CONCEPT

FOOD SECURITY AND ECONOMIC DIVERSIFICATION:
- Supporting development of agriculture sector and supply chain (field to distribution hub)
- Creation of Technology hub and training facility for cultivation and processing of high-value horticultural crops
- Design and build large scale modular Green House
- Serving national and export markets
- Enabling value addition to Oman’s natural resources

KEY ACHIEVEMENTS
- Capacity building
- Knowledge transfer
- Technology incubation
- Sustainable solution to enhance food production
- Thermal modeling of green house

SUPPORT
- Scientific advisors: University of Sheffield and Sohar University
- Potential support from local companies

MARKET
- DOMESTIC
- GCC
- MENA 400 M CONSUMERS

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IN–COUNTRY RESOURCES

- ALUMINIUM: Construction material from Sohar Aluminium – developing modular “Green House” solutions for in country and export

- WASTE GASES FROM INDUSTRY: Nitrogen based fertiliser from natural gas and CO₂ for enhanced yields

- POLYMERS: Recyclable polymer foam as synthetic soil for enhanced function hydroponic system from ORPIC

- POLYOLEFIN: Green House production

- RENEWABLE ENERGY: Concentrated solar power to produce freshwater through desalination

- SEAWATER: Climate Control of greenhouse by evaporative cooling

- PLASTICS: Food packaging and preservation supported by downstream plastics industries

INNOVATIVE FEATURES

- Sustainable renewable energy-based Green House with enhanced productivity suitable to Oman’s environmental conditions

- SU Green house - 150 m² integrated facility with dedicated climate control system

- Hydroponic channels using novel foam and Rockwool as growth matrices

- 10 KW Off grid PV system

- Solar evaporation based desalination system (Zero carbon foot print)