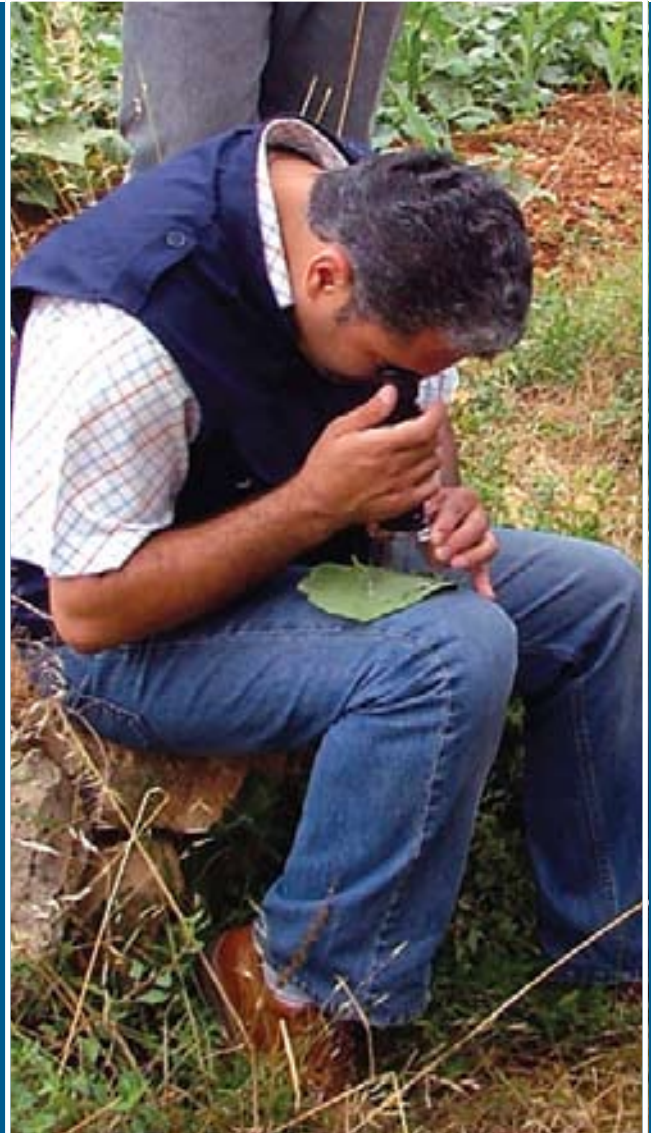


## Rural Development and Sustainable Agriculture



# Rural Development and Sustainable Agriculture

The Foundation's work in the domain of Rural Development and Sustainable Agriculture is based on agricultural extension services as a basic tool for developing the agricultural sector and animal husbandry, which represent an important portion of economic activity in North Lebanon. Agriculture is considered an indivisible part of the concept of rural development, which is based on the importance of the participation of various segments of local communities and encouraging the creation of development programs for villages and towns through the sound exploitation of the available economic, touristic, cultural and social resources.

## Objectives

- To develop farmers' capacities and providing the necessary guidance in order to improve production and raise incomes
- To develop agricultural production in order to enhance farmers' incomes and make the sector internationally competitive
- To activate the work of cooperatives and improve marketing conditions
- To train farmers in the use of laboratory testing to improve their production

## Programs and Projects

### The Safadi Agricultural Development Center

The Safadi Agricultural Development Center in Deir Dalloum (caza of Akkar) continued to support and develop the agricultural sector for the third year in a row by providing agricultural extension, technical and marketing services to farmers and livestock owners.

In 2007, the Center conducted various projects in cooperation with municipalities or agricultural cooperatives in addition to launching new development projects.

The center's activities served various segments of the population in Akkar, such as farmers, agricultural cooperatives, beekeepers and women who benefited from:

1. A fruit tree nursery
2. A mobile laboratory for testing plant nutrition
3. The Agricultural Extension Project in Al-Jouma, in cooperation with the Union of Al-Jouma Municipalities
4. The Agricultural extension project in Fneideq in cooperation with the Municipality of Fneideq
5. Project for the Empowerment of women in Deir Dalloum
6. An agreement for enhancing the beekeeping sector in Akkar as an



instrument to fight poverty in support of beekeepers union of Akkar

## 1. Fruit Tree nursery

In 2007, the Nursery produced the following saplings:

Type	Number
Wild apricot	1,230
Pine	3,200
Carob	4,430
Walnut	3,315
Chestnut	2,635
Damask rose	346
Cypress	6,863
Som orange	12,337
Citrus fruits of different varieties	3,861
<b>Total</b>	<b>38,217</b>



In addition to the ongoing production of various types of trees to meet the needs of surrounding areas, a total of 89 farmers benefited from this service in 2007; the farmers received 10,429 saplings at competitive prices to help reduce their production costs.

## 2. Mobile laboratory for testing plant nutrition

The importance of this laboratory lies in its guidance for farmers regarding the proper use of fertilizers, pesticides and irrigation water in order to reduce production costs and improve product quality. In this framework, the laboratory's work will be based on two types of intervention:

### One: Conducting tests on the nutritional components of crops, particularly on

- Salinity and acidity levels of soil and irrigation water
- Soil compaction rates following cultivation
- Soil humidity and temperature
- Air humidity and temperature
- Rates of nitrogen and potassium in plant sap
- Fruit sugar rates

## Two: Providing the required agricultural extension services for farmers based on the results of laboratory tests conducted on their fields.

Benefiting from the services of the mobile laboratory were 234 vegetable farmers, distributed across various towns in the cazas of El Menieh – Dinnieh, Akkar and Batroun.

Region	Beneficiaries
Akkar	94
El Menieh – Bahnin – Deir Ammar	130
Batroun	10
<b>Total</b>	<b>234</b>



### 3. Project for Developing the Agriculture Sector and Cooperatives in Al-Jouma, Akkar

This project resulted from a partnership initiative between the Safadi Foundation, the Socio-Economic Development Program in Akkar (United Nations Development Program and Council for Development and Reconstruction), and the United Cooperative Association (Al-Jouma, Akkar), which comprises agricultural cooperative associations in Akkar Al-Atiq, Bazbina, and Rahbeh.

The project has helped provide the necessary agricultural extension services to the members of these cooperatives.

Akkar Al-Atiq Cooperative	30 members
Bazbina Cooperative	20 members
Rahbeh Cooperative	20 members

#### Activities included:

- The installation of four weather stations (two in Akkar Al-Atiq, one in Bazbina and one in Rahbeh) to measure temperature, humidity and leaf moisture. These factors are necessary to monitor the agricultural pest incidence in crops, such as for apples and pears which are the basic crops in these villages.
- Daily monitoring of climate changes, via the weather stations.
- Informing the cooperatives about the need for farmers to intervene in their orchards according to climate changes.

- Establishing weekly field schools for a group of farmers from the United Cooperative Association according to the diverse types of planted crops. The field schools cover integrated orchard management methods and their connection to climate changes. In addition, field trips are conducted to enable farmers to become acquainted with pests, how to identify them and control them.

These activities aim at teaching methods that reduce the amount of pesticides and fertilizers used by farmers, thereby lowering production costs and improving quality, which heightens market competitiveness.

#### **4. Agricultural Extension Project in Fneideq, in cooperation with the Municipality of Fneideq**

This project resulted from a partnership initiative between the Safadi Foundation, the Socio-Economic Development Program in Akkar (United Nations Development Program and Council for Development and Reconstruction), and the Municipality of Fneideq.

##### **Project activities**

This project began in May 2007, as 25 farmers from Fneideq benefited from guidance services and diverse activities:

- The installation of four weather stations to measure temperature, humidity and leaf moisture. These factors are necessary to monitor agricultural pest incidence in crops, such as apples, which is the basic crop in the village.
- Daily monitoring of climate changes, via the weather stations.
- Informing the municipality of the need for farmers to intervene in their orchards according to climate changes.
- Establishing weekly field schools for a group of farmers, where integrated orchard management methods and their connection to climate changes are explained; conducting field trips to enable farmers to become acquainted with pests, identify them, and control them.

As part of the extension services, the Municipality of Fneideq, in cooperation with the Safadi Foundation and the Social Economic Development Program in Akkar, organized a training day for farmers on modern grafting methods for apple trees in order to develop the sector and enhance apple production. Farmers from Fneideq attended the workshop conducted by Dr. Jean Estephan, who offered a field explanation about a number of apple trees. This project is scheduled to be continued in 2008.

## 5. Project for the Empowerment of Women in Deir Dalloum, Akkar

This project is funded by the World Bank and aims at improving the standard of living for young girls and women in the town through conducting a series of awareness workshops. The project aims at:

- Developing the knowledge and capacities of women in the region (ages 14 to 40).
- Developing their capacities to express themselves, participate and cooperate with one another.
- Developing their capacities to develop their surrounding environments.
- Enhancing their participation in socio-economic life.

### Stages of the project:

The project began with a course on the basic principles of first aid for all age groups, with 57 women taking part. This was followed by two workshops on “domestic accidents” and the “principles of infant nutrition,” in which 16 girls and women participated. The project includes a series of workshops, which will address problems and issues such as child and adolescent development, environmental preservation, sound nutrition, health and cleanliness, and the rights of women and their impact on society and the economic cycle. The workshops will continue during the year 2008.



## 6. Project to Enhance the Beekeeping Sector in North Lebanon, Akkar as an Instrument to Fight Poverty

This project is a cooperative initiative between the Spanish NGO AIDA and the Safadi Foundation and it is funded by the Spanish Agency for International Development (AECI).

## Project goals

The project aims at developing Akkar's agricultural economy, creating job opportunities in North Lebanon and enhancing the role of beekeeping as a competitive sector in low-income rural areas of the north, by responding to the basic needs of beekeepers in North Lebanon.

## Beneficiaries

The Union of Beekeepers Cooperatives of Akkar will be the direct beneficiaries of the project. The union has 250 members and consists of the Beekeepers Cooperatives of Akkar Al-Atiqa, Qobeiyat, and Bazbina. In addition, 500 beekeepers will also benefit from these cooperatives and the project.

## Work Mechanisms

The project will enhance beekeeping in Akkar through different components:

- Administrative training for the cooperatives to improve their organizational structure and management
- Technical guidance for beekeepers through 15 theoretical and field workshops designed to develop methods of integrated management and pest control of beehives
- Rearing queen bees and selecting those with high quality traits in order to meet the needs of beekeepers
- Securing the necessary equipment to sterilize old wax and re-use it in manufacturing wax foundation sheets, which are considered fundamental for beekeepers; this will take place at a low price to guarantee sustainability
- Securing equipment to extract and pack honey
- Improving marketing conditions for honey by studying market needs and improving container quality

The project will begin implementation in 2008.



## Animal Livestock Development Project

The Safadi Foundation continued this project in 2007 after it was expanded to increase the number of farmers who could benefit from its services. The project involves two types of interventions:

1. Conducting artificial insemination in cows
2. Pregnancy testing for cows

In 2007, the Foundation tested 400 pregnant cows, whereby a total of 90 farmers in Akkar, Zghorta, Koura and Dinnieh benefited:



Caza	Number of tests	Nbr. of beneficiaries
Akkar	200	40
Zghorta	100	30
Koura	50	10
Dinnieh	50	10
<b>Total</b>	<b>400</b>	<b>90</b>

Also, a total of 300 milk cows were artificially inseminated for farmers from Akkar.

## El Mina Fish Market project

A permanent fish market was established in El Mina as part of a partnership initiative between the Safadi Foundation and the North Lebanon Fishermen's Cooperative Association. The World Bank, via the Council for Development and Reconstruction funded the project, while the Fishermen's Cooperative Association purchased the equipment required. The Safadi Foundation provided the technical expertise of engineers and administrators, in addition to contracting the Institute for the Environment, Maritime Resources and Coastal Management Program at Balamand University to provide employee training services for the market staff.

## Project goals:

Establishing a permanent fish market in El Mina aims at:

- Enhancing the work of cooperatives
- Improving the socio-economic situation of the fishermen community and developing their capacities, so that the sector becomes profitable and productive, with fishermen receiving direct benefits.



## Beneficiaries:

Profits from this project will go to the North Lebanon Fishermen's Cooperative Association, which has more than 400 members. Profits will be re-injected into the project in order to provide services that will improve the socio-economic conditions of members. The project will also create 14 fixed job opportunities, in addition to at least 10 seasonal positions.

The market contains a hall for selling fish in an auction, in addition to 9 tables for retail sales.



## Seminars and workshops

### The National Campaign to Fight Udder Diseases

In 2007, the Safadi Foundation organized a conference on how to control mastitis diseases of the udder, in which the Lebanese Ministry of Agriculture, the Lebanese Agricultural Research Institute, the Faculty of Agriculture at the Lebanese University and the Veterinarian's Syndicate took part, along with 90 specialists (university researchers, veterinarians and agricultural engineers). They evaluated the current situation of this disease and methods of treatment and prevention. The conference participants issued a series of recommendations related to combating this disease:

- Organize pharmaceutical treatment
- Prescribe medicine based on laboratory results, especially for mastitis
- Exclusivity of medicine prescription to veterinarians
- Medicine should not be sold directly from the importer to the farmer
- Enhance the cooperation between the Ministries of Health and Agriculture and with the Veterinarians' Syndicate

The conference was held at the Rotana-Hazmieh hotel in Beirut.

