

The Report Committee for Seth Werchan

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**Effect of increasing consumption of local produce on
greenhouse gas emissions, Central Texas region**

APPROVED BY SUPERVISING COMMITTEE:

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Question: If more food was produced and consumed locally in the Austin area, how would this change the carbon footprint and greenhouse gas emissions?

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Effect of increasing consumption of local produce on greenhouse gas emissions, Central Texas region

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Abstract

Modern agriculture factory-style farming has significantly increased food production through technological innovations causing economic growth, job creation, and improved food security. However, these advancements come with considerable drawbacks including a large carbon footprint and greenhouse gas emissions, environmental destruction, chronic disease in humans, and crippling communities. Producing and consuming local food is one way to possibly decrease carbon footprint. Less than 1% of food in the Austin area is produced and consumed locally. This paper aims to explore the effects on greenhouse gas emission in the Austin Area by increasing consumption of locally produced food. We predict by increasing the amount of local produce consumed by Austinites that the greenhouse gas emissions will decrease over time and as a result create better environmental habitats, decrease chronic health in individuals, and strengthen local communities. The methods used include estimating Life Cycle Assessment of greenhouse gas emissions from local and non-local food production and transportation using agricultural reports, comparative models, and scenario-based simulations of varying levels of local food consumption.