



GOAT INDUSTRY DEVELOPMENT

PROJECT IN ARMENIA

Narine Babayan
ARID Goat Breeding Center /manager/
Yerevanyan highway 1, Yeghegnadzor
Vayots Dzor, Republic of Armenia
arid_center@yahoo.com



Republic of Armenia

Total area - 29.800km

Permanent population 3.2 million

Share of agriculture in the economy is 46 %

Arable land is 280.793ha

Number of cattle 677.584

sheep 687.074

goats 30.500

pig 139.799

Armenia is a small, mountainous, landlocked country with few natural resources. With an area of 29,800 kilometers, it borders Georgia, Azerbaijan, Iran, and Turkey.

Following independence in 1991, policy reforms included the privatization agricultural sector also. Large state farms that had dominated the agricultural sector during the Soviet time were disbanded.

The dairy industry was depreciated and milk was consumed at household level with the low yield and poor condition of processing. The traditional methods of animal husbandry and food processing did not meet the requirement to satisfy consumers.



The low yield of goat milk and poor experience in goat industry was the reason to considering goats just the type of small ruminants.

The milk productivity of native breeds is low/ 100liters for 120days of lactation season/ and that is the reason of inefficient farming.

Efforts of national and international agencies towards the agriculture development in Armenia, lead to the livelihoods improvements, rural development and economy growth in the rural areas.

Livestock development was approached to provide the high quality agro-products that will satisfy the market demand among the consumers as well as increase incomes at farm level.



USDA has started cattle and goat genetic improvement program in Armenia since 2000 with close collaboration of Armenian Agrarian University, Agricultural Ministry of Armenia.

The native breeds that have special adaptive traits, such as disease resistance, climatic tolerance and the ability to digest low-quality feed and to survive with reduced or uncertain supplies of feed and water are the “basic sources” for the ongoing genetic improvement projects.

The Goat Industry Development Project was funded by USDA for assisting Armenian agriculture in developing an independent and economically viable dairy goat production, product manufacturing, and marketing industry through technology transfer.

Within the framework of USDA's Goat Industry Development Program (GIDP), USDA worked with the only goat research institute in the United States, the E. Kika de la Garza Institute for Goat Research at Langston University to develop a breeding program for recording, selection, and multiplication of improved goat genetics. Local villagers were eager to receive crossbred goats from Western and local Armenian varieties, and so the Armenian Improved Dairy Center (ARID) became an official breeding center in September, 2000. The Center is located in Vayots Dzor marz, Yeghegnadzor that is in Southeastern part of Armenia.

The components of the GIDP project are: Cooperatives and individual goat farms, associations, milk collection units and cheese factories, ARID center repository for improved goat genetics and for training in proper goat farming practices. Breeding program of ARID Center is focuses on the genetic improvement of the domestic Armenian goat, through successive generation crosses to high producing animals of four dairy breeds such are: Saanen, Alpine, Toggenburg and Nubian. With in the assistance of USDA 30 purebred goats were imported from US in May 2000.

The 129 purebred goats at ARID center and over 4000 crossbreds by 01 of april 2014 in the cooperating farms are the generations of the imported goats.

Annually more than 125 beneficiaries/goat farmers, cheese producers, veterinarians, extension specialists, breeding specialists, fodder producers, employees, etc/gets involved in the project activities, out of which more than 36 women and 75 rural kids.

Activities of ARID center in the frame of GIDP are as follows:

1. Service provision on

- *Goat breeding / crossbreeding with the purebred bucks and artificial insemination/*
- *Herd health management through the veterinary service provision*
- *Record keeping and herd management*

2. On farm research /done independently and with Agrarian University scientists participation/

- *Breeding and genetic improvement of goats*
- *Comparison of milk components and production between native, crossbred and purebred goats*
- *Comparison of growth and carcass characteristics between crossbred, native and purebred goats*

3. Technical assistance to farmers, producers, extension, agribusiness, students and youth

- *Proper nutrition, housing and care management*
- *Animal health and disease prevention*
- *Proper milking and milk handling procedures*
- *Grazing management*
- *Cooperative and financial management*

4. Training and education for farmers, producers, extension, students and youth

- *Seminars and workshops in ARID center*
- *Hands-on seminars and workshops in farms and villages*

5. Youth project implementation

The valuable obtained achievements of the project implementation are .

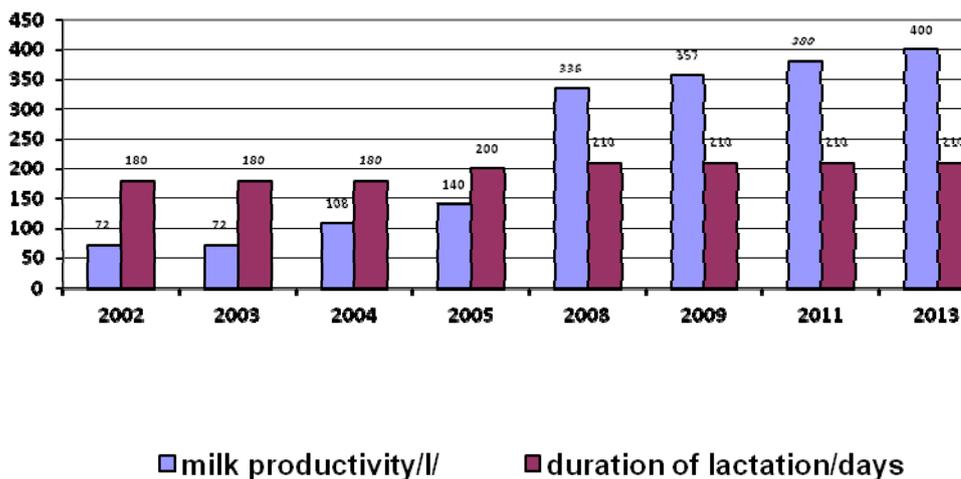
- Developed goat breeding technologies
- Improved body growth due to the crossbreeding

The average daily body growth of the kids has shown the following results

Purebreds	195 - 200 gr.
crossbreds	150 - 180 gr.
Native	120 - 130 gr.

- Improved and increased milk production among the goat herds

The milk productivity at cooperating goat farms



- **Increased demand among the farmers to be involved in goat farming**

/In 2000 there were 2 goat farmers from Vayots Dzor marz involved in the GDP, for now we work with 28 goat farmers /

The imported goats are well adapted to the environmental conditions in Armenia and due to this Project the number of goats is much increased all over the country. In 1999 there were 12.000 goats as for 2013 there are 30.500.

- **Improved milking technologies and proper milk storage facilities are established.**

As the result of the on going crossbreeding milk productivity / up to 400l /, body growth and farm efficiency among the different generation of crossbreds has been increased.

The imported goats are well adapted to the environmental conditions in Armenia and due to this Project the number of goats is much increased all over the country. In 1999 there were 12.000 goats as for 2013 there are 30.500.

Improved milking technologies and proper milk storage facilities are established.



Production of high quality goat dairy products / feta, tom lactic berried, ricotta /has been lunched and export market has been developed. In 2013 over 100 t of goat milk was processed and about 17 t of high quality goat chesses was produced.



Developing SMEs in the dairy sector has played significant role for providing jobs, increasing farm income and improvement of overall livelihood of rural population in the targeted communities.

However, still to assure the sustainability of food production and agriculture development the market has to be expanded and improved.

Due to the improvement of farm and herd health management, breeding and AI programs implemented by ARID Goat Center the efficiency of animal husbandry has been improved, but low milk yield per head is the still a limitation for tenth of thousand farmers in the country.



There is a significant need to improve grazing management, assure the proper use of pastures and its protection from the erosion.

The USDA's general goals for establishing a Goat Industry Development Project in Armenia were:

alleviation of poverty; change of small farmers' operational environment; introduction of new technology to increase productivity;

and the improvement farmers' living standards by creating opportunities and conditions for market access.



To achieve these goals, the Project began with the development, testing, and provision of proven, world famous genetics, the development and promotion of economical feeding systems and disease control interventions that would help increase animal productivity.

The tactics employed to achieve these general and specific objectives included: setting up small dairies in villages for processing goat milk; supporting and improving traditional Armenian cheese production and developing new types of goat cheeses; examining possibilities for direct marketing and transportation; establishing a niche market for goat milk products locally; and developing an export market.

In a variety of sectors, USDA/CARD worked from the farm gate to developing international markets. The ARID Goat Center and the development of a viable commercial goat industry was one of those projects, and it taught three valuable lessons: (1) With solid, upfront market research, an entire industry can be started and thrive in a short time; (2) Using the development model of the U.S. Department of Agriculture in Armenia, comprised of offering an integrated package of technical, marketing, and financial assistance, an agricultural sector can grow to supply new products not only for domestic but international consumption; (3) Every link in the marketing chain, from farm-gate to fork, must be developed and complete to shift from domestic to international marketing, and this must be accomplished with the latest technical assistance offered to committed local partners.

Today, the Center for Agribusiness and Rural Development (CARD) and ARID Goat Center, builds on these lessons in the development of Armenia's cattle and sheep industries.