

# Undergraduate Student Feedback Related to Diversity, Equity, Inclusion and Belonging in the Department of Animal Science

DOI:10.31274/air.16994

**Lauren Pierce**, Student Services Specialist II, Department of Animal Science, Iowa State University

**Jennifer M. Bundy**, Associate Professor, Department of Animal Science, Iowa State University

**Anna K. Johnson**, Professor, Department of Animal Science, Iowa State University

**Aileen Keating**, Professor, Department of Animal Science, Iowa State University

**Kelsi Carlson**, Graduate Assistant, Department of Agriculture Education and Studies, Iowa State University

**Scott. W. Smalley**, Associate Professor, Department of Agriculture Education and Studies, Iowa State University

**Michael J. Martin**, Associate Professor, Department of Agriculture Education and Studies, Iowa State University

## Summary and Implications

The Department of Animal Science at Iowa State University strives to support students from diverse backgrounds. Therefore, to assess the current departmental climate regarding diversity, equity, inclusion, and belonging, a survey instrument was developed and distributed to students with a primary major in the department. The survey consisted of scale questions, one “select all that apply” question, and one open-ended question. This report focuses on the open-ended feedback provided by undergraduate Animal (AN S) and Dairy Science (DY S) students. Based on participant responses, some students felt behind in their introductory AN S courses because they did not come from an agriculture background. Students expressed their desire for more hands-on livestock experiences but also noted the need for more diverse guest lecturers who share varying views and backgrounds. Additionally, students expressed interest for a physical space for student collaboration. These findings have provided insight into the experiences of our undergraduate students. It is important to take this feedback into consideration when developing academic resources and opportunities for students to gain hands on experiences in the AN S and DY S fields.

## Introduction

The Department of Animal Sciences mission statement is to empower and utilize our diverse strengths and identities to achieve global excellence in the department, college, and university's teaching, research, and outreach/extension missions. Animal Science (AN S) and Dairy Science (DY S) students' demographics continue to change. The AN S and DY S majors receive a large number of students who lack interest in food animal species and do not have previous livestock exposure. In 2022, 65% of new, incoming freshmen expressed a primary interest in non-food animals (canine, feline, exotics, and equine). Additionally, 73% of new students planned to apply to veterinary school rather than enter into the food animal industry. These interest

shifts, career goals and lack of prior livestock experience have caused cultural and knowledge gaps for many of our incoming students. This has resulted in undergraduate students feeling less engaged with the curriculum, faculty, staff, and their peers. It is important to understand the student demographic to best support them and have the Department of Animal Science and its alumni be globally recognized as an entity where background, identity, ideas, and expertise diversity is encouraged, pursued, and valued.

The objectives of this study was to (1) gather feedback from students in The Department of Animal Science regarding their sense of diversity, equity, inclusion, and belonging (DEI-B) and, (2) use their feedback to create intentional changes and resources in an effort to improve DEI-B among students in The Department of Animal Science.

## Materials and Methods

This study was reviewed and approved as exempted research by Iowa State University Institutional Review Board (IRB: 22-002) for Human Subjects Research and complied with CFR 45 Part 46.

**Survey:** The full study consisted of a 15-question survey instrument created in Qualtrics (Provo, UT) by members of the Department of Animal Science and the Department of Agricultural Education and Studies. The survey covered common DEI-B themes found in education literature and anecdotal topics discussed with Animal Science academic advisors and instructors.

**Participants:** The survey was disseminated via email to undergraduates Spring 2022 (n = 972; Table 1) whose major was housed within the Department of Animal Science regardless of ability, age, gender, culture, race, religion, sexual orientation, and socio-economic background.

# Iowa State University Animal Industry Report 2023

**Table 1.** Spring 2022 undergraduate demographics

	n	%
<b>Classification</b>		
Freshman	159	16.35
Sophomore	209	21.50
Junior	257	26.44
Senior	347	35.69
<b>Ethnicity</b>		
Asian	8	0.82
Black	14	1.44
Hispanic	100	10.28
White	825	84.87
Two or More Races	24	2.46
American Indian or Alaskan Native	1	0.10
<b>Gender</b>		
Female	790	81.27
Male	182	18.72

**Questions:** Two questions from the overall survey are included in this report (Table 2). All data will be presented descriptively.

**Table 2.** Survey questions

No.	Question	Answer
17	Which of the following can the department provide to help with inclusiveness? 1) Provide spaces where students can relax and/or work together. 2) Include artifacts around the department that shows Animal Scientists whom have come from diverse backgrounds. 3) Create a peer mentoring program beyond the first semester where students with previous experience can meet with those of less experience. 4) Create opportunities for students to work on university farms to garner hands on livestock experience. 5) Other – please describe.	Select all that apply
18	What changes for the Department of AN S would you like to see implemented as it relates to DEI-B?	Open ended

## Results

A total of 375 students completed Q17. Twelve responses indicated “*other*” and students provided feedback in their own words. Suggestions from participants that chose “*other*” included creating opportunities for students to gain

experience, implementing changes in the curriculum, and more diverse faculty and staff in the department (Table 3).

For Q18 a total of 158 responses were received. Interestingly, 63 students (40%) stated “*no suggestions*” or “*none*.” Other responses indicated students feeling excluded in classes and departmental activities if they did not have prior livestock experience. Additionally, students expressed the need for more peer interactions and space for collaboration (Table 4).

## Discussion

Overall, student feedback was more closely related to animal science experience and background identity instead of personal identity related to race, gender, and ethnicity. Students felt that prior livestock experience enhanced experiences, opportunities, and relationships in the department.

Each summer, new, incoming students complete an orientation survey that collects data on species interests and career goals. Summer 2022, just over 40% of incoming freshmen reported coming from an urban or suburban background. Only 33% of new, incoming freshmen reported coming from a farm background. All remaining students were from small towns or rural, non-farming backgrounds. Interestingly, despite being in the majority, students from urban and suburban backgrounds report feeling excluded.

Some students felt that they did not have the opportunity to gain experience at University farms or through faculty-sponsored research. Although these opportunities do exist, there are not enough positions for every student within the major to take part. The Department of Animal Science does offer a AnS 190 Livestock Handling, Safety, and Welfare course to teach basic handling skills to students who lack livestock exposure. This course is not required, and enrollment has been fairly low each semester.

Respondents expressed interest in having a designated space for collaboration in Kildee Hall. Some felt peer tutoring and mentoring would help promote inclusion and belonging. Currently, students have access to study spaces and academic support across campus. Typically, these resources are widely underutilized and do not have many options for Animal Science specific assistance.

## Implications and Future Directions

Based on survey feedback, it was evident that respondents were interested in a departmental space to aid in community. To extend opportunities for peer mentoring and provide accessible academic support, the department has opened an Animal Science Student Help Room in Fall 2023. The Help Room offers free drop-in tutoring and a space to host office hours for peer mentors and teaching assistants (TA).

To create a culture within the department that focuses on equal and equitable opportunities for students who are from agriculture farm backgrounds and those without prior

## Iowa State University Animal Industry Report 2023

---

experience, the department also plans to implement a research matching program. The program will allow students to apply for research experience, regardless of the Animal Science discipline. Advising staff members will

then match the students' interest to faculty conducting research in that area and notify the faculty of the student's interest.

## Iowa State University Animal Industry Report 2023

---

**Table 3.** Question #17: Which of the following can the department provide to help with inclusiveness? (Select all that apply); N = 375

	n (%)
Create opportunities for students to work on university farms to garner hands on livestock experience	288 (76.8)
Provide spaces where students can relax and/or work together	231 (61.6)
Create a peer mentoring program beyond the first semester where students with previous experience can meet with those with less experience	205 (54.6)
Include artifacts around the department that shows Animal Scientists whom have come from diverse backgrounds	82 (21.8)
Other (please describe)	12 (3.2)

**Table 4.** Question #18: What changes for the Department of Animal Science would you like to see implemented as it relates to Diversity, Equity, and Inclusion?<sup>a</sup>; N= 95<sup>b</sup>

Themes	n (%)
Students that do not come from a farm background felt they do not belong or that opportunities only exist for students with a farm background	31 (20%)
Suggest changes in the curriculum to include more companion animal options	20 (12.2%)
More diverse representation (guest speakers, faculty, staff, in artwork and artifacts around Kildee)	19 (11.6%)
Instructors unfairly make assumptions about students' livestock background and that they are already familiar with introductory concepts	15 (9.2%)
There is a lack of companion animal classes, opportunities, and content at the introductory level	14 (8.5%)
Students need space in Kildee to study, practice skills, and build community	6 (3.6%)
Suggest additional advising support and opportunities for additional peer mentoring	4 (2.4%)
Animal science clubs are not welcoming if you don't have previous experience	3 (1.8%)
Faculty and staff should be required to complete Diversity, Equity, and Inclusion training	2 (1.2%)

<sup>a</sup> Student comments can fall into more than one theme

<sup>b</sup> A total of 158 participants completed this question, but 40% of respondents (n=63) answered “none” or “no suggestions”