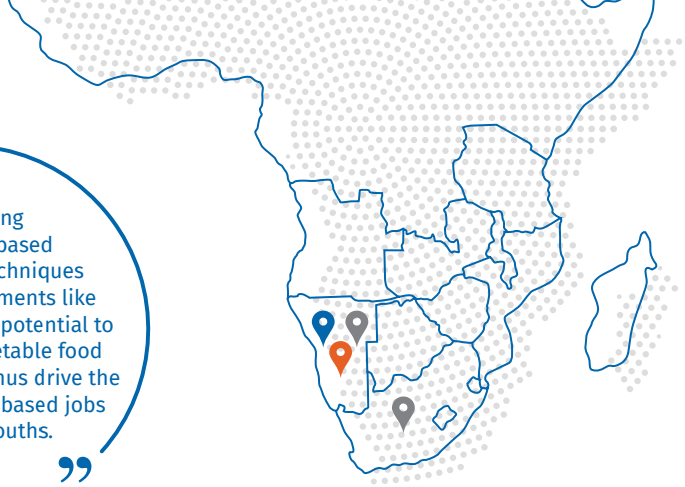




“ Exploiting precision-based agriculture techniques in arid environments like Namibia has the potential to boost local vegetable food production and thus drive the creation of agri-based jobs for local youths. ”



PRECISION DESERT AGRICULTURE AS A JOB CREATOR

ABOUT THE PROJECT

Namibia is the most arid country in Southern Africa, with very limited water available for crop production, making the country highly dependent on other countries for agricultural produce. This project will exploit mushroom production, hydroponics, drip irrigation, and greenhouse technologies to boost the yield and production of both leafy and fruit vegetables in the Namibian desert environment. These proposed technologies are very promising in arid Namibia as they result in a higher efficiency in terms of water use and higher yields of crop per unit area; they also result in reduced pesticide use and have a limited environmental footprint.

The hydroponics will make use of coconut husk- (coco-peat-) based media for planting. Doing so allows the planting of all vegetables, which is impossible under traditional hydroponic systems such as deep water culture or the nutrient film technique. The drip irrigation technique will be used to supply nutrients directly to the root zone based on the plant demand, and this will be automated, greatly optimising nutrient and water supply to the different vegetables. The greenhouse technology will be used to protect the crops from external environments whilst allowing the crops to accumulate heat units (even in winter), thus promoting temperature-sensitive crops throughout the year. Mushroom production will exploit the cool Namibian coastal environment to allow for the production of this protein-rich product. This project will engage young agriculture graduates from Namibia and train them in high-tech desert agriculture techniques, thus turning them into agri-preneurs and job creators.

KEY OBJECTIVES

- Train agricultural graduates on hydroponics, greenhouse technology, vegetable production, mushroom production, marketing, and business management.
- Establish two greenhouses equipped with hydroponic technology and temperature control.
- Establish a mushroom project with moisture and temperature control.
- Experiment with the feasibility of producing two high-value crops under the Namibian desert climate that have potential export value.
- Demonstrate the potential of precision-based desert agriculture in creating sustainable jobs for Namibian youth and agriculture graduates.

PROJECT PARTNERS

Jayden Nashe Enterprises, South Africa
Schanhansen CC (Shalom Farm), Namibia
Avagro Sustainable Agricultural Solutions (Pty) Ltd, Namibia



PROJECT COORDINATOR

University of Namibia, Namibia



IMPLEMENTING COUNTRIES

Namibia