

**Analyzing Demographic Data to Support and Promote Livestock Science Camp  
Participation**

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## **Introduction**

Over 19 million jobs within the agriculture industry provide more than 10% of employment in America (USDA, 2020). The Livestock Science Camp at NC State University aims to provide high school-aged students hands-on experiences focused on the livestock industry and career paths. Over the last five years, 91% of participants claimed to have learned a variety of career options from Livestock Science Camp that they were unaware of prior to the start of camp (Pickworth, 2022). Short-term programming related to high school students' perceptions of agriculture careers has been shown to be effective in increasing knowledge of postsecondary opportunities and career paths in agriculture (Jean-Phillipe et al., 2017). The American Camp Association (2021) reports that the average price of overnight camps exceeds \$500; however, 93% of those camps offer financial aid to lower-income families. Livestock Science Camp is a participant-funded camp (\$900), meaning the camper's fees cover their room and board, food, bus travel, and counselor supervision. Agriculture organizations in North Carolina are contacted to support a meal or an individual participant who indicated in the application a need of financial assistance. Over the years, potential participants have applied and indicated the need for financial assistance but ultimately did not participate. The reason for non-participation ranges from not being able to receive financial assistance, being accepted into a fully-funded program, or unknown. One goal is to create equal opportunity for minority populations interested in agriculture as a career. The purpose of this study was to assess the demographics of camp participants from 2017 to 2022 in comparison with North Carolina's economic distressed county ranking based on average annual wage. Tier one is the most distressed, and tier three is the least distressed. Data was also sorted into urban versus rural areas, as the USDA (2020) reports that most minority populations are located within urban areas. This study supports Research Priority 4 to provide more meaningful learning for all.

## **Theoretical Framework**

Drawing on the Social Cognitive Career Theory (SCCT) developed by Lent, Brown, and Hackett (1994), we aimed to determine the theoretical concepts of participants who want to seek a future career in agriculture from participating in the Livestock Science Camp. Social Cognitive Career Theory extends from Bandura's Social Cognitive Theory (1986) in which cognitive (knowledge, expectations, and attitudes), behavioral (skills, practice, and self-efficacy), and environmental (social norms, access to community, and influence on others) factors are being considered in relation to components of a person life (gender, ethnicity, social support, and barriers) that help shape their career development (Jean-Phillipe et al., 2017).

## **Methodology**

This quantitative study utilized Livestock Science Camp application data from 2017 to 2022. Two sets of data were utilized, those that applied and participated in the camp and those that did not. Between 2017 and 2022, there were 181 participants (N= 181) and 55 participants (N=55) who applied but did not participate in the camp. The demographic data collected

included age (14-18), race (Black or African American, Hispanic or Latino, White (non-Hispanic), Asian or Pacific Islander, Native American or American Indian, Other, Prefer not to Answer), economic status (less than \$30,000, \$30,000-55,000, \$55,000-80,000, \$80,000-120,000, greater than \$120,000, prefer not to answer (do not need a scholarship)), and North Carolina county location. Averages of 2017 to 2022 were calculated to analyze overall demographics to support the need for funding and participation.

### **Results**

Of those who applied and participated in the camp, the average number of participants was 30 per camp, and the average age was 16. 72.3% of participants reported being white (non-Hispanic), 14.9% reported being black or African American, 7.1% were Hispanic or Latino, and under 2% reported being Asian or Pacific Islander, Native American or American Indian, and other. Participants whose gross household income is greater than \$120,000 represented over 25% of campers (25.9%). Only 7.1% of participants reported that their gross household income is less than \$30,000. 54% of participants live in a tier 3 county, and under 25% are from Tier 1 and Tier 2 counties. The percentages of participants from North Carolina's urban and rural areas were calculated, and 72.4% of our participants are located within urban areas. The data set for those who applied to participate in camp ultimately did not show any significant differences compared to the data set of those who did participate. It is essential to note that the reason for the non-participation of the 55 participants is unaccounted for or unknown.

### **Conclusions**

Livestock Science Camp offers a unique learning experience for high school-aged students at a university level with access to university staff members who are experts in their field, extension personnel, industry leaders, current university students, hands-on labs, and university research facilities. There is a need for agriculture workers, and this program allows high school-aged students to learn and get hands-on experience within the livestock industry; however, the findings from this research prove that this learning opportunity is only available to those who can afford it as over 25% of participants' gross household income is more significant than \$120,000, not including those who preferred not to answer waiving the option for financial aid. The opportunity to participate in camp should be independent of household income. Even though over 70% of camp participants are from urban counties, over 70% of the participants identify as white (non-Hispanic).

### **Implications/Recommendations/Impact on the Profession**

This data helps to better understand the need for funding and participation in a program producing agriculture learning experiences. We plan to continue seeking funding for the camp from the university and other agriculture organizations. Educators must strive to create and facilitate equal opportunity, bridging a gap between minority populations, socioeconomic status, and the agriculture industry. Scholarships are needed and will become a priority component.

## References

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