

# **VERTICAL HIGH-TECH FARM**

# The Role of the Vertical High-Tech Farm



Promotes zero mile food production with a lower carbon footprint, due to the proximity of the farm to Tampines residents



Contributes towards the "30 by 30" goal on food security



Produces pesticide-free and organic vegetables for the community



Uses unutilised vertical space of HDB blocks



Reduces water consumption and wastage



Ensures food security, biosecurity and food safety by promoting a circular ecosystem for food production



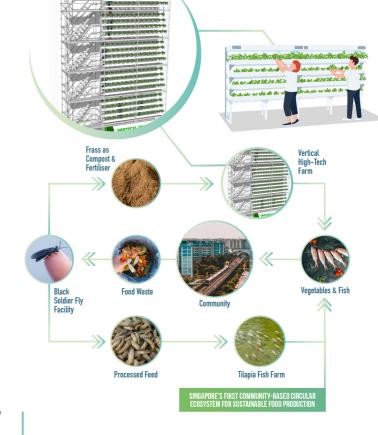
Produces zero waste and consumes zero eneray



**Builds communities and creates** opportunities for green-collar jobs



Empowers the next generation of agri-technologists and young people



## Here are the types of vegetables found in this farm...



# **Achieving Sustainability With The Use of Technology**



- IoT, Computing and Artificial Intelligence
  Fully automated with IoT for real-time monitoring
  Machine Learning and Big Data Management of trends and statistics
- Smart Vending and Unmanned Retail
- Robotics and Next Generation E-commerce via Augmented Reality



- Temperature and microclimate sensors to help track and detect real-time weather information for data collection and to assist in irrigation and shading



### • State-of-the-art fertigation

- Precise fertiliser dosing to optimise crop yield and reduce wastage



### Micro-drip technology

- Precise use of water to reduce water wastage





















