

National report on the situation of animal genetic resources in Lebanon

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General introduction

Lebanon is located on the eastern shore of the Mediterranean Sea. Its surface area is 10 452 km². Lebanon is divided into eight provinces: Beirut, Mount Lebanon, North, Akkar, South, Nabatieh, Bekaa and Baalbeck Hermel.

Lebanon's climate is related to its geography and elevations, and ranges from the semi tropical climate of the coast to the moderate climate of western series slopes, and from the cold climate of the tops of the mountains, to semi-desert climate in Bekaa Valley.

Lebanon's population is 5.4 million and it is estimated that this number will increase to 7 million by 2020. The labour force in agriculture is 9 percent.

Agricultural economy

About 40 percent of the population benefits from agriculture. The livestock sector does not meet local needs, except for the poultry sector, whose production has reached 135 thousand tons of white meat and 762 million eggs. The quantity of milk produced has reached 241.7 thousand tons and red meat has reached 29.7 thousand tons. Lebanon still imports about 85 percent of its food needs. The rates of animal imports in 2011 were as follows: (imports of living animals) 202 000 cows; 400 000 sheep; and 3 400 goats. The ratio of animal product exports reached 29.7 percent.

Organization of the livestock sector

Table 1. Number of animals in Lebanon

Species	Year 2010-2011
Local cows	52 000
Imported cows	11 000
Total cows	63 000
Shami goats	21 000
Local goats	400 000
Awasi sheep	375 000
Pigs	11 000
Chicken eggs	2 500 000
Mothers of chicks	600 000
Poultry meat	50 000 000
Local chickens	700 000

The livestock in Lebanon is the property of the private sector. Animal species raised in Lebanon include cows, sheep and goats, which are kept for food products such as meat and milk or for non-food products such as leather and wool.

The livestock sector, and especially cattle, has received great interest from the state and international institutions. Several projects have been launched and have contributed to the organization and development of the sector, including farms for raising milking cows and the establishment of factories for milk processing. In addition, there has been a project to develop fodder cultivation to help the owners of smallholdings, who constitute a high proportion of the cattle producers in Lebanon.

Sheep and goat production is based in Bekaa (kept by families within big flocks). Goats are raised in the mountain areas and heights of Lebanon Western Series (Mount Lebanon) within a smaller flock of sheep. The poultry sector, in which the integrated system is applied, is the most developed sector. For many years, poultry meat companies have been raising turkeys, but production is related to holidays and it is limited in terms of quantity.

Table 2. The most important animal products and their quantities

	Local meat	Imported meat	Milk	Eggs
Cattle	14.9 thousand tons	106.5 thousand tons	183 thousand tons	
Sheep	6.6 thousand tons	21.2 thousand tons	24.7 thousand tons	
Goats	8.2 thousand tons	0.18 thousand tons	34 thousand tons	
Poultry	135 thousand tons			762 million
Pigs	0.9 thousand tons			
Turkeys	0,3 thousand tons			

Situation of genetic diversity

Lack of information about animal genetic resources is the result of the non-execution of continuous surveying of animal genetic resources since 1975 due to persistent wars and events in Lebanon. Therefore, an agricultural policy shall be established to improve knowledge of breeds or groups of genetic resources:

- 1- Start the process of animal registration and numbering.
- 2- Establish a bank of national information about animal genetic resources
- 3- Launch programmes of rehabilitation or programmes to maintain the breeds with important qualities.
- 4- Establish a network of regional information concerning breed distribution in adjacent countries.

In Lebanon, there are two groups of cows: local cows and imported cows:

Local cows: their production is low; they are kept by small farmers; they are used in agricultural work; they are small in size; their colour is brown to black; and they do not produce significant quantities of milk.

Imported cows: Friesian cows or Holstein-Friesian cows imported from Europe (France, Germany and Netherlands) produce significant quantities of milk.

There are few breeds of shami and Russian cows, which have led to a new group of mixed cattle due to random breeding.

Sheep: Sheep present in Lebanon are from the Awasi breed; there is an increase in numbers and the production is based in Bekaa Valley and North Province.

Goats: The dominant breed is the black local mountain goat, which has poor production; there are also shami goats in addition to Cyprus and mixed cows. The two flocks are found in North province and Bekaa Valley.

The perception of animal genetic resources and how to deal with them does not go beyond the economic dimension, in the sense that the animals bearing the genetic resources are exploited for financial output without considering the maintenance and improvement of the genetic resources.

The Ministry of Agriculture is undertaking managerial steps aiming to contribute to the improvement of the livestock sector, such as working on expanding animal registration, especially cows and their numbering, and issuing decisions aiming to encourage the production of fresh milk.

Genetic resources are the main interest of the livestock directorate, production administration and animal raising, which is delegated by the organizational decree of the Ministry of Agriculture to supervise the affairs of raising and rehabilitating animals in farms; a special department was established to raise horses and ensure and maintain their progeny.

The importation of animals to be raised is subject to specific conditions for each species, but there is not special legislation related to the use of animal genetic resources. In that framework, attention should be drawn to article 232/1 issued in 2002 allowing the importation of frozen meat of cows within specific conditions that maintain and develop genetic resources and integrate new blood to Lebanese herds.

Bilateral cooperation between technically developed countries and developing countries and cooperation between international institutions and states

To maintain animal genetic stock, the developed countries that possess the necessary techniques and experience to maintain and develop animal genetic resources shall help and support developing countries.

The presence of international and regional institutions shall constitute a connecting factor for developing countries in general and Lebanon in particular, with developed countries to contribute to the renewal of national policies and strategies in the field of genetic resources and help in developing information systems and connection networks for national and regional projects that may be established.

Lebanon is not among the countries affluent in animal genetic resources, but there are in Lebanon many domesticated animals raised for their products: local cows and Friesian European cows, which increased due to their high productivity in comparison with local safety. Cows are raised using intensified methods and artificial insemination in the case of Friesian-Holsteins. It is certain that the maintenance and development of animal genetic resources shall have positive effects on the agricultural community in general and remote rural areas in particular, as it supports sustainable rural development and is reflected in the national economy.