SEKEM
Farming in the Desert

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World Environment day, Cairo House
11 June 2015
Farming in the Desert

A Business Model for the 21st century
“...for a 21st century business model which combines commercial success with social and cultural development”

The Right Livelihood Award
Holistic approach to Sustainable Development - The Sustainable Development Flower

- Responsible and ethical business
- A learning, living community
- Individual enlightenment
- Development in harmony with nature
Transforming the Desert – 38 Years of SEKEM

The first SEKEM building in 1979

The same building in 2009

A SEKEM field in 1987

The same field in 2009
Sustainable Value Creation

- 38 years sustainable agriculture at SEKEM
  - 20,000 feddan (including suppliers)
  - 2,000 jobs
  - 400 small-holder farmers
  - Over 1 million tons CO2e sequestrated
  - 20-40% water savings
  - Continuous yield increase
  - Continuous decrease of inputs
Associative Business
Integrative value chain & Associations

End Consumer

Trading

Consumer Products

Processing

Agriculture Production

NATURE
Associative Business
Integrative value chain & Associations
Ecological agriculture in Egypt – Cotton

• 1991: SEKEM convinces the Egyptian government about the benefits of biodynamic cotton after its success to harvest first biodynamic cotton crop.
• As a result, the application of pesticides in Egypt was reduced by over 90%. (Decreased from 35000 tonnes per year to 3000 tonnes only)
SEKEM – a Learning, Living Community

- About 2,000 employees in SEKEM Group and Foundation
- Safe workplaces, respect for the dignity of every employee
- Women empowerment and religious tolerance
SEKEM & Developing Human Potential

- Kindergarten and school
- Medical centre
- Vocational training
- Community school
- Children with special needs
- Adult education
- Heliopolis Academy for research and training
- Heliopolis University for Sustainable Development
Heliopolis University for Sustainable Development

- First semester started in September 2012 with three faculties:
  1. Pharmacy: 413 students
  2. Engineering: 95 students
  3. Business & Economics: 67 students

- Special feature:
  Core Program
Project Title: Protecting National Economic Crops via Application of Beneficial Microorganisms to Bio-Control Plant and Human Pathogens in Organic Agriculture - Bioguard

Date: 2014-2016

Objective:
To achieve High Quality Affordable Food and maximum Economic and Strategic Crops production from Organic Agriculture in Egypt. The project will ensure sustainable agriculture. In addition, the project will also have positive Environmental impacts through preserving the fertility and health of the soil and preservation of biodiversity (Soil Resources Management).
R&D project: PV-Solar pumping

Project Title: PV Solar-Pumping System for off-grid desert farms

Objective: Decrease dependency of diesel powered generators at off-grid farms

Date: 4/2015

Results:

- Overcome the problem of electricity cut in remote areas
- Decrease the dependency on fossil fuel that decrease carbon emissions
- Join between the renewable energy technology and agriculture for irrigation
- Irrigation of 90 feddan at Wahat farm
R&D project: Agri-PV for greening the desert

Project Title: Agri PV for greening the desert with semi-transparent glas-glas modules

Objective: Alleviate land use competition between food and renewable energy production.

Date: 2015-2017

Expected Results:

- Identification of fruits and crops that are grown better under sun reduction
- Improving integration of energy and irrigation system
- Improving energy efficiency
- Reducing CO2 emissions
- Assure economic competitiveness of the system
- Assure economic competitiveness of the system
- Raise Awareness and disseminate knowledge
- Commercialization and offering the System in the Egyptian Market
R&D project: Organic Aquaponics

Project Title: Using aquaponics in organic food production

Objective:
Cultivating fresh organic vegetables and fish that's four times more efficient than regular farms, and requires no fertile land.

Date: 2014-2017

Expected Results:
- Sustainable and intensive food production system.
- Water-efficiency (up to 90% less water than conventional agriculture)
- Economical production of either family food production or cash crops possible
- The ability to produce significant amounts of organic fish and vegetables from an extremely small amount of water and energy, without the need of agricultural land
Project Title: Knowledge Triangle (Platform for the Water Energy Food Nexus)

Objective: Improving the role of universities in the Egyptian society by developing a national strategy and a university platform to promote the WEF-Nexus and the related synergy between Research, Education and Innovation (Knowledge-Triangle).

Date: 2013-2016

Results:
- A National Strategy for the WEF-Nexus is identified and discussed with stakeholders.
- A WEF-Nexus Coordination Body is established within each partner university.
- Qualified Egyptian academics are trained to face WEF-Nexus multidisciplinary projects.
- A Euro–Egyptian Ph.D Program on the WEF-Nexus is defined with a pilot implementation and an international conference.
- A web-based Knowledge Sharing System is online and training materials are shared.
Project Title: Heliopolis University Innovation Platform

Objective: To create a mechanism through which we can bring together the key players from industry, academia and government to address the challenges that the Egyptian society is facing through research and innovation

Date: 2014-2015

Expected Results:

● To create FOUR Knowledge Transfer Networks (KTNs) in specific fields to drive the flow of people, knowledge and experience between business and the science-base across sectors

● To create ONE business incubator to support early stage entrepreneurs

● To provide support services for researchers such as fundraising, grant management as well as assistance in the process of Intellectual Property Protection
Innovative SEKEM:
- Aiming for the impossible..

Opening ceremony of the Sinai Project 2008

The land before…
...and changing our world.

... and after 18 months.
Thank you very much for your attention!

For more info, please check:
http://www.sekem.com/sustainability.html
http://hiro.hu.edu.eg/
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