



Ministry of Foreign Affairs of the Netherlands



in association with:



Jordan Hydroponic Agriculture and Employment Development Project



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Jordan Hydroponics Agriculture and Employment Development Project (HAED-Jo)

The Jordan Hydroponic Agriculture and Employment Development Project (HAED-Jo) aims to advance efficient farming in Jordan and create employment opportunities for Jordanians and Syrian refugees in agricultural production and associated postharvest chains. The project, funded by the Ministry of Foreign Affairs of the Netherlands to be implemented from 2017 to 2019, focuses on increasing resilience of the hosting communities in Jordan.

The project will contribute to improving the efficiency and productivity of Jordanian horticulture, creating workforce opportunities in the value chains, increasing economic and livelihood opportunities for Jordanians and Syrian refugees, advancing programming and leveraging funding for efficient farming in Jordan. The program focuses on the following key areas:

1. Encouraging and advancing the adoption of technologies for sustainable and efficient agriculture

2. Enhancing the market-driven approaches to improved productivity
3. Strengthening business partnerships within the sector
4. Expanding the pool and skills of human resources in hydroponics and postharvest management
5. Increasing employment opportunities in commercial farming and agribusiness
6. Supporting communities to utilize hydroponic farming and postharvest systems in order to create jobs and increase livelihoods of Jordanians and Syrian refugees within host communities
7. Leveraging national and international donor support for hydroponic and efficient farming

HAED-Jo Project Pillars:

Adoption of Improved Greenhouse and Hydroponic Technologies by Farmers

With little exceptions, the majority of farmers use tunnel greenhouses which provide limited options for climate control and pest management, in turn limiting the growing and production season. HAED-Jo provides technical and management innovations suitable for arid and semiarid climates in order to increase produce quality and quantity, meet market requirements, and compete with high-end regional and international producers.

HAED-Jo makes advanced greenhouse and hydroponic designs and systems which are suitable for Jordan available to growers, helping them overcome the challenges of climate and soil conditions, pest control, and lighting, and increasing their productivity per square meter and reducing the use of agricultural inputs such as water and fertilizers.

Through providing a cost share for implementation and targeted technical and operational support, farmers would be able to recover their costs of investment in a few years, while also accessing new markets.



Improved Postharvest Systems Implementation and Management

Adequate postharvest systems and technologies are vital for realizing the benefits of improved growing and greenhouse systems and expanding the adoption of these technologies. Organizing growers and exporters into partnerships or cooperatives for investment in production and postharvest could produce the biggest opportunity to target markets. HAED-Jo supports the development of business partnerships and provides technical and management support to build these partnerships. Additionally, it incentivizes investments in postharvest technologies and along the value chain through grants to share related costs.

Building Capacity and Developing Skill Sets

HAED-Jo is collaborating with key institutions to build the capacity of the sector through training and knowledge sharing. The goal of these activities is to provide growers, researchers, students, agricultural engineers, and workers with the skills necessary to implement, operate, and benefit from these advanced systems. Through the project, a knowledge base on the applications of advanced agriculture, greenhouses, hydroponics, and postharvest in Jordan will be created to disseminate knowledge within the Jordanian agricultural sector.



Developing Improved Greenhouse, Hydroponic, and Postharvest Systems for Community Adoption

HAED-Jo community interventions seek to enable and encourage the adoption of hydroponic and/or postharvest systems by community groups and support the establishment of market linkages within the horticulture value chain. HAED-Jo developed community-level hydroponics and postharvest solutions to upgrade the productivity of community farming, thereby assisting in livelihood improvement through increased revenues. These interventions will focus on engaging with community-based organizations, particularly, those led by women and/or have experience with employing Syrian refugees in host communities.

Marketing Development and Support

HAED-Jo is working with partner growers and exporters to identify market opportunities that drive investments in the production and postharvest systems thus increasing their viability. This includes identifying crop types that are in high demand in the desired markets.



Building Partnerships

HAED-Jo aims to create and build partnerships that will grow and expand with the development of hydroponic projects in Jordan. Business partnerships are vital for the enhancement of the sector's sustainability, incentivizing investments and technology adoption, while exchanging information and knowledge.

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Advantages of Hydroponics Farming and Improved Postharvest Practices

Growing under hydroponics systems:

- Saves freshwater supplies:
 - 40 - 50% savings growing vegetables like cucumber and tomato
 - 60 - 80% savings growing leafy greens such as lettuce
 - * As compared to open field
- Limits use of pesticides and herbicides within a proper greenhouse management
- Extends production seasons with climate control systems and enhances quality and quantity of produce

When combined with improved postharvest practices:

- Improves quality and consistency of produce
- Reduces losses and waste along the agricultural value chain
- Creates skilled employment opportunities within the sector
- Opens new markets for Jordanian products
- Prepares farmers to produce at a higher quality to meet existing and future export market demands



What does HAED-Jo mean for you?

Farmers



- Access to improved agricultural technology
- Access to markets
- Operational technical support during the project's lifespan
- Capacity building
- Availability of skilled workforce
- Knowledge exchange

Jordanian and Syrian Refugee Workforce



- Capacity building and access to training
- Access to employment opportunities of differing skill levels

Community Organizations



- Livelihood improvements for host communities and Syrian refugees
- Market linkages
- Access to improved agricultural technology
- Capacity building and access to training

Research and Advisory Institutions



- Training and collaboration
- Capacity building
- Knowledge exchange
- Providing an environment for research and development