

## **Containerized Greenhouse Module (CGM) Abstract**

Digital Agriculture Systems

Team Members: Matt Oliver, Eli Lopez, Jadon McLaughlin, and Andy Gilman

Changing weather patterns, insect infestations, and disease crop failures are happening around the world. The purpose of the Containerized Greenhouse Module (CGM) is to offer a means of growing crops in a more protected environment so that consumers and businesses alike have access to an alternative source of fresh crops that is easy to assemble and maintain and allows the user to grow many types of crops in a limited space. Whether for home use or on a larger scale to augment supply sources for industry, the CGM utilizes a portable set of sensors to monitor conditions and provide feedback thorough an Arduino microcontroller to manage the environment inside the protective container to maintain the optimal lighting, soil moisture, humidity, and temperature. The containers are stackable, allowing for optimal use of available space. For this project, the final product is a working prototype that can be improved and developed further into a production quality model.