WHO FILLS THE SEAT:
THE DEMOGRAPHICS, PERCEPTIONS, AND KNOWLEDGE BASE OF STUDENTS ENROLLED IN THE INTRODUCTION TO ANIMAL SCIENCE COURSE AT OKLAHOMA STATE UNIVERSITY

Samantha Lowman
Questions arise about demographic profiles of students who fill the seats of agricultural classrooms.

Agricultural educators are challenged to provide literacy to as many as 60 to 70% of non-traditional agricultural students, who lack farm knowledge and hands-on experience (Hasslen, 1983).

- Previous assumption: students enrolled have a rural background with farming/ranching experience
- Reality: most students are three generations removed from the farm with no farming/ranching experience

Animal Science departments are aware of new enrollment trends; however, uncertainty of how to make curriculum changes in the classroom still remains at the forefront of concern (Buchanan, 2008).
OBJECTIVES

1. To determine the demographic profile of students enrolled in the Introduction to Animal Science course at Oklahoma State University

2. To determine the student’s perceived knowledge about animal science disciplines, species, and husbandry practices using pre-course and post-course surveys

3. To assess the change in pre-course and post-course student perception of animal management and husbandry practices

4. To measure student curriculum learned throughout the course based on pre-test and post-test assessment scores

5. To measure the relationship between selected demographic variables and measured knowledge using pre-test and post-test assessment scores
MATERIALS AND METHODS

- **Demographic Survey**
  - 34 questions
  - Responses recorded via TopHat response system
    - Voluntary

- **Pre-Course and Post-Course Perception Survey of Perceived Knowledge**
  - 17 questions
  - Responses recorded via TopHat response system and ZipGrade scantron system
    - Voluntary
    - Likert-Type Scale

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Very Little</td>
<td>Some</td>
<td>Considerable</td>
<td>Extensive</td>
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</table>
MATERIALS AND METHODS

- **Pre-Test Assessment**
  - Number of questions varied between 15-20
  - Administered prior to lecture material being taught
  - Responses recorded via ZipGrade scantron system

- **Post-Test Assessment**
  - Questions varied in number
  - Administered in conjunction with unit and midterm exams

- Descriptive statistics were used to determine the frequency of demographic information and self-perceived knowledge
- A paired t-test was used to compare means, pre-test and post-test
- Data analysis utilized StatCrunch, a web-based statistical software
DEMOGRAPHIC RESULTS
GENDER

- Female: 70.6%
- Male: 29.4%

n = 333
IN-STATE VS. OUT-OF-STATE RESIDENCE

<table>
<thead>
<tr>
<th></th>
<th>In-State</th>
<th>Out-of-State</th>
</tr>
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<tbody>
<tr>
<td>n</td>
<td>333</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>61.9</td>
<td>38.1</td>
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</table>
YOUTH AGRICULTURAL ORGANIZATION INVOLVEMENT

n = 333

Percent

No 42.0
Yes 58.0

n = 333
PREVIOUS AGRICULTURAL EXPOSURE

- Field trip: 12.0%
- Live/work: 39.0%
- Work with relative: 20.7%
- Visited friend: 23.1%
- Never visited: 5.1%

n = 333
PREVIOUS AGRICULTURAL EXPOSURE

<table>
<thead>
<tr>
<th>Activity</th>
<th>No Youth Involvement (n = 140)</th>
<th>Youth Involvement (n = 193)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field trip</td>
<td>25.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Live/work</td>
<td>13.6</td>
<td>57.5</td>
</tr>
<tr>
<td>Work with relative</td>
<td>19.3</td>
<td>21.8</td>
</tr>
<tr>
<td>Visited friend</td>
<td>31.4</td>
<td>17.1</td>
</tr>
<tr>
<td>Never visited</td>
<td>10.7</td>
<td>1.0</td>
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</table>
Species of Interest

<table>
<thead>
<tr>
<th>Species</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>29.4</td>
</tr>
<tr>
<td>Companion Animals</td>
<td>28.2</td>
</tr>
<tr>
<td>Horse</td>
<td>21.8</td>
</tr>
<tr>
<td>Goat</td>
<td>4.9</td>
</tr>
<tr>
<td>Poultry</td>
<td>7.9</td>
</tr>
<tr>
<td>Sheep</td>
<td>2.4</td>
</tr>
<tr>
<td>Swine</td>
<td>2.4</td>
</tr>
<tr>
<td>Zoo/Exotic</td>
<td>1.0</td>
</tr>
<tr>
<td>Other</td>
<td>0.0</td>
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</tbody>
</table>

n = 330
SPECIES OF INTEREST

| Species            | Percent
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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>11.6</td>
</tr>
<tr>
<td>Companion Animals</td>
<td>12.5</td>
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<tr>
<td>Horse</td>
<td>25.4</td>
</tr>
<tr>
<td>Goat</td>
<td>2.9</td>
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<tr>
<td>Poultry</td>
<td>1.5</td>
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<tr>
<td>Sheep</td>
<td>0.7</td>
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</tr>
<tr>
<td>Other</td>
<td>0.7</td>
</tr>
</tbody>
</table>

- **No Youth Involvement (n = 138)**
- **Youth Involvement (n = 192)**
PRE- AND POST-COURSE PERCEPTION OF PERCEIVED KNOWLEDGE
BEEF CATTLE
DAIRY CATTLE
COMPANION ANIMALS
PRE- AND POST-TEST ASSESSMENT
BEEF CATTLE

Pre-Test

Post-Test

No Youth Involvement (n=93)  Youth Involvement (n=150)

Percent

50  55  60  65  70  75  80

P < 0.67

Percent

50  55  60  65  70  75  80

P < 0.0001

57.4

72.6

73.3
DAIRY CATTLE

Pre-Test

No Youth Involvement (n=104)

Youth Involvement (n=170)

Post-Test

No Youth Involvement (n=104)

Youth Involvement (n=170)

Percent

P < 0.1582

P < 0.0022

48.9

71.4

69.2

Percent
COMPANION ANIMALS

Pre-Test

No Youth Involvement (n=88)

43.4

65.9

P < 0.6248

Post-Test

No Youth Involvement (n=88)

Youth Involvement (n=148)

58.7

P < 0.0098
SUMMARY

- Females > Males

- Nearly 60% of enrolled students were previously involved in a youth agricultural organization

- 40% of enrolled students’ previous agricultural exposure included an educational field trip, visited a friend, or never been on a farm
  - 65% no youth agricultural involvement
  - 20% youth agricultural involvement

- Top 3 species of interest did not vary among students
  - Order was reversed based on youth agricultural involvement* or no youth agricultural involvement**
    - *Cattle, horses, and companion animals
    - **Companion animals, horses, and cattle
Generally speaking, a shift from *none and very little perceived knowledge* to *some and considerable perceived knowledge* was seen for all species looked at thus far in the study.

**Youth Agricultural Involvement vs. No Youth Agricultural Involvement**

- A significant difference was seen in pre-test assessment scores of those students involved in a youth agricultural organization, *except companion animals*.
- No significant difference was seen in post-test assessment scores between the two groups, *except companion animals*. 
WHAT IS NEXT FOR INTRODUCTION TO ANIMAL SCIENCE?

- Our student profile will continue to change over the next decade as a reflection of cultural background and interests
  - How do we respond to the change in the demographic profile of students enrolling in the agricultural sciences
  - What curriculum revisions are needed, if any
  - Is there a need to expand academic offerings
  - With any changes, we must consider agricultural society and industry needs
QUESTIONS?

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