into the body results in an increase in Growth.

Growth Promoting Implants have been approved by the FDA since 1985.

Implants Effect on Growth Performance
- Sacrifice a greater percentage of feed efficiency, this is the other main growing period.
- Feed efficiency is improved with proper care and management.
- This allows for a faster gain with minimal growth.
- The growth of leaner steers makes it easier for consumers to buy leaner, more expensive cuts.

*Implanting results in more revenue per dollar invested than any other growth enhancement practice.*
Experiential Learning- Have You Herd

- "Talking with people at events after learning more about the subject was beneficial because I had to really think about some topics and some things made more sense because I could see how others thought differently."
Experiential Learning - Dairy Experience

• Dairy Management
  • Junior and Senior level course
  • Semester long opportunity
• 2 Components
  • Milking shift
  • Calf feeding shift
• 8% of course grade
• Each component graded by farm manager supervising shift
Experiential Learning - Dairy Experience

- "There is a difference in learning about the day-to-day management, whether it is in lecture or even in lab, versus actually participating in these activities. I think getting up at 4:30am and driving out to the dairy unit to feed the calves or the milk the cows is something that gives every student a sense of what farmers and herdsmen do on a daily basis. I think it is very important for all of us, especially the students that wish to go into a career in livestock, to experience and learn."
Experiential Learning- Farm Management

- Techniques of Animal Care
  - Open to AS and BS students
  - Requirements
    - 8 hours of volunteer service at a livestock educational unit
      - Beef, Dairy, Swine, Small Ruminant
      - Any combination of locations
    - 1% of course grade
      - Farm unit supervisors must sign off on service hours
• “What I enjoyed about this project was that it allowed us to work at any of the units, which sometimes with species specific classes you don’t get the freedom in doing. It also helped me get to know the unit managers better than I would have previously because we had to communicate with them to be able to set up times to volunteer.”
Experiential Learning - Farm Assistance

- NC State Teaching Educational Units
  - Beef Cattle, Dairy, Small Ruminant, Swine, and Equine
  - Key resources for laboratories for courses as well as research programs
  - Opportunities to learn the day-to-day management of the operation
    - "life of the farmer"
    - More than just another 2 hour laboratory experience
  - Paid and volunteer positions
Experiential Learning - Farm Assistance
Experiential Learning - Summer Camp Counselors

- NC State Animal Science Summer Camps
  - VetCAMP
    - 5+ years running
    - Non-residential day camp
    - 2, 1-week long sessions

- Livestock Science Camp
  - 1st year
  - Residential camp
  - 1 week long
Experiential Learning in Animal Science

• There is demand for graduates from Animal Science with skills, knowledge, and interest in working with livestock.

• Majority of students entering Animal Science lack these qualifications at the start of their program.

• Goal to inspire and educate student to seek careers related to livestock through experiential learning.

• Create new experiential learning opportunities.
Thank you, Questions?

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