



Women of Hope Project

Institute For Simplified Hydroponics
Afghanistan (ISHA)

Institute of Simplified Hydroponics Afghanistan

- **Introduction of new agricultural technology to Afghanistan for the purposes of reducing hunger and improving the economy by creating jobs and export opportunities.**
- **Research and Demonstration Facility**
- **To Train Master Trainers to implement technology throughout Afghanistan**
- **Member of the International Institute of Simplified Hydroponics**



ISHA Greenhouse at MAAHF

International Institute of Simplified Hydroponics

● *Institute for Simplified Hydroponics Major Projects and Field Trials over past 19 years:*

- 1984Jerusalen,
- Bogata (UN Funded Co-operative) 1986, 2000
- Columbia (UNDP) 1990
- Venezuela (UNDP) 1990
- Dominican Republic (UNDP) 1990
- Costa Rica (UNDP, INCAP and Spanish Government) 1991
- El Salvador (UNDP) 1992
- Ecuador (UNICEF) 1992
- Chile (UNDP and UNFAO) 1993
- Nicaragua (UNDP) 1993
- Peru (FAO) 1996
- Guatemala (World Food Program –WFP) 1997
- Belize (UNDP) 1997
- Zimbabwe (Japan Council of Governments) 1998
- Seychelles (UNFAO Rome) 1998
- Senegal (UNFAO Rome) 1999
- Brazil (Chicago Methodist Church) 2002
- Tehuacan, Mexico (Institute for Simplified Hydroponics) 2003-2005
- Sri Lanka (FAO, Sri Lanka MOA, and NGOs) 2003
- Afghanistan 2003

What is Simplified Hydroponics?

- Introduction of growing food, flowers and fruits without soil
- 13 Essential Macro and Micronutrients are added to water supply
- Training in organic nutrient production, such as worm farms and poultry droppings are also taught.
- Made from recycled materials

Benefits

- Requires less water than soil farming, as water used is continually recycled and refreshed on a bi-monthly to monthly basis. Provides alternative farming method during drought conditions. Uses 1/10th the water as soil irrigation.
- Ideal in heavily mined areas and where people do not have land.
- Does not contribute to soil erosion and nutrient depletion in soil.
- Portable
- Requires minimum labor and offers maximum output
- Ideal for women, children, refugees and physically challenged.
- Provides nutritious food and a family income.

- **Consistent supply – ability to grow year-round.**
- **Ability to meet demand with crops not indigenous to the Region.**
- **Improved Health – clean, organically grown fruits and vegetables – Parasite Free**
- **Ability to meet the demand during drought conditions**
- **Production can be increased or decreased to meet the immediate demand**
- **Some crops ready in 30 days and a complete vegetable production in 90 days.**
- **6 times the yield in less than 1/3 the space.**

Women in Agriculture

- **WOMEN:**

- Women should be allowed to enjoy the benefits of a profitable business.
- Many women in Afghanistan are now in the position of being the main source of support for their families.
- Women have the freedom to operate a lucrative agribusiness from their homes and still be available for their families.
- Children and other family members can participate.
- Literacy levels are not important

Garden Spaces

Backyard Small Space Gardening



On a shelf or a wall:



On a rooftop:



In a Community Co-op:



Garden Production

- 10m² Garden produces enough food to feed an Afghan family of 6-8 people daily.
- 40m² Garden provides family income of at least \$10 per day.

Greenhouses:



Passive Solar Heating



Growing Containers

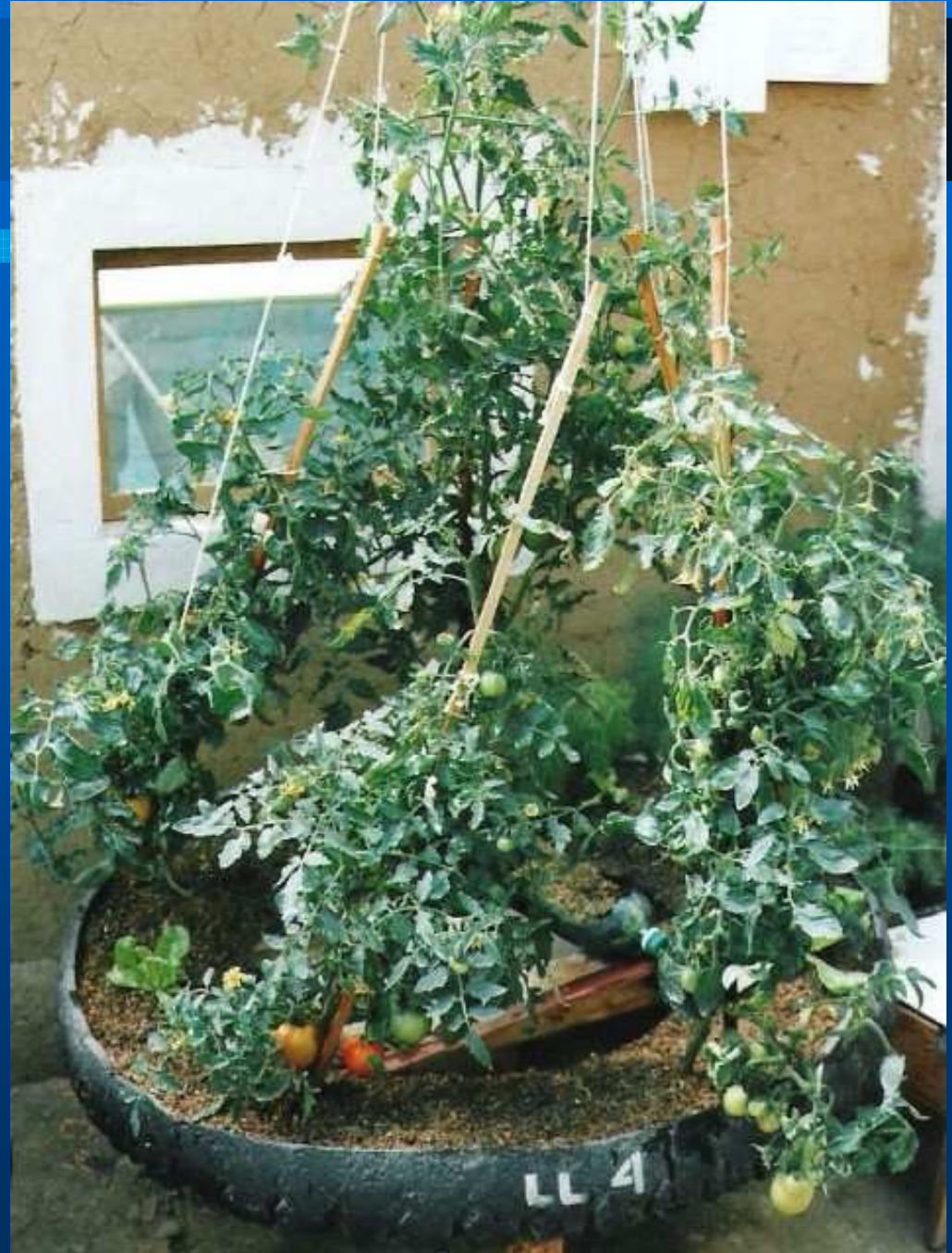
Discarded Shipping Pallets



Discarded plastic containers:



Old Tires:



Growing Systems:

Substrate Beds



Types of Substrate:

- Rice hulls
- Sand
- Gravel
- Sawdust
- Coco Coir Fiber
- Almond, pistachio and peanut shells
- Red Volcanic Rock

Nutrient is recycled



Water Floating Beds





Roots in Floating Bed



Hand Aerated



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- **Nutrients are added to water**
 - **Same water is used for whole growing cycle**
 - **New seedlings are added as mature plant is harvested**
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Hanging Bags:

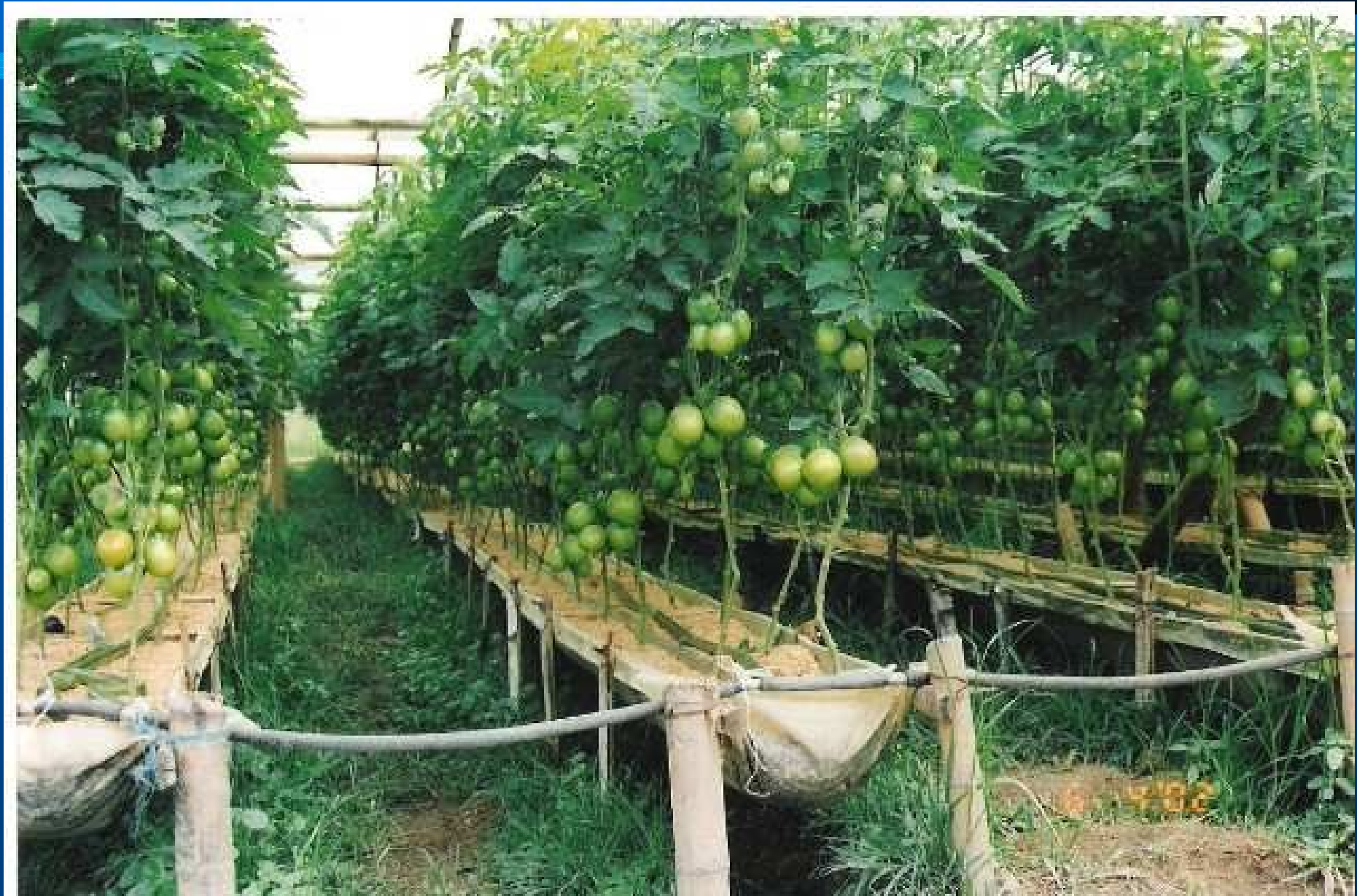




Plastic Growing Bags for Tomatoes and Roses



Canoe Beds



Commercial Gardens





Stackable



Recent Projects:

- **Riasat-e-panj Refugee Camp**
- **54 women and young girls were trained and graduated from a two-month training class.**





Taking a pallet apart



Children at Work



Women at work





Teamwork









Seedlings



Refugee Camp Home Gardens



Healthy Food



Healthy Families



THANK YOU

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