

- Trainings were in Toguz Bulak village, Tup Rayon on canning mushrooms, cooking of the strawberry jam, red currants.
- Trainings were in Barskoon village, Jety-Oguz Rayon for the production of apricot juice with pulp, conducted training in the use of the pH meter and a refractometer.
- Trainings were in Sary Kamysh village, Ak-Suu Rayon production of sea buckthorn and barberry pureed with sugar. Also, at the request of the volunteer members of the CBO trained cooking rose petal jam.
- Trainings were in Chelpek village, Ak-Suu Rayon for the production of rose petal jam, rose, barberry, buckthorn from the packaging into a small container provided by the Office of Karakol OVOP. Information for Training in the table.

The training covered the following topics:

- Sanitary rules and regulations in the manufacture of food products sold in order to implement;
- Personal hygiene, sanitation equipment. Food safety.
- The choice of recipes: technical and technological aspects of production;
- Study of applicable standards. The purpose and importance of technical conditions for the admission of raw materials.
- Quality control
- Drawing process flow diagram of production;
- Control during manufacture. Compliance with process parameters. Control of the finished product. Control of nonconforming goods or products. The study of "damage of production."
- Accounting for raw materials and finished products.
- The calculation of production costs and consumables. Pricing for sale. Contribution margin.

For each type of product at the end of the material was compiled with photos, information is given on Kyrgyz language. JOCV Volunteer Sayaka-san this material is also translated into English. All these materials are given in the Appendix. For each type of food was a practical demonstration of the production of garden and wild fruits and berries, with recipes in the program of training, at-approved visits and CBO participants were distributed additional information, recipes for other species of conservation preserves. All recipes were adapted to the conditions of production in rural areas with maximum use of local raw materials. The first part of each day of training was devoted to familiarization formulation technology of jam from fruits and berries, and the second - the practical implementation of knowledge. Depending of the event sometimes training and practical work carried out in parallel to maximize the time available.

The training paid much attention to the practical and individual exercises, as it is through the practice of participants to acquire skills for the proper selection of ingredients and recipes for the use of conservation preserves of fruit and berries.

Among the participants during the training was an interactive exchange of experience and knowledge in the field of conservation preserves. The most successful practice - it's boiling jam from rose petals and walnuts. Most of those have been learned, which proves that the evaluation feedback, and practical demonstration of production of pi.

2. Which set of the training problems caused the greatest interest?

The most interesting topics for participants were:

- The technology of production of walnut jam and rose petals,
- The technology of production of jam - rose, rubbed with sugar, hawthorn.
- Modes of sea buckthorn berries, blanching, and barberry;
- Technology of vegetable caviar, garlic paste;

In addition, the greatest interest was aroused by questions such as:

- Mode of sterilization at home
- Presentation of products, packaging, labels. Providing packaging and the possibility of purchasing small quantities.
- Implementation of the finished product

3. What ideas and suggestions made by participants during the training and after

Participants noted the high efficiency of trainings conducted. Trainings are practical in nature. It was suggested to conduct the training in this area and conduct monitoring visits to specialists, as well as training data showed one of the good ways to increase family income, subject to the development of production facilities for the production of jams of wild fruit and berries, the realization of output urban and rural populations. According to the participants of trainings and workshops have been timely and useful. The participants took an active part in achieving these goals.

All participants were very interested and asked many questions about the widespread use of technology, conservation of jam from fruits and berries at minimum cost and rural conditions. At the end of the training, participants were able to get answers to questions about production of food products from the unique native raw materials. Participants were given a hard, but everything they came up with great interest and enthusiasm.

4. What problems were identified in the process of organizing and conducting trainings?

It should be noted that some of the CBO is not able to participate in training, especially at the beginning of the work was difficult to collect. For example, when the CBO has traveled, and announced that there would be training, some CBO-heartedly endorse this news. During the first training on cooking jam walnuts Bulan Sogotu attended only three members of the CBO. By results of the calculation, many CBO's now ask to teach cooking jam walnuts. Unfortunately, when the participants expressed their desire to participate, or even to hold them, raw material was not suitable for cooking jam, because jam nuts to fit the stage of breast maturity. This is an important condition for a successful business: time to procure raw materials and their recycle. Virtually all manufactured products are seasonal in nature. They need to keep in mind when planning what they will do. For example, CBO Ak-Suu CBO indicated a desire to produce rose jam, rose almost as already faded. CBO "Dary Prirody Issyk Kulya" Dabaeva Rysboldu this training was postponed several times, did not return to phone calls. When I still was able to meet with her and set a date for the training and I arrived to conduct the training (come with JOCV volunteer from Ak-Suu) she was not ready: Did not invite anyone, were not ready materials, citing the fact that she thought that must first be discussed.

You should also be taken into account that the members of CBO - are residents of the village, who have other urgent care (care for livestock, irrigation, mowing grass, etc.). So naive to believe that we should be constantly engaged in the production. This is a companion business, which is only in its infancy.

One obstacle was lack of confidence at the beginning of the project to an expert. Participants CBO's silent their problems, or trying to hide. This refers to the previously organized CBO. For example, "Adilet" (Jergez), "Bereke" (Chon-Kyzyl-Suu), "Kok Jar" (Boz Beshik). Production of unstable quality, there were some inconsistencies in the manufacturing technology, misunderstood earlier acquired knowledge (e.g., blanching - duration is not observed, the temperature conditions, etc.). But in the process of mutual understanding was reached with members of the "Adilet", "Kok Jar"

Due to the fact that the CBO had expressed a desire for additional training, in my opinion, it is necessary for this project, I will spend two more training in the Ak-Suu Rayon in addition to what has been done.

One of the issues on which to run the newly created association is, in my opinion, software packaging and auxiliary materials. As everyone knows, CBO - is beginning businessmen. Although during an earlier round stud tour participants were familiarized with the suppliers of packaging, labels, etc. Nevertheless, in the course of this work had to explain to the examiner again, where you can buy, where to look for some information. Participants for some reason do not want and can not do research on your own packaging, order labels, pectin. This is because our market is impossible to buy a small batch of glass jars, or very unfavorable to order a small number of labels. This service is undeveloped or underdeveloped. These procedures are burdensome for rural CBO. Therefore the union of the association is justified. Necessary to support the business organization at the beginning and continuing systematic training. It should be noted about the role of assistance in the development of JICA volunteers food CBO. One of the problems - lack of knowledge on the basics of microbiology, it is related to food safety. Failure to understand the specific terms of food security, according to some specifications. Therefore, a consultant on food safety – sanity doctor from Karakol Hafizova R, have been developed for the elementary rules of hygiene, which I distributed to course participants.

Evaluation of training and recommendation

1. Evaluation of training and advice on how to conduct

According to the results scorecard can be said that the theme of the training was very relevant and helpful in improving the capacity of entrepreneurs engaged in manufacturing in the village, increase knowledge and capacity of their activities in the countryside. Evaluation sheets showed that participants gave a good estimate of the training content, methods of training, and personal and professional abilities of the coach and the organization of training.

Suggestions have been made to JICA on a large utility and feasibility of such training and dissemination of such trainings in the future. Participants noted that a properly chosen method of presenting knowledge and skill that contributed to the perception of a good topic of training.

2. Remark and suggestions for improving the organization of training

The suggestion was made to help the project to acquire the necessary instruments and apparatus: refractometer and pH meter, thermometer, in order to obtain products of stable performance. This issue has been resolved in the course of this job. JICA has purchased three refractometer, and three of the pH meter for the four districts of CBO. The devices were distributed and used in the production.

It should be noted that the CBO products, produced on primitive equipment. For example, use the manual seaming twist caps. At the same can not be guaranteed leak packaging, which could lead to the penetration of outside pathogens will lead to growth of molds of the product. Nor is it the air of the room in the bank, in which sterility I'm not sure. The product is taken from the jar with his hands, at this stage, which is unacceptable; you can not sterilize your hands properly. Or used when cooking with a pan tile. The cause of browning products of sea buckthorn is a long heating in blanching and cooking (caramelization reaction). But the uniqueness of sea buckthorn products to maximize preservation of vitamins, mineral carotenoids.

The specifics of food production are that it must meet certain regulatory requirements. CBO, who expressed a desire to take food production, should first carefully read the legislative requirements for food production.

That being said, I would like to recommend the project to assist in providing technical training center with a minimum of specialized equipment in the HACCP quality management system, adapted to domestic production of CBO. Previously, support was provided by the organization of pilot CBO. But, unfortunately, I did not notice the presence of the pilot and CBO Adilet, Bereke least canning machine. This again leads to the conclusion that the need for exemplary technical training center for food CBO. The purpose of the training center: training members of the CBO, the training of new members, demonstration and introduction to food production, development of new unique product, information about food CBO principles of food safety, the construction of new demonstration center in accordance with the DPP (GMP), sanitation and following the rules, which we have not in the country. At the organization of this center can attract financial support from USAID (the actual conducting tenders), EU (project SEDIAPS) provides grant support to associations.

3. Monitoring of the use of the knowledge and skills.

At the end of the training with Bulan Sogotu was held tasting. The purpose of this tasting: to determine what your product is not just good, but the best;

- To know the opinion of others;

Ability to teach, evaluate their product.

For what the participants were asked

- Identify do people like the product or not.
- Compare products from different samples and to evaluate. What is with the nearest store and purchased similar products offered to fill in the proposed questionnaire.
- Expert evaluation. Why was asked to identify the organoleptic characteristics according to the current standard, to determine the physico-chemical characteristics, using laboratory equipment, which at that time already been purchased, and each member of the CBO can use it.

The result of this work was that in my subsequent visits to the participants enjoyed the extended method of evaluating its products, and clearly showed every time in determining the quality of the product, even when I have not looked like. Especially it can be noted about the members of the CBO "Umut" (Shaty village). Also, members of the CBO "Umut" was told that on the show in Kochkor village assessed the quality of their products according to the method 1, offering tasting product, and after tasting some of the products sold.

Very good results were obtained for Private Entity Galiev. The resulting dried paste of good color, bright, attractive, thin layer of smooth pastes, as would the client. Different range of pastes made from a mixture of fruits and berries. Providing technology to preserve the color is applied successfully. The parameters observed rubbing, as this layer shows a smooth pastes. CBO, "Bulan Sogotu." It should be noted activity leader Namazova Guljamal. Making it possible to release a new region for the types of products: jam nuts jam and rose petals. Initially, as an expert were marked inappropriate and crockery cooker for cooking. By the middle of the project were purchased new crockery for boiling cans, gas stove, refrigerator, pots.

On the other CBO activities came to an end of an expert. Make the products was made on the CBO "Malika Issyk-Kul", "Cheber", "Kok Jar" "Yntymak", "Ayan", "Dry prirody Issyk Kulya", "Shirin", "Juuku Syry."

In order to monitor the knowledge gained from training in cooking preserves of sea buckthorn, barberry, rose petals was held by Namazova Guljamal. I participated as an expert in training. It should be noted that the training was very successful, very vividly; the participants willingly shared their experiences and concerns with each other.

No	Name of event	Data	Days	Venue	Number of participants	Trainers	Remarks
Visiting of Jamaats							
1	Visiting of the Jamaats	21-27 May	8	According the location		2	
	TOTAL:		8				
Meetings							
1	Meeting with the Director of Veterinary Laboratory Karakol	22.06.11	1	Karakol	3	1	
2	Meeting with a specialist veterinary laboratory with Kyzyl Suu	23.06.11	1	Kyzyl Suu village	2	1	
3	Meeting with suppliers of glass jars		7	Bishkek and Correspondence		1	
4	Designing of labels		9	Bishkek	2		
	TOTAL:		18				
Trainings and workshops							
1	A technology assessment cheese	04.06.11	1	Juuku Syr Saruu village	1	2	Cheese
2	Drive to CBO, the definition of the required product	16.06.11	1	Bulan Sogotu village	1	1	
3	Boiling jam walnut	18.06.11	1	Bulan Sogotu village	3	2	Walnut jam
4			1	Bulan Sogotu village	2		
5	Rose petals jam	23.06.11	1	Bulan Sogotu village	4	1	
6	Marinating mushrooms	30.06.11	1	Toguz Bulak	5	2	
7	Choosing of mushrooms, strawberries jam, red current berries	01.07.11	1	Toguz Bulak	9	2	
8	Apricot juice	04.08.11	1	Barskoon	6	1	
9	Production of paste, puree for a pastille	05.08.11	1	Karakol	5	1	
10	Marinating cucumbers, garlic, green peas	07.08.11	1	Shaty	5	2	
11	Monitoring and results	08.08.11	1	Karakol	4	2	
12	Sea buckthorn, barberry, rose Pectin	27.08.11	1	Bulan Sogotu	5	1	
13	Preparation of puree, working pH meter	29.08.11	1	Barskoon	6	1	
14	Sea buckthorn, barberry, rose	23.09.11	1	Sary Kamysh	9	1	
15	Vegetable eggs , garlic paste, the calculation of profit margin, and monitoring	24.09.11	1	Shaty	6	2	
16	Possible packaging for dried products	27.09.11	1	Karakol	2	1	
17	Drying, issue a molding	29.09.11	1	Karakol	4	1	
18	Meeting about production	06.10.11	1	Karakol	7		
19	Trainings on hips	07.10.11	1	Chelpek	7	1	
	TOTAL:		19		90		

Assortment		The laboratory tests range count		Q-ty, and physical volumes of jars	Possible capacity for 2012
1	Marinated mushrooms	Yes		70	
2	Black currant jam			50	
3	Walnut jam	Yes		200	5 000
4	Rose petals	Yes		200	5 000
5	Sea buckthorn mashed			300	20 000
6	Rosehip rubbed			150	5 000
7	Barberry rubbed	Yes		300	20 000
8	Apricot jam			70	3 000
9	Apricot juice	Yes		700	3 000 liter
10	Strawberry jam			50	
11	Pickled cucumbers			70	5 000
12	Green peas			20	
13	Vegetable caviar			100	5 000
14	Garlic pasta			15	1 000
15	Dried fruits			100 kg	1 000kg
16	Pastille			200 kg	1 000kg
17	Compot assorti			20	5 000
18	Apple juice			100	5 000liter
19	Cheese			450 units	700kg
19	TOTAL:			2800+cheese+dried fruits	84 000

In the course of the tested products: pickled mushrooms, jam of rose petals, jam nut, barberry pureed, and apricot juice on indicators of food security. The cost of laboratory tests was 870 soms for one product. The study was conducted Hafizova R. Laboratory tests revealed the sterility of canned food. (Results of the analysis in the appendix).

Notification. Possible production in 2012 is subject to incentive CBO (providing container, sugar, aid in the implementation).

A list of consultants engaged for the project

No	Name	Position
1	Hafizova Raya	Sanity Doctor of the Issyk Kul CEZ
2	Slobodyanuk N	Leading specialist of the Issyk-Kul NISH
3	Omorbekov B	Consultant on market
4	Abdyldaev N	Designer
5	Mambetova A	State University Razzakov, Technologist for milk
6	Serkebaeva Ch	Independent Consultant
7	Dogoev D	Engineer food equipment

CHAPTER 4. CONCLUSIONS AND RECOMMENDATIONS

Utilities and public services

Current Situation

It's very sad that some of the CBO use water for industrial needs of the ditch (Shaty).

Cross-contamination

Technological route is not finalized.

Traceability

There is currently no system of traceability. For the production batch number must be used, through which it will be possible to trace the production date and the information that will allow CBO to find out where did fruit and was sent to production.

The quality control system and the output.

Canned fruits and vegetables can be a source of botulism. Not exclude the appearance of mold or fermentation (There is a sad result of molding products Bulan Sogotu).

CBO must be prepared to be able to analyze the occurrence of mold and marriage. This should be done or on the production of, or in the laboratory of Karakol. The presence of botulinum should be checked by the Office of the State Sanitary and Epidemiological Control - the only responsible body responsible for checking the quality of the finished product.

Regular tests, such as solids content by hydrometer Brix, acidity exponent and check the temperature should be within the quality system.

System should be used in output (quarantine!), especially in the initial phase. Must be under quarantine, during which products will be checked for gas evolution.

CBO do not know much about the rules of personal hygiene - **there is a need to promote personal hygiene all the time.**

You can produce color booklets on hand washing, good hygiene practices and to hang in the room.

Organic production

Demand for organically produced food is increasing. CBO or the Association shall conduct a marketing analysis of the market for the product and determine the range and volume production possible, whereby should develop their production. OVOP products can qualify for organic certification.

CHAPTER 5. GENERAL CONCLUSION

The value of the information provided during the project, is very noticeable, given the fact that the food industry and regulation in Kyrgyzstan is experiencing a period of transition to preventive measures in food safety (GMP / HACCP), which will be widely used in food industry. Food CBO are free to apply their experience and knowledge into practice, thus preserving the original properties of organic raw materials to produce safe and quality products. In implementing the above measures, training were useful result of the compilation of knowledge on the block diagram of the technological process, the definition of compounding, the definition of shelf life and food safety knowledge on sanitation and hygiene production. Also, the participants gained knowledge on the calculation of profit margin, price-setting to implementation.

Training revealed differences in knowledge among participants. The lack of some important aspects was observed among participants on internal factors such as mode of sterilization, the pH environment, food safety risk assessment. Farmers also need to undergo appropriate training for each technological step above the production of canned food. Great attention should be paid to the issue of safe products, the introduction of quality control (none of the participants did not know about HACCP system!). Training or a seminar on quality management system is necessary to spend more.

Recommendations for strengthening the capacity of CBO:

- Assist in the acquisition of simple sealing machines, homogenizers, sterilizers;

- Develop and complete technological documents (rules, instructions) for the production of unique products, covering the entire food chain, conditions of transportation, waste diversion, water supply, storage and staff training in hygiene, taking into account the issue of liability of food manufacturers. The document clearly paints the responsibility of food producers on hygiene and food safety. This information must be step by step, as currently food CBO are not ready to accept the information provided at a time.
- To provide technological support for the introduction and use of these documents;
- Trainings and seminars with good results, considering that they were not ad hoc, but it was a series of training sessions. In the future it is necessary to conduct training (training, exchange of experience, stage tours) is constant.

The future of current knowledge on the Food preservation depends on the understanding that the food can be "engineered" food technologists and manufacturers in such a way as to prevent microbial growth, preserve the original properties as unique products. If we use a multivariate approach to internal and external factors to control the food environment microbiological growth along with the implementation of preventive hygienic measures, we will be able to extend the shelf life of food products, improve food safety, which ultimately will improve the competitiveness of Kyrgyz products in the global international market.

APPLICATIONS

1. Report on visits
2. Report on Training
3. Specifications
4. Processing instructions
5. Some recipes
6. Booklets on quality and standards: "International standards for quality assurance and food safety" in Russian and Kyrgyz languages; "Food safety rules", "Additional biological requirements and Genetic Engineering information"
7. Safety information. General provisions