## Introduction & Theoretical Framework

- Throughout the last decade, numerous research reports have highlighted the importance of food science and its critical role in maintaining the nation’s food supply (Marsh & Buguin, 2007).
- Food and Meat Science is not mandated as a curriculum in secondary education. It is, however, discussed as skills through certain classes in the State of Texas Agricultural Science courses: Advanced Animal Science, Food Technology, and Safety, Food Processing.
- In 2016, Texas Examinations of Education Standards introduced a new certification domain known as “Food Science and Processing” to the 272 6-12 Agriculture, Food and Natural Resource test.
- The Bhirag Needs Assessment Model measures the agriculture educator’s perceived level of importance and perceived level of accomplishment through mean weighted discrepancy score (Lester, 2012).
- Bandura’s (1994) self-efficacy theory “perceived self-efficacy is concerned with people’s beliefs in their capabilities to produce a given attainment” (p. 307).
- Evidence indicates peoples level of self-efficacy correlates to their self-esteem, outcome-expectancies, and locus of control (Bandura, 2006).

## Purpose & Research Objectives

**Purpose**

The purpose of this study was to describe secondary agriculture educators’ perceptions of the importance of, and their ability to teach selected agriculture food science skills in a formal secondary education setting.

**Research Objectives**

- Describe the demographic characteristics of participating agriculture educators.
- Describe the importance of selected agriculture food science content areas as perceived by secondary educators.
- Describe the perceived capability of secondary agricultural educators who teach agricultural food science content areas.
- Determine the discrepancy between the importance of agricultural food science content areas and the capability to teach agricultural food science areas as perceived by secondary agriculture educators.

## Methodology

- A sense sample (n = 204) was selected from the 2016-2017 VASTAT directory to represent the population.
- Qualtrics survey sent to a panel of experts (n = 25) to verify content and face validity of the survey.
- Stratified sampling was used for a pilot test group (n = 30). This was conducted to ensure instrument reliability and resulting in acceptable N level for each construct (Cronbach’s a > .75).
- Dillman’s Tailored Design Method was used when distributing the surveys (Dillman, 2009).
- A census survey was sent out to every agriculture educator in the State of Texas (n = 1967).
- Data was collected from surveys of agriculture educators who selected ‘yes’ to teaching one of the three classes (n = 206).
- Descriptive and inferential statistics were used to evaluate the data.

## Conclusions & Recommendations

- The demographics to question one resulted in an agriculture educator being a white, male, with a bachelor’s degree. The agriculture educator is employed for five years or less and teaches in a multi-teacher department; majority (n = 174) of the teachers did not have a laboratory facility.
- Every skill within the research needs further profession development due to the MWDS being a positive integer.
- Professional development should be used during the Vocational Agriculture Teachers Association of Texas to enhance their understanding of the skills. Training certifications can be obtained during these training periods for the food science domain.