



Center for Agribusiness and Rural Development

Progress Report

PERIOD COVERED

2011-2012

Prepared for: Caucasus Agricultural Development Initiative
Office of Capacity Building and Development
Foreign Agricultural Service
US Department of Agriculture

September 2012

Acknowledgment

Dear USDA FAS CADI team, Thank you so much for your tireless commitment to helping CARD to become in very short period of time one of the leading agriculture development and service providing organization in the region. The capacities USDAFAS CADI team has built at CARD makes us more attractive to donors, government and agriculture private sector representatives and attracts more funds necessary to continue to provide support and services to farmers and agribusinesses in our rural communities affected by transition difficulties and blockade over the years.

First and foremost, we would like to thank Daniella Maor for the valuable guidance and support over past year to set up different tools to build CARD capacities to maintain better internal control, financial accountability as well as monitoring and evaluation system. It will give us great opportunities to participate in many donor funded biddings and projects, as well as produce outstanding results with the limited funds.

To develop our next 3 year program, Daniella and the other USDA FAS employees contributed significant amount of time and energy, which made a huge difference in the final outcome of the proposal. The new funds provided with your assistance will help to fund a variety of projects, including small household farming, family cheese, wine, dried fruit production, providing new technologies and innovation solutions which makes Armenian food industry competitive, as well export of Armenian food products, Thanks this support the lives of many people would be affected positively.

CARD Progress Report 2011-2012

Summary

This report is prepared for USDA/FAS's CADI program and outlines the progress of activities Center of Agribusiness and Rural Development (CARD) has been implemented during the period of 2011 to September 2012. The report outlines the activities and accomplishments CARD implemented through the financing of USDA/FAS.

CARD has implemented more than 24 technical assistance, trainings and demonstrational small grants projects in five main agricultural sectors: Dairy, Greenhouse, Wine and Agri-Tourism. About 886 farmers benefited from the intervention and more than \$ 844,000.0 additional income has been generated.

Evaluating the CARD performance for the reporting period CARD management considers that the accomplishments met the set targets. Nevertheless, CARD will continue to further implementation of its assistance program through cost efficient and impact oriented projects in close coordination with its donor.

- 100 greenhouse farms participated in the trainings and workshops and adopted new crop varieties which generated \$ 240,000.0 additional income;
- 134 farms participated in the trails of new crop protection solutions and were able to save \$ 176,880.0;
- 229 farms were trained in Improved Cattle Breeding and Housing techniques;
- 25 farms were introduced in Community Livestock Management Program and \$ 54,000.0 income has been generated;
- 18 greenhouse farmers participated in soil and water quality measurement training and 340 greenhosue farmers are going to benefit from established new field laboratory;
- \$ 54000 additional cash has been generated due to Agro-Tourism project implemented at Areni winery
- New bread was introduced to the market and \$ 15,000 income has been generated.
- \$156,000 worth cheese has been produced due to introduction of new cheese vats and 34 farms started to sell milk to the processors getting \$260.0
- 6 farms has started to use new drying technologies and earned extra \$56,400.0
- \$ 93000 worth Emmental cheese was produced due to new molds

**Accomplishments of
Rural Development Department Projects**

1. Varietal test of tomato and cucumber seeds

Varietal tests of 9 varieties of tomato and 11 varieties of cucumber were conducted in two selected greenhouses in Darakert village of Ararat Marz. CARD contracted agronomist provided consultancies and technical assistance to cooperating farmers on various aspects of cultivation processes. Workshops, facilitated by CARD and visiting specialists were organized for 100 farmers for presenting technical aspects of growing new varieties of tomato and cucumber. Farmers from neighboring villages/regions participated in exchange visits. They were introduced with the high performance of new varieties of tomato and cucumber.

Results of this trial were summarized on information leaflets. The leaflet comprises information about the plant health protection, plant nutrition and agronomical requirements, resistance to different disease. The developed leaflets distributed to about 100 greenhouse farmers.

Invited farmers adopted new varieties which increased the yield by 17 % or additional 200 tons of crop from cultivated 10 hectares or additional \$ 2400 income per farm has been earned.



2. Test of environmentally-friendly protection methods for range of vegetable crops

The application of chemicals play important role in greenhouses. They protect plants from different insects and diseases. The only problem in application of chemicals is their dosage and influencing substance origin (environmentally friendly or not). RD team investigated the international market (through internet research) and selected for registration of Phytoverm and Phytolavin substance for the trail. The mentioned products of this are environmentally friendly and new in our market.

Through cooperation with the Ministry of Agriculture RD team clarified the procedure of registration of chemicals and obtained the list of necessary documents for submission of application. The Pharmbiomed company provided

CARD Progress Report 2011-2012

all necessary documents for preparing the application for registration of Phytoverm and Phytolavin substances. After completing the registration RD team imported trial amount and it was tested in greenhouses of cooperating farmers. The substances performed very well and they helped to prevent the damages of “white fly” and “Trips” insects (the mentioned insects had resistance for those chemicals that were used before introducing Phytoverm and Phytolavin). 134 farmers now have access to good quality and environmentally friendly crop protection solutions and have adopted it to improve the yield and quality.

Due to new solutions production losses has been reduced by 9 % in 134 farms or in cultivated 13,4 ha farmers saved 147 tons of crop which costs \$ 176,880.0 or extra \$1320 to the farmers who adopted new methods of crop protection.



3. Improvement of Cattle Breeding and Housing

Within the framework of Cattle housing project RD team developed good cooperation with experts of WWS (USA), Delaval (Sweden), ZS-AG International (Switzerland), PUM (The Netherlands). This cooperation resulted in detailed training curriculum and comprehensive training materials, which later on was distributed to training participants.

The cooperation with mentioned organizations was very effective and productive, as far as the series of trainings were organized in the regions of Armenia for about 200 farmers:

1. 1 training with 23 participants for artificial insemination specialists in Syunik marz,
2. 3 trainings for 88 farmers and dairy experts in Syunik, Gegharkunik and Lori marzes,
3. 1 training for 25 farmers in CARD office on improved cattle genetics
4. 4 trainings for 93 farmers in Syunik and Shirak marzes on “cow comfort” concept and improved cattle housing, milking and breeding.

Totally 229 farmers participated in the training and already 34% of them or about 78 farmers has started to implement different components of introduced new technologies and concepts.

CARD Progress Report 2011-2012

4. Introduction of Community Livestock Management Program (CLMP)

The research showed that the lack of good pasture practices, control measures and ineffective use of land have brought about a number of impacts among them: overgrazing, land degradation and soil erosion.

After the visits to the pastures and meeting with several farmers of Sarnakunq community of Syunik region, it was decided to develop a small-scale plan focusing on a rotational grazing trial, young stock grazing trial and pasture fertilization.

To have a yield increase in livestock sector, the productivity of natural pastures must be increased, and necessary measures of care must be applied. The trial of rotational or controlled grazing system will involve an intensely grazing portions of a pasture (paddocks) followed by a rest period which will allow the forage to grow again (recover) and make a balanced demand on its resources of fertility. Such grazing schedule may as well help to eliminate parasites. Pasture rotation will supply the young stock with new and fresh roughage and the effect of contamination with parasites will be reduced through good nutrition.

Meanwhile, the CARD experts acknowledge the fact that making a change in farmers' thinking will be a quite challenging task as only few of them showed interest in CLMP. They are reluctant to accept alternative grazing schedule; use the manure of cattle as a fertilizer rather than means of heating, etc. Nevertheless, CARD has involved two progressive farmers in this project, with the goal of serving as a model to attract other farmers in the community.

During the workshop farmers learnt about:

- Pasture management on community level,
- Pasture improvement
- Introduction of rotational grazing in pastures by using electric fences,
- Prevention of parasitic diseases during the pasturing period
- How to use pastures for young cattle stock and disease prevention

Totally 25 farmers participated the workshop and 2 of them started to adopted new Pasture Management method for about 150 cows. We are expecting to have at list 20 farmers involved in Pasture Management program next year as a result of demo project will mean additional \$120 income per cow or \$54,000 income increase during 90 days pasture time for 450 cows or \$2454 extra income for 22 farmers involved in the project.

5. Effective Greenhouse Management

For the first time in Armenia, CARD has introduced the LASA Agro modern portable laboratory to enable farmers to conduct soil, water and nitrate tests reliably and quickly in their greenhouses. The portable laboratory will help Armenian greenhouse farmers increase their production and efficiency, and is under the auspices of the USDA-funded "Effective Greenhouse Management" project. Beginning in June, as part of the project, a Mr. Pavel Shishkin was invited to Armenia to conduct training on the use of the mobile laboratory.

The training was held on CARD premises and in the fields with the participation of young agronomists from Armenian State Agrarian University, greenhouse owners from the Ararat and Armavir regions, and CARD specialists. Totally 18 people participated in the training.

The portable laboratory is placed in Armen Simonyan's trial plots in Darakert village, in Ararat marz, where the

CARD Progress Report 2011-2012

majority of farmers are involved in greenhouse farming. Mr. Simonyan, a fairly sophisticated greenhouse owner, has extensive experience in vegetable production and greenhouse farming.

Along with the young agronomists Mr. Simonyan is providing consulting and mobile laboratory services to more than 340 farmers in the region by applying the “farmer to farmer” model for knowledge exchange.

Agribusiness and Marketing Department Projects

6. Improvement of Agri-tourism capacities at USDA/CARD supported SMEs

Improvement of wine tasting facility for hosting tourist/visitors

Areni winery in Vayots Dzor Marz was supported with implementation of Agritourism initiative. The project involves renovation and furnishing of the tasting room . The capacity of the new facility will enable to host around 200 tourists a day.

Today, the company has in average 25 visitors a day and they spend about \$150 at the winery. Monthly income has increased by \$4500.0 or additional \$54,000 cash per year without any distribution and marketing expenses.

Improvement of tasting facility of Arid Goat Breeding Center

ARID goat breeding Center has been supported with development of Agritourism capacity. The landscape has been beautified and tasting facility improved for hosting tourists. As a result of the project the center will be able to host 50 tourists a day, creating a sustainable source of income for ARID goat breeding center. This project is in the stage of the development and we will have final data for the report in the end of 2013.

7. New product development and Marketing

AUM bread promotion

CARD specialists assisted “AUM” Ltd in designing and printing of booklets, developing packaging for bread and organizing bar code and logo registration which created opportunities to introduce AUM products in supermarkets and shops.

As a result of the project the product has entered into supermarket chains and the sale of the bread increased by 20% or extra \$15,000 income per year for small production unit.

8. Improvement of cheese quality and increase of quantity due to introduction of quality cheese vats

For dairy demonstration project component, CARD selected “Borisovka” LLC in Syunik Marz and ARID goat breeding center in Vayots Dzor Marz.

The project aimed to assist the company to obtain cheese vats for the expansion of production volumes. CARD also provided on-site technical assistance to the company as well as centralized training to participating processing firms and their employees. On-site technical assistance and training were conducted by Dutch expert for 7 employees of “Borisovka” LLC.

In addition, CARD experts provided continuous training and consultation on mascarpone, ricotta and mozzarella cheese productions.

As a result of assistance Borisovka LLC has increased by 30%. New types of cheeses have been produced and test market organized.

Due to this intervention Barisovka LLC and increase purchase of milk by 40 % reaching 5000 litter a day.

This resulted additional 30 tons of cheeses produced over past 120 days or extra \$156,000.0 income to the cheese company.

As a result of this intervention about 34 new farmers has started to supply milk to the company and earned additional \$260.0.

CARD Progress Report 2011-2012



9. Provision of cheese moulds for Emmental cheese production

CARD supported Ashotsk cheese plant in acquisition of cheese moulds for yellow semi-hard cheese production. Cheese moulds ideally suited for use in fully automated production processes as well as in a manual traditional way of cheese making.

The usage of Kadova cheese moulds extended shelf life of the produce up to 40%, improved cheese draining by 50%, which led to production volume increase up to 15% or extra 15 tons of cheese or additional \$93,000.0 to the cheese producer.

10. Dried Fruit Production

Six fruit drying facilities were supported to increase their efficiency of dried fruit production through introduction of new technology - electric or natural gas powered shelf driers.

The driers have been used by beneficiaries to dry fruits and berries regardless the weather conditions which resulted in:

- Improvement of the quality of dried fruit;
- Improvement of capacities for the food safety through final washing and drying are established;
- Enhancing exporting possibilities due to improved quality and increased quantities;
- Training of 30 farmers on dried fruit production technologies who are going to adopt the same technology in 2013.
- Establishment of capacity to produce additional 18 tons of high quality dried fruit.
- Decrease of losses during dried fruit production and own fresh fruit marketing are at least 50%.

The quantity of dried fruit produced by beneficiaries increased in average by 30%. That is in average 2 tons per beneficiary, or additional \$9400 has been earned (or \$56,400 for 6 farms) per farm in very short period of time. (The project is still ongoing because the fruit drying season will end in the mid October).



CARD Progress Report 2011-2012