**Team ID: U27**

**ECC Team: TAAAA**

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| **Team Member Name** | **Year** | **Major** |
| Tyler Piesik | 2027 | Industrial Engineering |
| Akshay Krishnan | 2028 | Chemical Engineering |
| Amey Prajapati | 2028 | Mechanical Engineering |
| Andrew Hetzer | 2028 | Mechanical Engineering |
| Abdullah AlSabban | 2028 | Industrial Engineering |

**Advisor(s):** Dave Cubanski

**Topic:** Smart Farms, Healthy Planet: Technology's Impact on Sustainable Agriculture

**Audience:** Regrow Agriculture, Inc.

**Sustainable Development Goal**

SDG #2: End Hunger, achieve food security and improved nutrition and promote sustainable agriculture.

SDG #9: Build Resilient Infrastructure, promote inclusive and sustainable industrialization and foster innovation

**Executive Summary**

Agriculture is the backbone of our food system, yet traditional farming practices often lead to inefficient resource use, environmental degradation, and limited productivity. Regrow Agriculture aims to drive sustainable agriculture by leveraging science and technology to help companies measure, report, and reduce emissions. The company focuses on promoting regenerative farming and optimizing resource use to create a more sustainable food system. However, ethical concerns arise regarding data transparency and the risk of greenwashing if companies misuse sustainability reports for image rather than impact. Data privacy and farmer autonomy are also potential issues, as increased reliance on digital tools may pressure small-scale farmers to conform to corporate standards. To address these concerns, Regrow Agriculture must ensure transparency, uphold scientific integrity, and collaborate with farmers rather than impose top-down solutions.

The mission Regrow currently has is a great framework for growing sustainable agriculture, but the company has the potential to expand their impact by continuing to embrace new technology and addressing potential inequities that have arisen from the agricultural industries transformation. By expanding access to their services Regrow can expand both their client base and their impact globally. This would give more access to family-owned and operated farms that account for over 90% of farms in the United States. Improving transparency will have a similar impact, allowing customers, or potentially the public in some cases, to access information that has generally been confined to larger corporations. Improving sustainable practices is a responsibility of every company, but not everyone has the economic standing necessary to make actual change. With their current expertise and infrastructure, Regrow has the potential to be at the forefront of making sustainability a truly accessible goal.