

GROWING AMARANTH IN THE *Sunshine State* WITH LEO RAMSEY

BY: ALLEE STOVER

Meet the Researcher

Leo Ramsey, an undergraduate student majoring in Geography at the University of Florida (UF), has embarked on a journey to explore the untapped potential of Amaranth, a plant native to Central America, and its role in Florida's ever-changing climate.

He is conducting a research trial on the growth of Amaranth varieties through the UF Climate Institute Fellowship Program. This program offers grants to undergraduate and summer graduate students who are interested in conducting climate-related research to help combat the effects of climate change.

Ramsey's interest in agriculture grew when he worked at the UF Field and Fork Farm and Gardens last year. While he studies Geography in the classroom, he participates in agricultural production in the field.


Ramsey said he enjoys being outside in nature, putting his hands in the soil, and seeing his hard work to grow and study a new crop like Amaranth pay off.

Amaranth Background

Amaranth is a plant native to Central America. The plant could potentially become a commercial production crop in Florida due to its heat tolerance. This crop is highly resilient and can withstand temperatures as high as 104°F.

Producers have not grown Amaranth commercially in America since colonization. It is a very versatile plant because it produces both a leafy vegetable and a grain that contain protein in unusually high amounts.





Which varieties of Amaranth plant grow best in North Florida's climate and soil?

Amaranth Research

Ramsey is working on a research project to determine which varieties of Amaranth plant grow best in North Florida's climate and soil. He and Dr. Dina Liebowitz, Plant Science Program Director at the UF College of Agricultural and Life Sciences, planted and monitor 16 different varieties at the UF/IFAS Horticultural Teaching Garden.

Amaranth's heat tolerance makes it able to withstand Florida's summer heat which is predicted to increase in temperature due to climate change.

The researchers collect data through objective measurements such as the plant's height and subjective measurements such as how vigorous the plants are, pest resistance, and how uniform they grow across a block of the trial. In the future, when the crops are large enough to be harvested for their leafy vegetables and grains, Ramsey and Liebowitz will begin taking measurements such as harvest weight.

Ramsey hopes to have cooking festivals with the community to see which variety is the most flavorful. Ramsey also plans to

run a second research trial in the future. Amaranth is a summer crop, but their first trial occurred in the fall. The research team would like to conduct the second study in the Spring/Summer to examine Amaranth's true potential in Florida's heat.

Building Sustainable Communities

Ramsey's appreciation for growing crops also stems from his passion for community-based agriculture. He spends his free time working with the Free Grocery Store and Working Food, organizations in Gainesville to grow crops and provide them to food-insecure individuals.

"If we help give the power to grow, cook, and consume food back to people in their communities, instead of big agribusiness corporations, there's a ton of power in that. I think we can make our relationship with food much healthier by doing so," said Ramsey.

Why Join a Research Project?

Academic research is a highly beneficial way to facilitate learning and enrich students' personal growth. It is an easy way to pursue interests, learn new information, strengthen problem-solving skills, and challenge yourself in ways one would not typically think of.

Many people often think that they will join and everyone else will have all the information, and they will be lost, and not have any knowledge. Or that they will not be able to get to the right solution and will ultimately embarrass themselves. However, this is not true.

"In research, you realize there is a lot of stuff that nobody knows, and that's why we're conducting research on it. You really can be the one to create new knowledge," said Ramsey.

Research is critical to learning new information. It builds critical and analytical thinking skills, provides real-world experience, and allows one to build professional relationships.