## How Corn Silage Planting Population Affects Yield and Quality

Marriott, McCoy (School: Fremont High School) Hill, Owen (School: Fremont High School)

This study aims to determine if planting population affects yield and quality. In 2022 the market for corn silage was secured at \$342.4 Million and is estimated to be valued at US\$ 677.33 Million by 2032. With the value of Corn silage rapidly increasing, farmers need to take control of their farms and grow the most corn possible. The average cost of corn silage in 2022 was \$61 per ton (Hanchar, 2022). If a producer can increase corn yield then they can increase profits. In this study, two varieties of silage corn were planted at four different planting populations. Each variety was chopped, harvested, and weighed. Samples of each variety were quality tested for starch content, moisture, and milk content. The results of the study found increasing the corn seed population does not affect the quality of the corn, and does increase yield until a population threshold is reached. The threshold differs based on which seed variety was used. The study will help farmers increase yields while keeping quality by choosing tested seed varieties.