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FEASIBILITY STUDY

POTENTIAL OF ORGANIC PRODUCTS PRODUCED IN TAJIKISTAN

CENTRAL ASIA

2012

CUSTOMER OF THE PROJECT

This feasibility study was developed and replicated with the financial support of the **European Union** in the framework second phase of "**Central Asia Invest II**" Program commissioned by the project "Integrated approach to the promotion of the Central Asian small and medium-sized enterprises for processing of nuts, dried fruit and honey", which is implemented by **Hilfswerk Austria International**.

The sole responsibility for the content of this publication rests with the organizations **Hilfswerk Austria International** and **SAS Consulting** and may not reflect the views of the **European Union**.

Hilfswerk Austria International – an Austrian non-profit charitable organization promoting international cooperation, has been operating in Central Asia since 2001, performing the projects in the social sector and rural development programs, support for small and medium-sized businesses and other priority directions.

PROJECT EXECUTOR

Public Organization "Sugdagroserv Consulting" – a consulting company whose main activity is: providing agricultural consulting and information services, research and business development in the agricultural sector.

We provide a comprehensive approach to information and consulting services of agribusiness representatives: from farmers to processors, wholesalers, input suppliers, as well as all other parties having an interest in the agricultural sector.

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I. ABBREVIATION

AG	Aktiengesellschaft, Joint-Stock Company
AMA	Agrarmarkt Austria
CANDY	Integrated approach to the promotion of the Central Asian small and medium-sized enterprises for processing of nuts, dried fruit and honey
CFS	Catering and Foodservice Sector
DAC	Development Assistance Committee
ECOGLOBE	local authority for certification of organic production in Armenia
EU	European Union
EU Regulation	European system of regulation in the field of organic agriculture
FairTrade	Fair Trade
FDB	Danish consumer cooperative community
FiBL	Forschungsinstitut für biologischenLandbau, Research Institute for Organic Agriculture
FIEC	Foundation for ecological culture integration, Kazakhstan
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit, German Agency for International Cooperation
GfRS	Gesellschaft für Ressourcenschutz, Society for the protection of resources
GOMA	Global Organic Market Access
HEKS	Hilfswerk der evangelischen Kirchen Schweiz
IBS	IFOAM Basic Standards
ICCO	Interchurch Organization for Development Cooperation
IFOAM	International Federation of Organic Agricultural Movements
IMO	InstitutfürMarktökologie
IOAS	International Organic Accreditation Service
JICA	Japan International Cooperation Agency
LEIA	Low External Input Agriculture
NPOP	organic agriculture regulation system in India
OAS	International Organic Accreditation Service
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
POS	Pacific Organic Standard
PGS	Participatory Guarantee Systems

RGP	Rural Growth Program
SDC	Swiss Agency for Development and Cooperation
SECO	Swiss Secretariat for Economic Affairs
SQS	Swiss Association for Quality and Management Systems
UKROFS	UK Register of Organic Food Standards
UNDP	UN Development Program
UNEP	United Nations Environment Program
UNFI	United Natural Foods Inc.
UNCTAD	United Nations Conference on Trade and Development
USDA	U.S. Department of Agriculture
APC	Agro-industrial complex
WHO	World Health Organization
he	hectare
GMO	genetically modified organisms
DDT	Dichlorodiphenyltrichloroethane (insecticide)
NGO	Nongovernmental organization
OJSC	Open Joint-Stock Company
PO	Public Organization
PF	Public Foundation
SAS	Sugdagroserv
CIS	Commonwealth of Independent States
ACSC	Agricultural commodity and service cooperatives
USA	United States of America
FS	Feasibility study
ths.	Thousand
FAO	subsidiary of the UN Food and Agriculture Program
SA	South Africa

II PREFACE

Organic farming is an environmentally and economically sustainable form of agriculture. Transition to more intensive and mechanized agriculture, wide use of genetically modified organisms and pesticides has a negative impact both on the environment, human health and on economic and social stability of society as a whole. With maximum use of self-regulating bio-systems, the natural potential of the soil, plants and animals, organic farming can minimize environmental, social and economic risks, and provide an opportunity for rural population to improve their lifestyle, sustainably increase incomes and positively impact on the environment and human health.

Organic farming is a method of intensive agriculture, which is based on the effective use of the whole complex of local conditions and resources. In developing countries, this form of management can be extremely beneficial for sustainable socio-economic and environmental development, since it has low costs and high economic efficiency. The market of organic agriculture products is promising and underdeveloped therefore it opens wide horizons to producers and exporters. Thus, the research of FiBL has shown that organic production has a particularly positive effect on the environment and the economies of developing countries. And in conjunction with the FairTrade certificate the organic production brings the highest and stable income to the farmers in developing countries[1].

The authors of this research have questioned how practicable it is to manage organic agriculture in Tajikistan and whether Tajik farmers are able to obtain sustainable income, which would improve their living conditions due to production of organic agricultural products.

[1] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, page 88.

III ABOUT THE AUTHORS

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ABDULATIB KHALDAROV, an international consultant, expert on production and certification of organic products, works in the Swiss Association for International Cooperation «Helvetas». Abdulatib Khaldarov is the author and co-author of many studies, research papers and publications:

1) "Organic Agriculture", in co-authorship with Ulrich Ansorge, 2004, Jalalabad

2) "Standards of Organic Farming" (EU Regulation), in co-authorship with Ulrich Ansorge, 2004, Jalalabad

3) Manual on internal control system under EU 2092/91 and EU 834/2007 standards. The years 2003-2010, Jalalabad

4) Manual on the export of organic cotton in Kyrgyzstan, 2008, Jalalabad

Abdulatib Khaldarov received higher education in Tashkent Agrarian University of the Druzhby Narodov Order, which he graduated in 1986 with distinction.

IV EXECUTIVE SUMMARY

Despite the global financial crisis, the sector of organic production was unaffected and continues to grow and gain increasing turnover at the moment. Number of countries which increase the area of organic production and consumption grows from year to year. Countries, which didn't know about organic anything few years ago, start to consume and to produce organic products by themselves. Every year grows the number of countries with their own organic legislation, programs of organic agriculture development and support of organic farming.

Differentiated agriculture in Tajikistan could restore and strength the economy by making maximum use of local resources without threatening the environment and the human. The country has all the terms and conditions for organic farming. Many successful projects and initiatives are proof of that. In Uzbekistan already for 10 years Austrian-Uzbek company "Silk Road Organic Foods" successfully produces organic dried fruits and nuts under the brand name "Perlen von Samarkand - Schätze der Seidenstraße". Since last year the company gained 95% of the world market of dried cherries. In Kyrgyzstan, for several years, farmers successfully grow organic cotton, apricots, beans and herbs. International projects support farmers to profitably sell their products abroad.

Tajikistan has great potential for agriculture due to climatic diversity, fertile soil, water conditions and sunny valley. Variety of vegetables and fruits known for their special flavor and vitamins is the particular advantage of Tajikistan.

From one side the challenging situation due to low income and low living standards of rural population, unstable society, effects of civil war, lack of access to the sea, challenging cross-border situation with Uzbekistan, from other side growing demand for environmentally friendly products, growing awareness of healthy nutrition and pure environment - these and many other factors are preconditions for great potential of organic farming in Tajikistan.

Presently the farmers in Tajikistan successfully grow organic cotton. But there is great potential for organic production of various fruits, berries, nuts, legumes and vegetables. In all circumstances, an organic farmer suffers less in comparison with a conventional farmer, but he gets the sufficient higher profit.

Today it is difficult to determinate the potential of organic products in the local market of Tajikistan. Based on the experiences of other countries, the demand for organic products in Tajikistan will continue to grow. The most popular organic products will be baby food, bakery products, fresh and dried fruits and vegetables, wellness teas, breakfast with cereals and dried fruits etc. Tajik producers and processors have to produce high quality organic products to displace the expensive imported inorganic products from the supermarket shelves.

The dried apricots from Tajikistan have no great potential at the world global market since Turkey produces cheap and high quality organic dried apricots and since the European and American customers got used to the flavor of Turkish and Iranian dried apricots. However, the Tajik dried fruits, nuts and honey have potential at the fast-growing and not saturated markets of Russia,

Kazakhstan and other CIS countries, China and fast-growing and developing Asian countries. Particular potential have exclusive organic products or organic technical crops like cotton. Tajikistan should produce and process high-quality organic technical crops and such crops as organic cherries, sweet cherries, buckthorn, pomegranate, etc.

An alternative sales channel for organic products can be the organic tourism which just began to emerge in Tajikistan.

In order to support the positive development of organic production in Tajikistan they need to make some changes in law and regulation of production, processing, sale and export (simplification of procedures, reduction of taxes and duties, promotion of private enterprises). It is also necessary to raise public awareness about the benefits of organic matter, increase farmers' knowledge about the conduct of organic farming, attract investments and create conditions for the emergence of the domestic market.

To maximize profit of Tajik farmers they need to certify their products not just according to the organic standards but also get Fair Trade certification.

1. FEASIBILITY STUDY BACKGROUND

Organic farming is a system of production, which maintains sustainability of soils, ecosystems and people. The system is based on ecological processes, biodiversity and cycles adapted to local conditions, and try to avoid the adverse effects methods. Organic agriculture combines traditions, innovations and scientific advances to benefit from the environment, spread of reasonable relationships and good quality of life for all who are involved in this system.
The organic goods market offers not only organic foods and beverages, but also organic clothing, children's products, cosmetics and medical devices, forage and pet toys for domestic animals, organic furniture, flowers, etc. In late 1990s in Switzerland, Austria, Italy and Germany the first "organic" hotels have emerged, where all food, bedding and other items were organic. However, the main category of organic products continues to be organic food.
All links of organic food-stuff production annually undergo strict certification system. This system inspects both the absence of chemical additives in the production, genetic engineering technology, and a set of other requirements for organic products. For instance, the "organic" domestic animals have strictly regulated area of residence, special feeding stuffs; they have a daily walk in the open air.

Organic products can be recognized due to a special marking on the package. Most of the developed countries have their own sign, certifying satisfaction with methods of producing the products with national requirements. Several signs may appear on the product indicating to the certification by several organizations / countries.

Nowadays organic agriculture is recognized all over the world. It provides answers to a number of questions and problems arising in modern agriculture and in rural areas in general, as well as to the issues related to food quality and health of the population, accordingly. As a multi-functional model, organic farming has its economic, social and environmental goals. It is based on local resources, requires more labor than traditional farming, more care for the environment and produces high quality bio-products.

Refusal from intensive agriculture and transition to organic agriculture is dictated both by environmental and social aspects as well, and is the demand of the market. Well-off families in the developed world are increasingly focused on healthy lifestyles, healthy food, beverages, clothing and clean environment. It mainly concerns organic foods and baby foods.

The growing demand for environmentally friendly products ("organic" foods, textiles, cosmetics, toys, furniture and houses) makes it more urgent, "the return to earth" and the safe use of natural resources. On the one hand, such revaluation of the demand in the international community is determined by the need to more effective use of "the force of nature gifted to us" and constantly rising in price capital investments, on the other hand, the increasing demand for environmentally friendly products.

This study is aimed at assessment of the prospects for organic agriculture in Tajikistan, as well as the expected impact of organic agriculture on the profitability of producers and processors. The results of

this study are the findings and recommendations to Tajik producers and processors on how to achieve their goals, get on the exclusive / international markets and become economically stable and financially independent.

The question of the capacity and profitability of organic production is a prerequisite for this feasibility study (FS).

To understand the extent of feasibility of the organic production and processing of agricultural products, sustainability and effectiveness of this business is for producers and processors, the extent of contribution made by development of the organic production and processing to comprehensive growth of producing and processing sector in Tajikistan, this feasibility study was carried out with the support of the Project "Integrated approach to the promotion of the Central Asian small and medium-sized enterprises for processing of nuts, dried fruit and honey" (CANDY)"[2]. This project is the part of the European Union Program "Central Asia - Invest II", which is aimed at encouraging and supporting of small and medium-sized businesses. In Tajikistan this project is carried out by Tajik representative Hilfswerk Austria International.

The project aims at comprehensive development of the processing sector in Central Asia by strengthening the capacity of specialized business - intermediary organizations to improve the quality of services offered to small and medium-sized enterprises, and promoting regional integration in Central Asia.

[2] Project number DCI-ASIE/2010/256-682.

2. REASONS FOR THE TRANSITION TO ORGANIC AGRICULTURE

2.1. PRECONDITIONS FOR ORGANIC AGRICULTURE

The concept of sustainable development that covered different spheres of human field of activity could not lay aside the world agriculture. Direct evidence for this is the phenomenon of organic agriculture. The problems of environmental management and the providing the people with safe health foods are especially important in today's society. In the 20th century new technology enabled to succeed in significant improvement of productivity in agriculture, reduction of production cost value, improvement of the quality and increase of products storage life. However, many aspects of these achievements remain insufficiently studied; they can be hazardous to human health and can cause irreversible changes in the environment.

In 1970-80s a number of negative consequences of using the pesticides and other chemicals in agriculture began to emerge. It became apparent that pesticides kill beneficial insects, and sometimes present excellent conditions for breeding of new pests. When applying pesticides, the farmer runs the risk of health problems. It is estimated that every year 200 thousand people die poisoned by agricultural chemicals. A part of the pesticide remains in foods and reaches human body. Many of them are very resistant to degradation (e.g., DDT), getting into the environment, they somehow find themselves in the human body, showing the negative effects only over time. Some pesticides can cause chronic diseases, abnormalities in newborns, cancer and other diseases. Pesticides contaminate groundwater and are contained in drinking water, thus their widespread may become uncontrollable. The mentioned circumstances led to the fact that some pesticides are banned in developed countries but in developing countries their use is virtually unlimited.

In the 1980s of the last century the genetic engineering technologies have appeared in the world, which have been immediately applied in U.S. agriculture, and then in other developed and developing countries. Currently a number of discussions are held about the safety of transgenic plants and animals in agriculture. According to the international concern Monsanto, a leader in the field of genetically modified plants by genetic engineering techniques, nowadays there is no scientifically confirmed case of the negative effects of transgenic plants on human health, despite a nearly 20-year history of use in the U.S. and other developed countries. However, many experts believe that the time passed is not enough to be able to draw definitive conclusions about their safety; it is possible that the negative consequences will affect future generations.

Since food production in many developing countries failed to keep pace with population growth, the farmers-producers increasingly began to resort to the principles of intensive farming, which had a negative effect on productivity of the soil, the environment and directly on their health. Many studies have proved the damage to the environment caused by intensive agriculture in developing countries. Thus, soil erosion has led to low productivity, salinity and inability of soil to retain water. Damage to the segment caused siltation of reservoirs, increase of the costs for the maintenance of channels and habitat degradation. Excess irrigation led to the depletion of groundwater, water-logging and salinity; soil compaction led to loss of productivity. Enhanced pest control, weed, fungi, pests and diseases

control caused rapid increase in their numbers and increased resistance to drugs. Intensive use of agrochemicals harmed to the health of the people who worked in the fields and to those who lived nearby (through air pollution, drinking water, etc.).

Similar results of intensive farming can have profound consequences in the social community. The productivity of land, income and social cohesion are closely linked in the rural areas anywhere in the world. Where the land is unproductive, there is a depopulation of the rural population, which may further exacerbate the productivity and change the age and sex balance of the community.

These and many other examples of manifestations of the problems of modern food production methods indicate that people are increasingly forced to think about the quality of food consumed. In developed countries, where the consumers have the financial ability and can afford to pay for their health and environmental safety of the planet, a new area called "organic agriculture" has been actively developing. The systems close to the organic farming emerged, like as Permaculture and the Low External Input Agriculture (LEIA), the sales of Fair Trade products are rapid increasing.

Thus, first supermarkets of Great Britain commenced offering organic products in early 1980s. In 1997 one supermarket sold 182 organic production lines amounting to 20 million pound sterling, which comprised 7% of its proceeds.[3]

Similar extension occurred at the same time in majority of European countries. In the USA in 1997 retail sales reached 4,7 billion US dollars continuing their growth for 25% per annum during the last five years. Whole Foods Inc., the hugest net of organics supermarkets in the USA, has over 50 stores throughout the country with sales volume of over 1 million US dollars, whereas in the past the market demand was the problem of organic projects, but now the market has become the primary stimulus for many initiatives.

[3] Information from unpublished study of Soil Association

2.2. ADVANTAGES OF ORGANIC AGRICULTURE

Consider the advantages that organic farming brings to all the participants of agricultural process, environment and society.

Advantages for producers:

- reduction of costs by saving on pesticides and mineral fertilizers, instead the use of organic fertilizers, beneficial insects, tinctures and decoctions of herbs,
- increase of the income from premiums for organic products,
- organic matter provides an outlet for exclusive / international markets the health of the farmers themselves and future generations,
- reduction of the risk of bankruptcy, since a farmer produces several crops, keeping crop rotation. If a culture does not justify itself, then the farmer will be able to cover the costs at the expense of another culture,
- management of cash flow due to rotation, for example, income sneaked early vegetables first, then wheat and cotton. When monoculture it is not possible,
- regulating the working labor, since the time of the different cultures and the amount of labor expended differ. Thus, the farmers can manage on their own, growing several crops in succession. When monoculture this is not possible

The advantages for agriculture:

- Restoration of natural balance,
- The growth of beneficial insects in number,
- Increase of the diversity of cultures,
- Ensuring of long-term soil fertility,
- High quality of agricultural products,
- Reduction of the number of pests and diseases
- Independence of the production system,
- The stability of production.

Advantages for the environment:

- Reduction of environmental pollution,
- Reduction of dependence on non-renewable resources,
- Reduction of soil erosion,
- Protection of fauna
- Flexibility and elasticity of the agricultural ecosystem,
- Compatibility of the production with environment.

Advantages for society:

- Improvement of the health,
- Increase of the level of education,
- Sustainability of community
- Reduction of migration of the rural population
- Gender equality
- Increase of employment,
- Quality of work performance.

Advantages for the economy:

- Strengthening of the local economy,
- Independence of the economy,
- A guarantee of income,
- Increase of the return on investment,
- Reduction of the risk level
- Increase of investment.

Advantages for organizations:

- Cohesion
- Stability,
- Democracy of organizations,
- Capacity building.

3. METHODS OF FS

This feasibility study is based on the study of primary and secondary data from published and unprocessed data materials, including interviews and contacts with key personnel, as well as practical experience of organic farming initiatives in Tajikistan and Kyrgyzstan. The study was conducted in November - February, 2012 and published in February, 2012.

Stages of the study:

- Collection and analysis of documents and reference materials
- Analysis of secondary information on the Internet and publications abroad
- Contact with organic certification programs in Europe and Central Asia
- Contact with advisers and consultants who work in this area
- Contact with international organizations and projects on development,
- Interviews with organizations in the organic production in Uzbekistan and Kyrgyzstan,
- Interviews with key staff
- Collection and analysis of the results of similar researches in developing countries and in Central Asia in particular,
- A survey of organic and traditional farmers in Tajikistan and Kyrgyzstan,
- Lessons learned and recommendations
- Summarizing and conclusions.

The method of data collection:

Monitoring of open sources, specialized publications, the data of leading specialized agencies, international and national statistics data on overall economic growth of the organizations, monitoring of trade sites and specialized companies, the actual synthesis of expert evaluations.

This study is designed for a wide range of readers, ranging from producers and processors who are interested in the transition to organics, to international organizations interested in promoting organic agriculture in Tajikistan, as well as foreign importers interested in new suppliers of high quality organic products certified according to European and other standards.

4. INTRODUCTION TO ORGANIC AGRICULTURE

4.1. HISTORY

It is quite difficult to determine when organic agriculture first emerged. Its concept existed before the invention of synthetic agrochemicals. However, as an independent branch of organic agriculture it has been formed in the early 20th century. The concept of organic farming was firstly introduced by Lord Northbourne, an expert on agriculture at the University of Oxford, used in his book "Take Care of the Earth" published in 1940.

One of the founders of organic agriculture was Albert Howard, the British botanist. His book "Agricultural Testament," published in 1940, had an enormous impact on many scientists and farmers. Howard described the negative impact of chemical fertilizers on the health of animals and plants, proposed a system of soil fertilizing, based on the use of composts from crop residues and manure.

In 1939 Eve Balfour under the influence of Howard's work put the world's first scientific experiment on agricultural lands in the UK to compare traditional and organic agriculture. 4 years later she released her book "Live Soil". The work was widespread and has led to foundation of today's one of the most well-known organizations for organic farming – Soil Association.

An important contribution to the development of organic agriculture has been made by Rudolph Steiner, who created the first comprehensive work devoted to organic farming: "The Spiritual and Scientific Fundamentals for Successful Development of Agriculture".

In the United States in 1943 Louis Bromfield published his book "Pleasant Valley", which describes his agrarian experience in Ohio, USA. Bromfield was an active supporter of the agricultural practices that promote soil conservation, besides he supported most of Howard's ideas. In his book "Farm in Malabar" published in 1948 Bromfield described his experience of organic farming on his farm.

However, the most powerful carrier of new ideas in the United States was Jerome Irving Rodale. Rodale was one of the first who popularized the term "organic agriculture". In 1942 he founded the magazine "Organic Farming and Gardening". In 1950 Jerome Irving Rodale founded another magazine - "Prevent", which set out the philosophy of organic agriculture. In the 1954 the editions were managed by Rodale's son Robert Rodale. Unlike his father, who focused on the fact that organic products are the most useful for the health, Robert Rodale regarded the social and environmental benefits of these products. In 1971 Robert founded the Rodale Research Center, which is now called "Rodale's Institute of Experimental Farming".

Organic agriculture in Japan has started to develop about 100 years ago. An important contribution to its development was made by Japanese philosopher Mokichi Okada. He paid particular attention to the so-called "nature farming", the principles of which largely correspond to the modern organic farming.

Japanese farmer Masanobu Fukuoka, born in 1913, is worthy to be referred to one of the initiators of "organic farming". Fukuoka practiced the new method of farming at his farm, which he called "non-arable, without fertilizer, without weeding, without pesticides, and doing-nothing method in natural farming". His most famous books are "Natural Approach in Agriculture" and "One Straw Revolution".

4.2. CERTIFICATION

In the middle of the 20th century adherents of organic agriculture began to form groups to share experience and new ideas. In 1940s to make the product organic, it was required to become a member of such group of the farmers.

In 1924 the first sign of organic agriculture Demeter occurred, which is widely known in our time. In 1967 Soil Association published the first standards for organic agriculture. Since the late 1970s a lot of certifying organizations have been founded in the USA and Europe. In the middle of 1980 certifying companies like Skal (the Netherlands), KRAV (Sweden), Farm Verified Organic (USA) have been established.

In the USA the first laws on organic farming were issued in Oregon (in 1974) and California (in 1979). In 1990 the USA issued the Organic Food Production Act, however, all the requirements of organic agriculture have come into force only in October 21, 2002 under the auspices of the US Department of Agriculture (USDA).

In Japan, the first laws in the field of organic agriculture (JAS) were issued only in April 2000. In 2001 organic agriculture regulation system was formed in India (NPOP), in 2005 – in China, in 2006 – in Canada. The requirements for organic products do not exist in Tajikistan yet. In Russia they are still under development. Organic products in the countries, which do not have their own standards of organic agriculture, can be certified by foreign authorities with an opportunity to use their mark on the packaging.

In 1972 there a non-governmental international organization International Federation of Organic Agricultural Movements (IFOAM) was established. In 1980 IFOAM published its first standards that are essential for creation of state standards and inspection systems. Many organic products with different signs of certifying authorities can additionally have the inscription IFOAM ACCREDITED, which proves execution of basic international requirements in the field of organic agriculture, though this is not mandatory.

In 1963 various governments have established an international organization Codex Alimentarius Commission, a subsidiary of the UN Food and Agriculture Organization (FAO) and World Health Organization (WHO) to develop food standards. In 1999 this organization released the standards of organic agriculture Codex Alimentarius Guidelines for farming and in 2001 the standards for livestock production have been supplemented.

In 1991 the European system of regulation in the field of organic agriculture EU Regulation 2092/91 has come into force. In January 1, 2009 it was replaced by a new version of EC 834/2007, thus abolishing the EU Regulation 2092/91.

Thus, three international standards – EU Regulation 2092/91 (EC 834/2007), Codex Alimentarius Guidelines for organically produced food 1999/2001 and the IFOAM Basic Standards (IBS) have been adopted throughout the world. State standards and regulations of organic food production are issued on their basis, which enable to take into account physical and geographic, social and economic

characteristics of different countries. The three above-mentioned systems are quite similar, but they have some differences.

Currently most countries have their own system of regulation in the field of organic agriculture, which includes not only the requirements to the methods of production, but also the processing, packaging, and storage of the products.

4.3. FAIR TRADE

One of the most dynamic modern areas of "sustainable" agriculture has been the movement of "fair trade» (Fair Trade). This movement advocates fair standards for international labor, environmental and social regulation of agricultural products and handicrafts. In particular, this movement emphasizes the export of goods from developing to developed countries. The system of production and sales of these products in a way to help farmers in poor countries receive a decent wage for their work. For optimum cost structure of products minimizes the number of intermediaries between the farmer and the buyer. Production of goods "fair trade" occurs in developing countries (the poorer countries of Asia, Africa and Latin America), and only for certain groups of products, including tropical fruits, tea, coffee, chocolate, etc. - all products are certified and labeled .

The direction of "fair trade" was born in the 50s of XXs century, but rapid development has been only in this century. Sales of fair trade products in 2007 totaled 2.3 billion euros in 2006 was estimated at 1.6 billion euros. The growth of coffee production areas "fair trade" in 2006 was 53% Cocoa - 93% of bananas - 31%, tea - 49%.

I'm not only includes requirements for the methods of production, but also the processing, packaging, and storage products.

Fair Trade products market is concentrated in 19 countries; sales in other states are negligible. Almost a third of all products sold in the U.S. (500 million euros), and 60-70% - in European countries. Western Europe is leaders in terms of per capita. With a large margin from the other countries in the first place is Switzerland, where annual sales are about 20 euros for 1 person, followed by Great Britain, Luxembourg and Austria. The maximum rate of increase in sales in 2006 was recorded in Spain, where sales for the year increased by 63 times, but the total is considerably inferior to other countries in Western Europe (5 euros for a thousand people). The minimum growth rate (1%) in Europe is typical for Switzerland, which is apparently associated with the approach to saturation of the market.

Food "fair trade" and are often produced in compliance with the requirements of organic agriculture. In recent years, more and more consumers try to choose products that are labeled with these two directions simultaneously. As a result, about 80% sold at the present time, organic coffee is certified "fair trade", a similar situation with organic chocolate, tea and some other foods.

Sales of Fair Trade products in the world are very small and it is less than 0.1% of all food products. However, its rapid growth demonstrates the concern and responsibility of public issues of social development.

5. WORLD PRODUCTION AND CERTIFICATION OF ORGANIC PRODUCTS

5.1. ACTUAL SITUATION OF THE WORLD ORGANIC AGRICULTURE

According to the latest review of the FiBL / IFOAM - The World of Organic Agriculture[5], - statistical information on organic agriculture is now available in 160 countries, in 6 countries compared to 2008.

Organic farming involves 37.2 million hectares (including the transition lands[6]) in the world. Regions with the largest areas of organic agricultural land are located in Oceania (12.2 million hectares), Europe (9.3 million hectares), and Latin America (8.6 million hectares). Countries with the largest area of organic agricultural land are Australia, Argentina and the United States.[7]

Currently 0.9% of agricultural land in the world is organic. However, in some countries, land for organic agriculture take up to 36% of the total agricultural area, such as the Falkland Islands, Liechtenstein - 26.9% and in Austria - 18.5%. Total in seven countries of the world organic area is occupied by more than 10% of agricultural lands of the country.[8]

In compare with 2008 organic land increased by two million hectares, which corresponds to 6% increase. The strongest growth was in Europe, where the area has increased by almost one million hectares. Strong growth has been distinguished in certain countries - Argentina, Turkey and Spain. In addition to the agricultural land, wild territories are also organic. Since 2008 the area of land has increased by 10 million hectares, reaching to 41.9 million hectares[9].

The number of producers in 2008 increased by 31% (mainly due to a significant increase the number of producers in India) and amounted to 1.8 million, 40% of the total organic producers is in Asia, followed by Africa and Latin America, 28% and 16% respectively. Countries with the largest number producers: India (677.257), Uganda (187.893) and Mexico (128.862).[10]

Nearly two-thirds of the organic agricultural lands of the 37.2 million hectares in 2009 were occupied by pasture (23 million hectares). The area of cultivated land under organic farming increased by 13.2% in compare with 2008 and amounted to 5.5 million hectares (15% of the organic agricultural land). Most of this land is used for crops, including rice (2.5 million ha), forage (1.8 million hectares) and vegetables (0.22 million hectares). Permanent crops make up about 6% of organic agricultural land (2.4 million hectares). The most important crops are coffee (0.54 million hectare, accounting for one fifth of the arable land organic), olives (0.49 million hectares), cocoa (0.26 million ha), walnuts (0.2 million ha), and grapes (0.19 ha).[11]

5. Data for the end of 2009

6. Transition lands are such lands where use of chemicals and other auxiliary substances are prohibited at conducting organic agriculture, but for the time being certified as "transitional", as for the first two or even three years the land is given a status of "transitional" and after a certain period of time the land can be certified as organic one

[7] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011.

[8] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011.

[9] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011.

[10] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011.

[11] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011.

Table 1: Key indicators of organic agriculture in the world. Organic agriculture 2011 and leading countries.

Indicators		Leading countries 2009
Countries with data on certified organic agricultural land	2009: 160 countries 2008: 154 2000: 86	
The area under organic farming in 2009	2009: 37,2 million /ha 2008: 35,2 million hectares 1999: 11 million hectares	Australia – 12 million/ha Argentina – 4,4 million hectares USA – 1,9 million hectares
Number of countries with more than 5% (10%) of the area under organic farming	2009: 24 countries 2008: 22 countries 2009: (7 countries) 2008: (6 countries)	Finland – 7,8 million hectares Brasil – 6, million hectares Cameroon - 6 millionhectares
Producers	2009: 1,8 млн. 2008: 1,4 млн.	India – 677.257 Ughanda – 187.893 Mexico – 128.862
The market volume of organic agricultural products	2009: 54,9 billion / 40 billion euros 2008: 50,9 billion dollars. 1999: 15,2 billion dollars.	US – 17,8 billion euros Germany – 5,7 billion euros France- 3 billion euros
Number of countries with the legislation on organic agriculture	2010: 74 countries 2008: 73 countries	
The number of organic certifiers	2010: 523 2008: 489	Japan , US, Southern Korea
Number of branches / offices of IFOAM	1.1.2011: 757 2008: 734 200: 606	Germany - 98 US – 45 India – 44

Source: FiBL and IFOAM; for total global market: Organic Monitor; for certifiers: Organic Standard/Grolink.

5.2. RULES AND REGULATIONS

2010 was a year of consolidation in the area of standards and regulation.[12] This year had been implemented the new EU rules on organic production, and Canadian standards. For the first time in the world a bilateral agreement was signed between the equitable regulated organic systems of Canada and the USA. Malaysia has adopted a regulation, as well as a large number of countries and especially Africa is in the process of developing legislation in the field of organic agriculture. According to a study on organic standards and regulations FiBL, the number of countries with organic standards has increased to 74. 27 countries are in the process of drafting legislation.[13]

In most regions there was a slight increase in the number of certification bodies, but in some European countries, their number has increased dramatically since the international certification bodies are branches that have been approved, such as the EU or local government. The total number of certification bodies is 532, compared with 489 in 2009. Most certification bodies are in the European Union, the USA, Japan, South Korea, China, Canada and Brazil.[14]

In 2009, FAO, IFOAM and UNCTAD launched the project on access to the global market of organic matter.[15] Action Plan in 2010 included the promotion of cooperation in organic agriculture in Asia and in Central America, as well as advice on the practical requirements of organic standards.[16]

A growing number of organic producers around the world are checked at the local market through Participatory Guarantee Systems.[17] Currently, initiatives are spread across continents, with Latin America and India as leaders in terms of the involved farmers / farms. In 2010 important steps were taken to increase the official recognition of PGS governments, especially in Brazil and India.18

The organic sector is faced with a growing number of other standards and brands competing in "green" and ethical consumer market segments. While sales of certified organic products have grown, the sector have to deal with new entrants to the ethical and other requirements.[19]

A recent study conducted by FiBL, considered the current state of empirical research on the environmental, social and economic consequences of sustainability certification in the agricultural sector. According to this study, there are sufficient conditions for organic farming. Especially the positive effect of organic production has on the environment and the economy of developed countries. However, in conjunction with the Fair Trade certified organic production has a positive effect on producers in developing countries.[20]

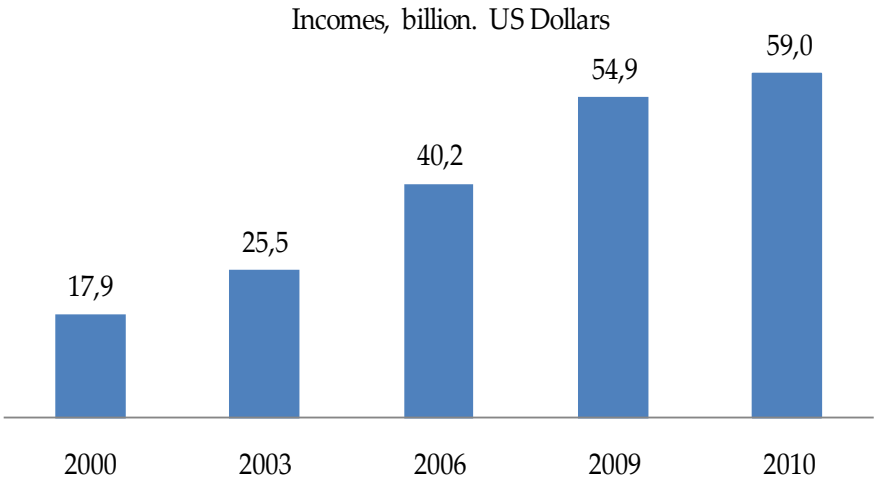
[12] www.organic-world.net/rules.html, 15.12.2011.
[13] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, стр. 68.
[14] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, стр. 78.
[15] Global Organic Market Access (GOMA) Project.
[16] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, стр. 76.
[17] Participatory Guarantee Systems (PGS).
[18] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, стр. 82.
[19] More detailed on such competition you can find in The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, p. 84.
[20] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, стр. 88.

5.3. GLOBAL MARKETS OF ORGANIC AGRICULTURAL PRODUCTS

According to the data Organic Monitor, the global market for organic products is recovering from the effects of the economic crisis. Sales of organic food and beverages has increased in 2009 by 5% and reached 54.9 billion U.S. dollars. Global revenues increased more than threefold from U.S. $ 18 billion in 2000. Double-digit growth rates were observed each year, except 2009.

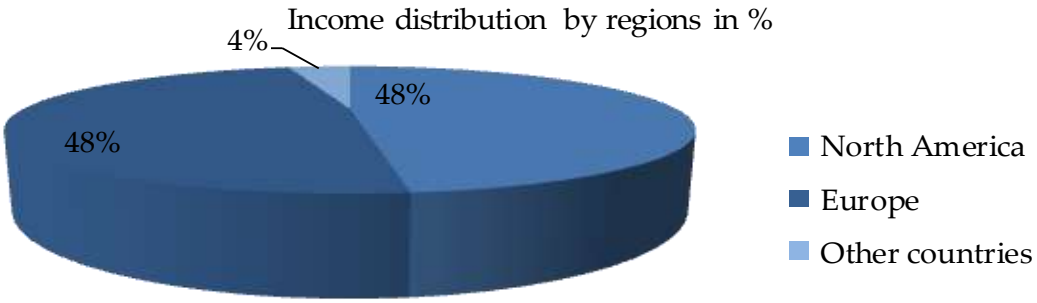
The countries with the largest markets for organic products are the USA, Germany, and France, the largest per capita consumption in Denmark, Switzerland and Austria.[21]

Figure 1: Global market for organic food and beverages, 2000 - 2009



Source: The Global Market for Organic Food & Drink (Organic Monitor 2011) , interview with the director of London consulting company Organic Monitor during BioFach 2011.

Figure 2: Global market for organic food and beverages, 2009



Source: The Global Market for Organic Food & Drink (Organic Monitor 2011).

[21] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, стр. 33.

5.3.1 Europe

At the end of 2009 in Europe, 9.3 million hectares of agricultural land was managed organically by more than 250,000 households. 1.9% of agricultural land in Europe and 4.7% of agricultural land in the European Union (EU) given to organic farming. At the same time 25% of organic land in the world are in Europe. Compared with 2008, the area of organic land increased by almost one million hectares. The countries with the greatest organic areas are Spain (1.3 million hectares), Italy (1.1 million hectares) and Germany (0.95 million hectares).[22]

Currently in Europe there are five countries with more than 10% of organic agricultural land: Liechtenstein (26.9%), Austria (18.5%), Sweden (12.6%), Switzerland (10.8%) and Estonia (10.5%).[23]

Sales of organic products in 2009 amounted to 18.4 billion euros. And yet the market growth rate was less than in previous years, although some countries like France and Sweden, have shown strong growth in 2009.[24]

The largest market for organic products in 2009 was Germany with a turnover of 5.8 billion euros, followed by France (3.04 billion euro) and Britain (2.1 billion euros). The highest percentage of organic matter was achieved in Denmark, Austria and Switzerland with 5% or more. These countries are also have the highest cost of organics per capita.[25]

Support for organic farming in the European Union and neighboring countries include subsidies in the framework of rural development programs, legal protection, the European and national action plans. An updated review of the European action plan shows that there are currently 26 planned steps (including the regional plan of action).[26]

An important event in 2010 was the launch of a new European logo for organic food.[27]

The European market is estimated at 26 billion U.S. dollars, and is thus almost half of global sales of organic food and beverages. The market for organic products is the largest and most complex in the world. It is also characterized by a high degree of competition, with an exceptionally large number of companies engaged in production and distribution of organic products.

The financial crisis has had a negative impact on sales of organic products. Consumer spending on organic food and beverages fell by declining revenues and rising unemployment.

Market for organic food and beverages as England suffered as a result of the crisis and reduced by 14%. German market remained unchanged mainly due to falling prices for organic products. Other markets of organic food and beverages, as in France and Sweden, have shown double-digit growth in 2009

[22] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011.
[23] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011.
[24] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011.
[25] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, p. 156.
[26] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, p. 160.
[27] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, p. 150.

Most of the sales of organic products is concentrated in Western Europe: Germany, Britain, France and Italy, which corresponds to 70% of total sales in Europe. The greatest consumers of organic products, however, are in the Scandinavian and Alpine countries. The market share of organic food is more than 5% of total sales of food and beverages in Denmark, Austria and Switzerland. Danish consumers are the biggest buyers of natural products in the world, spending about 202 U.S. dollars per capita per year.

In Southern Europe there is a large number of export-oriented producers of organic food. Spain, Portugal and Greece are important producers, but not large consumers of organic products. In fact, most of the organic agricultural products produced in these countries is exported to northern Europe. In this case, refers to such crops as organic fruits, vegetables, herbs, spices and olive oil.

Organic food production is also growing in Central and Eastern Europe. As in Southern Europe, the majority of production is export oriented, while the domestic market for organic products is gradually developing. Important markets are in the Czech Republic, Poland and Hungary.

5.3.2 North America

In North America, nearly 2.7 million hectares are managed organically, of which nearly 2 million hectares in the U.S. and 0.7 million hectares in Canada, representing approximately 0.7% of the total agricultural area in the region and 7% of organic farming land in the world.

U.S. sales of organic products continued to grow during 2009, despite the difficult economic situation. In fact, sales of organic products in 2009 rose by 5.3% and reached 26.6 billion U.S. dollars. Of this amount, 24.8 billion U.S. dollars have been spent on organic food, which corresponds to 3.7% of the total food market. The remaining 1.8 billion were sales of organic non-food items.[28]

American branch of organic products in 2010 pleased with the growth of 8% compared with 1% growth in ordinary grocery market. Thus, sales of organic products reached 28.6 billion U.S. dollars (21.6 billion euros). In the field of non-food products dietary supplements have increased sales by 7%, which corresponds to 681 million U.S. dollars. Sales of organic fibers (cotton and linen) reached 605 million U.S. dollars (16%), skin care - 490 million U.S. dollars (7%).[29]

In 2010, Canada has released a new report with the data on the volume of trade in organic products and the volume of retail sales: total market for organic products in Canada is 2 billion Canadian dollars a year.[30] If you anticipate in the coming years, it promises high organic growth in North America.

With regard to legislation, the representatives of the Canada Organic Office and the US National Organic Program completed a full review of legislative acts in order to monitor and assess the equivalence of their regulators.[31]

[28] http://oneco.biofach.de/de/news/?focus=d5c5e0f1-4ee4-4f85-8542-b55f09592d64, 12.12.2011.
[29] http://oneco.biofach.de/de/news/?focus=d5c5e0f1-4ee4-4f85-8542-b55f09592d64, 12.12.2011.
[30] Canadian dollar = 0.63046 euros, average exchange rate 2008; source: www.oanda.com/lang/de/currency/average, 21.12.2011.
[31] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, стр. 205 и 211.

North America is the largest market for organic food and beverages in the world. Volume of 26.3 billion U.S. dollars (2009), the market has become more prominent as compared to the European market. Although growth slowed in 2009, consumer demand for organic food and beverages continues to be stable. USA is a leading producer and exporter of organic agricultural products, but many sectors remain dependent on imports. Significant amounts of organic fruits, vegetables, meat, legumes, seeds, herbs, spices and ingredients are imported into North America. The main supplier is Latin America.

Expanding markets through normal channels is a major factor in the growth of the market. Organic foods are becoming widely available in supermarkets, discount stores, mass merchandisers and places. All major retailers have introduced their own brand of organic foods. "O Organics" - his own brand of supermarket chain Safeway, has become a leading brand of organic foods in the U.S.. Brand "PC Organics", owned by Loblaw, - a leading private brand of organic products in Canada.

The organic food industry is more concentrated in North America compared with Europe. Big companies dominate the production, distribution and retail. Large food companies have strong market positions, such as Dean Foods, PepsiCo, Danone and Hersheys. UNFI was the dominant distributor of organic products, while Whole Foods Market and Trader Joe `s are at the forefront of retail natural food. Catering and food service sector, The Catering and Foodservice Sector (CFS) have become important channels for the sale of organic products. A growing number of catering uses organic products, while the catering is increasingly uses organic ingredients. Some companies specifically focused on the sector of CFS. For example, Organic To Go Food Corporation supplies organic coffee and serves a number of organic food catering. Other institutions of public power, such as Pizza Fusion, use organic ingredients in a chain of restaurants, pizzerias.

5.3.3 Africa

Africa has over one million hectares of certified organic agricultural land and about 500,000 producers. It is about 3% of organic farmland in the world. Countries with the largest number of organic land - is Uganda (227 hectares), Tunisia (167 hectares) and Ethiopia (123 hectares). The highest percentage of organic land is in Sao Tome and Principe (6.5%), Sierra Leone (1.8%) and Uganda (1.7%). Most of certified organic products in Africa are designed for export markets. In Uganda, the value of exports of organic products totaled U.S. $ 37 million in 2009/2010.[32]

The European Union is a major importer and the largest market for organic products from Africa. Thus, organic farming has a significant role in addressing the pressing issues of food security and climate change in Africa.

[32] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, стр. 117.

5.3.4 ASIA

The area of organic agriculture in Asia is 3.6 million hectares (10% of organic farmland in the world), the number of producers - 731,315. The leading countries in the area are China (1.9 million hectares) and India (1.2 million hectares). In Timor-Leste is the largest area under organic farming in relation to the total agricultural land (7%).

You can find a wide range of different scenarios for the sector, from early development to strict regulation in this region.

Far from the position occupied by organic farming, standing at the source, is now organic - is approved by the concept and the growing trend in the region. Although exports remains dominant for the development of the sector in most developing countries in the region are gaining momentum generated and local markets. Organics is primarily driven by market found support at the governmental level, many countries. Seven countries in the region (China, India, Japan, South Korea, the Philippines, Taiwan and Malaysia) have implemented organic labeling regulations. Other countries like Sri Lanka and Nepal have established government authorities to resolve such issues as Thailand and Indonesia have established a system of accreditation.[33]

Asia has a two-tier organic food industry. The first level includes the producing countries, which have a large agricultural sector such as China, India, Thailand, Philippines and Vietnam. These countries are mainly produce organic products for export. Important organic agricultural products include fruits, vegetables, herbs, spices, rice, tea and other ingredients.

The second level of the country are major consumers of organic food, but not important producers. The richest Asian countries are in the second level, these include Japan, South Korea, Taiwan and Singapore. The demand for organic products is concentrated in these countries, although organic production in them is negligible.

Sales of organic food and beverages in Asia are growing steadily. The Asian market was valued at more than U.S. $ 1 billion in 2009. Rising consumer awareness about organic products and the expansion of sales are the main drivers of market growth. A growing number of retailers offering organic products, some of them under their own private brand. Asian consumers to consume more organic foods, the more they learn about food safety and environmental aspects. Food scandals, especially those associated with Chinese products, forcing consumers to think seriously about the safety of food consumed.

And yet the Asian market has a lot of obstacles to growth. The lack of standards in the region impedes trade in organic products. Only a few Asian countries have introduced mandatory standards for organic agriculture and food, most countries either do not have national standards or have voluntary standards.

[33] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, стр. 122.

Consequently, consumers cannot distinguish between legitimate organic products from competing products, which are often sold with similar attributes as "chemical-free" or "low in pesticides." Also on this day, there is no equivalence between national standards. Therefore, producers and importers have to obtain multiple certificates for organic products.

5.3.5 Latin America

In 2009, in Latin America, more than 280,000 producers were engaged in organic agriculture by 8.6 million hectares of agricultural land. This represents 23% of all organic land in the world and 1.4% of all agricultural land in the region. The leading countries are Argentina (4.4 million hectares), Brazil (1.8 million hectares) and Uruguay (931 hectares). The highest share of organic farmland in the Falkland Islands / wholesale (35.7%) in the Dominican Republic (8.3%) and Uruguay (6.3%). Most organic products from Latin America are sold on the European, North American and Japanese markets. Popular products are those that cannot be produced in these regions, as well as foods out of season. Thus the development of sustainable markets is still a big problem, without doing that will not be achieved stability of organic production. The biggest sales of organic food at local markets is placing in big cities. 18 countries already have legislation on organic farming, and five other countries are now under developing of it.
Costa Rica and Argentina have reached the status of third countries in accordance with EU regulations on organic agriculture.[34] Thus, the Latin American country receive support from a wide range of programs to promote organic agriculture to support the export agencies to enter the global market.[35]

5.3.6 South Pacific

This region includes Australia, New Zealand and island nations like Fiji, Papua New Guinea, Tonga and Vanuatu. A total of 8,466 organic producers operate 12.2 million hectares of land. This represents 2.8% of all agricultural land in the region and 33% of organic land in the world. 99% of organic land in the region is in Australia (12 million hectares, 97% of which consists of vast pastures), followed by New Zealand (124 hectares) and Vanuatu (8.996 ha). The highest proportion of all agricultural lands are located in Samoa (7.9%), followed by Vanuatu (6.1%), Solomon Islands (4.3%) and Australia (2.9%). High growth of the organic industry in Australia, New Zealand and the Pacific Islands due to the strong influence of the rapid growth of external demand, domestic markets, but also growing. In Australia, sales of organic products in 2009 amounted to 947 million Australian dollars[36] and New Zealand NZ $ 350 million.[37]

The biggest change in the Australian domestic market in 2009 was the fact that was adopted by the Australian organic and biodynamic standard products and is published in Standards Australia. Now, when an Australian Standard published by the organic industry and the responsible authorities,

[34] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, p. 194.
[35] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, p. 182 и 191.
[36] Australian dollar = 0.56599 euros in 2009; average annual exchange rate 2009; Source: http://www.oanda.com/lang/de/currency/average, 18.12.2011.
[37] New Zealand dollar = 0.45376 Euros in 2009, average exchange rate; average annual exchange rate 2009; Source: http://www.oanda.com/lang/de/currency/average, 18.12.2011.

the Australian Quarantine and Inspection Service, will seek to use one standard for domestic and export markets.[39]

2010 was an important milestone for the Pacific region as well as the International Organic Accreditation Service International Organic Accreditation Service (IOAS)[40] evaluated the Pacific Organic Standard Pacific Organic Standard (POS) and determined that this standard is equivalent to the requirements of organic standards of the European Union. This means that, in accordance with IOAS, Pacific Organic Standard is suitable as a standard for certification of operators who wish to export products to the European Union.

Most of organic certified products from the region is exported. As a rule, domestic markets are not very developed for organically certified products, and in some cases non-existent. Therefore, often organic produce sold as traditional, without the surcharges in price.

Interesting possibilities are being explored in countries that are increasingly becoming tourist purposes and is increasingly visited by tourists, with particular emphasis on the cuisine and the Pacific (eg Fiji, Cook Islands and Samoa). Thus, it is possible to link organic farmers and small producers directly with hotels, restaurants and other travel providers. While still there is no regional policy on organic agriculture. Secretariat of the Pacific Community has developed brief regulatory principles in 2009 to assist governments in the region to develop appropriate policies.[41]

Although the continent is one-third of organic agricultural land, there is a relatively small market for organic products. Retail sales of organic food and beverages totaled about 0.8 billion U.S. dollars in 2009.

As well as in other regions, market growth has slowed due to the economic downturn. Healthy growth rates are due to consumer demand for healthy and nutritious food. Increased consumption is a major driver of market growth, sales of organic food brings good results to supermarkets, shops, department stores, catering companies and caterers.

And yet the Australian market is characterized by limited availability of organic products. Although organic food and beverages have made a breakthrough in the retail product mix remains low. High price and perceived value of organic products are also major obstacles to higher rates of adaptation. Consumer confidence in organic products is still low due in part to the voluntary nature of the organic standards

Australia and New Zealand are important exporters of organic products. Significant amounts of organic beef, lamb, wool, kiwi fruit, wine, apples, pears and vegetables are exported from the region.

As it has already happened in Europe and North America, large companies producing food products, and retailers are entering the market of organic food. Woolworths has become a leading retail chain of

[38] The Australian Standard for Organic and Biodynamic Products, 2009.
[39] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, p. 218.
[40] www.ioas.org, 18.12.2011.
[41] The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, p. 223.

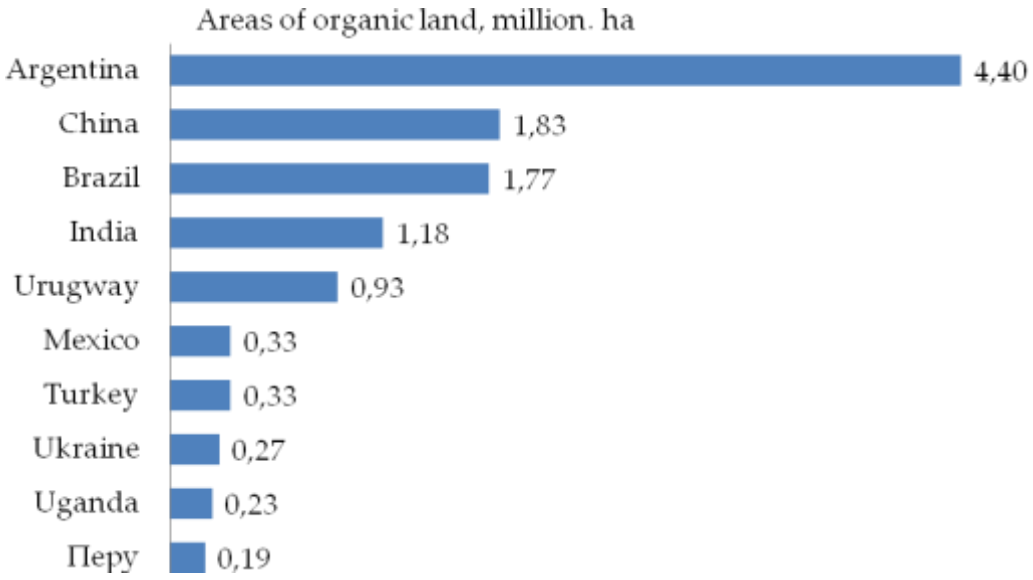
stores where purchased Macro Wholefoods organic products in 2009. He has integrated these stores under the banner of groceries Thomas Dux Grocer. Big companies producing food products, such as Fonterra and Sanitarium have strong positions in the market as they expand their range of organic products.

5.3.7 Developing countries and countries with economies in transition

This section includes and analyzes the recipients of official development assistance Official Development Assistance (ODA) from Development Assistance Committee list of Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development Organization for Economic Cooperation and Development (OECD).[42]

More than one third of organic farmland in the world -13.4 million hectares - are located in countries that are included in the list of the Development Assistance Committee. If you include the area of land with wild plants and the area of beekeeping, the total area is 44.4 million hectares. Most of the farmland is located in Latin America (8.2 million hectares), Asia (3.5 million hectares) and Africa (1 million hectares). Countries with the largest areas of organic farmland - Argentina, Brazil, China, India and Uruguay.

Figure 3: Countries of the Development Assistance Committee list with the highest area of organic land,2009

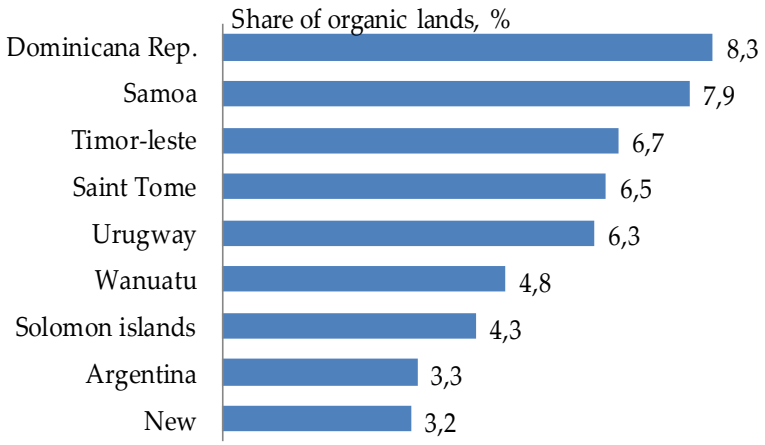


Source: Research FiBL/IFOAM.

However, when it comes to the proportion of land under organic farming of the total area under agriculture, the sequence of countries is quite different. A high percentage of organic land in relation to the total agricultural land is a few Pacific Island countries - the Dominican Republic and Timor-Leste. Argentina, with the largest area under organic agriculture in absolute terms (4.4 million hectares), ranking ninth.

[42] Find the list in the link: www.oecd.org/document/16/0,3343,en_2649_34447_2093101_1_1_1_1,00.html.

Figure 4: Countries of the Development Assistance Committee's list with the largest share of organic land, 2009



Source: Research FiBL/IFOAM.

Ten developing countries with a high proportion of organic agricultural land is commensurate with the top ten European countries. This high percentage can be partially explained by the high potential of organic agriculture in the region and the concentration on exports. High levels of organic agriculture in Latin America can be explained by various government support programs.[43] Nevertheless, from the countries surveyed, only a few have a share of organic land above one percent of the total area of agricultural land. Thus organic agriculture in most developing countries and countries with economies in transition and emerging market countries is lagging behind compared to organic agriculture in developed countries.

It is necessary to consider the fact that land-use data were only available for 31% of agricultural land. There are no data for some of the world's largest producing countries (China, Brazil and India). Despite this, the available statistics show that the proportion of pasture and perennial crops are relatively high compared to Europe and North America. Arable land, on the contrary, are of secondary importance. This may be due to the fact that exports as meat products (mainly from Latin America) and perennial crops play an important role. The most important permanent crops to export crops such as coffee, olive, cocoa and sugar cane.

5.3.7.1 Armenia

Organic agriculture is a part of the concept of sustainable development in Armenia and is one of the priorities of agricultural and food policy of the government. Organic farming is a great opportunity for farmers, businesses and investors involved in agriculture and producing.

[43] More detailed see The World of Organic Agriculture: Statistics & Emerging Trends 2011, FiBL and IFOAM, 2011, p. 182.

History

Discussion of organic farming among the stakeholders began in 2002, coordinated at that time U.S. Department of Agriculture (USDA). This activity continued by project of FAO and USAID / DAI ASME. The result is the Armenian Organic Agriculture Foundation. A number of farmers' associations have included organic farming in their draft plans, and some of the members started to produce organic products. Donors have supported the development of organic agriculture through various projects. Currently, the sector continues to develop on their own, regardless of the foreign funds.

Data on production and producers

The demand from refineries in the organic feedstock is a major factor for the development at the farm level, since the government ceased to support the farmers' subsidies to organic farming.

In 2009, 1,100 hectares of certified land, of which 600 ha were in agricultural areas. In the rest of the area are growing wild plants, or land is in transition. There are about 1,000 hives.

The basis of organic agriculture is the production of fruits, berries, alfalfa, and some grain crops, vegetables, gathering of wild species and beekeeping. These products also undergo further processing. The main final products are juices, nectars, concentrates, purees, quick frozen food, bread. Organic farming is an industry with great potential, therefore, ranks high on the priority list of public policy for agriculture in Armenia.

In 2009, Armenia had 8 certified organic farms and 6 processors and importers of certified organic products. A large number of farms in the transition state. Dimensions of organic farming vary from 5 to 120 hectares. Organic farms are either privately owned by individual farmers or farmers are part of the agricultural associations. Farmers also have the opportunity to work in the public gardens in the community development projects.

The main institutions

The main public institutions involved in organic agriculture are the Ministry of Agriculture, Forestry Agency, Ministry of Environmental Protection, Agency for Natural Resources Management and the Ministry of Economy. Ministry of Agriculture is responsible for developing policy and legislation in the field of organic agriculture, as well as for its enforcement.

ECOGLOBE is the local authority for certification of organic production in Armenia. He performs organic certification under the trademark "Green Caucasus" for national, EU and other export markets. ECOGLOBE working closely with the Georgian partner Caucascert and agrees with the equivalence of regional standards. ECOGLOBE Services and Systems "Green Caucasus" DAkkS accredited in accordance with EN45011, the EU 834/2007 and 889/2008. ECOGLOBE is also an accredited certification agency of the National Organic Program U.S. US National Organic Program.

In addition, in Armenia there are a number of NGOs that promote and support organic agriculture.

Legislation

Organic Law was enacted in 2009. The basis of the law served as the Codex Alimentarius organic principles and rules governing the EU's organic. The law has a broad scope and, therefore, requires further regulatory acts. However, interested parties have agreed that national legislation should be revised in accordance with international standards and asked the National Plan of development of organic agriculture.

Local market

The first study of the consumption of organic products was carried out the Armenian Fund for Organic Agriculture in 2005. In the same year he organized the First International Conference on Organic Agriculture in Armenia. The organization has undertaken NGO Fruitful Armenia, which promotes agro-business and economic development of Armenia.

The development sector has been slower than many of its participants are willing. One reason for this is the fact that the state does not provide direct payments to farmers for organic farming. Processing companies want a more rapid pace of development of organic agriculture sector, which would correspond to the rapid growth in demand for organic products.

The domestic market is still in its infancy, although in the supermarkets you can find organic products, locally made bread, honey, herbal teas and juices.

Export

First Armenian organic products were exported in 2008. The main organic products that are exported are processed in the rapidly frozen juices / drinks, fruit in syrup (compotes) of cultivated or wild fruits and berries. The main export markets are Russia and the European Union.

It is expected that from 2010 to 2012 new areas will complete their transition period and will receive organic certification, which will increase exports. Then it will be possible to expand exports to the U.S., Canada and Asia.

Processors are usually engaged in export and import, the following are the major processors and traders in the market: Tamara Fruit, Beer of Yerevan, SIS Natural, HAM, Biouniversal and others.

Each year, the Armenian organic producers attend the exhibition BioFach in Germany and present their products there. In addition, they attend more exhibitions like Anuga, Green Week in Germany, Organic Marketing Forum in Poland, and All Things Organic in the United States.

Import

Import of organic ingredients such as sugar is very important, because it is a key element in many natural products being processed. There is a problem with a non-regulated organic imports in Armenia. This fact causes damage to the reputation of organic food and agriculture in Armenia.

Imports of some products like tea, coffee, products for body care are carried out by the Center for Agricultural and Rural Development.

Education and agricultural extension services

Agricultural extension services continue their development and expansion. State Agrarian University of Armenia[44] continues to collaborate with the University of Kassel to create educational programs for teachers and researchers in Armenia and Germany. Currently, the university dairy farm is in underway to transition to organic one.

The state extension service and agricultural associations are involved in the trainings conducted by ECOGLOBE and other organizations. In addition, NGOs such as Shen and Green Lane provide advice and guidance to farmers.

Investments in the organic sector

Investments in agriculture are increasing in many regions of the country and include both local and foreign private investments. Foreign investments mainly come from the Armenian Diaspora in Russia, the USA and Europe.

In 2009 the Armenian government provided a grant of U.S. $ 1 million to land of organic fruit plantations in various regions of Armenia. The grant was provided to processors with the purpose of further investment in organic agriculture.

Some NGOs, in particular, Shen, together with Swiss donor support implement community projects such as planting of 160 hectares of organic gardens.

Donor support

Recently two outstanding projects have been completed: The project "Development of Biological Agriculture and Bio-certification in the South Caucasus"[45] supported by SDC and HEKS (2002-2010) with technical assistance from GTZ (GTZ)[46], as well as the project "Development of the organic chain of the Caucasus and Moldova "supported by the Dutch Ministry of foreign Affairs and Avalon, The Netherlands (2005-2009).

Food and Agriculture Organization of the United Nations FAO (FAO) has assisted the Government of Armenia in the development of the organic law. U.S. Department of Agriculture (USDA), USAID, FAO and the UN Development Program UNDP (UNDP) have also supported a number of initiatives to organics in Armenia. As part of ongoing projects GIZ emphasis is on public-private partnership aimed at organic farming.

At the present time Armenia participates in a pilot project initiated by the Green Business Program of the United Nations Environment Program UNEP (UNEP) for the reorientation of the agricultural sector towards the creation of "green" jobs and the environment. IFOAM, Grolink ECOGLOBE and conduct research and prepare a national report with conclusions and recommendations for the development of the industry.

[44] www.armagrar-uni.am, 26.12.2011.

[45] "Development of Biological Agriculture and Bio Certification in South Caucasus".

[46] C 1.01.2011 Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

5.3.7.2 Kazakhstan

Agriculture is one of the key sectors of the economy of Kazakhstan. As one of the priority areas for development, agriculture has enormous potential. A variety of climatic zones in Kazakhstan allows to grow almost all crops of temperate climatic zones and to expand farming.

The total area of agricultural land in Kazakhstan is 222.6 million hectares, of which 24 million hectares of arable land (10.8%), 5 million ha of grassland (2.2%), and 189 million hectares of pastures (85% .)

Kazakhstan provides itself with a basic food. Such as products sugar, cooking oil, meat, poultry, fruits and vegetables are imported out of their season. The country is a major exporter of wheat and flour (it lists among the top ten exporters in the world), and also has a significant share of total agricultural exports of cotton (15%), skin and wool (25%).

The conditions for the development of organic sector

The area of farmland with a chemical treatment is about 160 ha (i.e., only a small portion of agricultural land). In Kazakhstan, the cultivation of genetically modified crops is prohibited. All this creates favorable conditions for development of organic production and greatly facilitates the process of transformation (transition).

Legal and regulatory framework, labeling and certification

Environmental Code[47] provides the basic provisions on the labeling of "green products". "Eco-product" - is a product that has a positive impact on the environment, human health and biological resources. However ecologically clean production does not correspond to the international understanding of organic production.

In Kazakhstan, the prefix "bio" is used for food, fortified with vitamins and beneficial bacteria. "Organic" is a brand that is not relevant to organic production. The use of the term "organic" is not regulated.
Kazakhstan currently has no national system of certification of organic products. Also, there are no private Kazakh companies on certification. However, there are three European certification companies accredited to certify products in Kazakhstan and export to international markets.
Production and export of organic products from Kazakhstan

According to one of these certifying companies the area under organic farming is 135 thousand hectares. Eight producer-companies have been certified by, whose production is mostly export-oriented.

[47] ST RK 1618-2007.

Table 2: Kazakhstan: Organic area, production and export

Products	Area, ha	Grownproducts, tn.	Exportedproducts, tn.
Soft wheat	35.706	49.847	33.035
Hard wheat	8.298	14.936	3.067
Rice	2.862	10.017	500 (Kapro)
Rice husk			1.300
Alfalfa	2.291	22.818	
Rape	16.193	24.290	1.137
Rapeseedcake		10.000	9.727
Barley	620	1.240	
Oat	10	13	
Grape	20	90	
Sunflower	3.672	5.508	
Linen	5.304	7.426	4.590
Soy been	6.528	18.278	3.037
Alcohol		100	
Vodka		250	

Source: Center for organics Kazakhstan (data from one of certifying agencies).

Internal market

Despite a number of barriers such as lack of legislation, lack of awareness, there are several prerequisites for the development of the domestic market in Kazakhstan. This is evidenced by the results of market research, carried out by the Center for Organic of the Republic of Kazakhstan. Most respondents were willing to pay from 10 to 30% more for environmentally friendly products, 20% of people said they are even willing to pay 50% more.

Information campaigns conducted by Organic Center of Kazakhstan, has led to increased demand for organic products. Organic products have been sold in supermarkets in Kazakhstan. But as the production of organic products is still poorly developed in Kazakhstan, most of the products were imported, mainly from EU countries.

Products such as juice, baby food, cosmetics, tea and coffee are included in the product range. In 2010, some supermarkets have opened specialized stands for organic products. Currently, there is one organic cafe and a special eco-store.

In 2011, it was planned to sell local organic dairy products in the city of Almaty.[48] In a case of development of an appropriate legislative framework, we can expect the dynamic growth of production and consumption of organic products in Kazakhstan.

Organic Center of the Republic of Kazakhstan was established in 2008 as a result of collaboration between the Foundation for ecological culture integration (FIEC, Kazakhstan) and Agro Eco Louis Bolk Institute (The Netherlands), with financial support from the European Commission.

[48] With the support of Organics Center of Kazakhstam, www.organiccenter.kz, 3.01.2012.

The Center's mission is to strengthen the organic movement and help / support in creating and enabling environment for the development of organic agriculture in Kazakhstan and Central Asia.
Organic Center is the only organization of its kind in the Republic of Kazakhstan. Seamlessly the Organization combines a non-profit and commercial activity, and it helps to develop the organic sector in the region, combining the dissemination of knowledge and experience in providing resources and creating a competitive market environment. Organic Centre of Kazakhstan develops and maintains an extensive network of partners in Central Asia and other regions.

5.4. CONCLUSION

The global market for organic food and drink is recovering from recession. For the first time in 2009, growth dropped to single digits of 5%. The European market has suffered the most, especially the UK market due to poor economic conditions. Healthy growth continued in North America, catching up and surpassing Europe in importance. While other regions, including Asia and Australia, demonstrating the high demand for organic products, they make up only 4% of global income.

Market growth was restored in 2010. Healthy growth resumed as soon as the renewed growth of the global economy recommenced reeling from the effects of the financial crisis. Due to food inflation, and due to increase in in market growth it is expected to increase prices for organic products. While in many sectors of the organic food industry overproduction in 2010 could be observed. The expected growth in demand will correct the situation with excess supply in the market in the coming years. A major problem for many companies producing organic food and retailers will be insufficient supply of organic products and high prices.

The growing demand for organic products in regions such as Asia and Latin America are expected to make the sale less concentrated. The formation of such countries like China, India and Brazil as economic superpowers, leads to the growth of the middle class, and as this population becomes more educated and wealthy, it begins to consume more organic food.

It is expected that this development will transform this countries producers of organic products in major consumer countries. As demand becomes more uniform, the organic food industry will become truly global.

6. ORGANIC FARMING IN THE FERGHANA VALLEY COUNTRIES

6.1. UZBEKISTAN

6.1.1. Current situation in agriculture

In 2010 the country has produced 11 million 919.5 thousand tons of products, in particular: 6.346 tons of vegetables, potatoes, 1.693 tons, melons 1.182 tons, 1.710 tons of fruit, grapes, 987 thousand tons

At the beginning of 2010 contract were signed between the producers and 269 agro firms a for the purchase of 1.366 tons of products for export and processing. 81% of produced products in 2011 has provided the domestic market, 11% were processed, 5%exported and 3% was used for production of seeds

6.1.2. Export

The share of agriculture accounts for one third of the gross national product and over 55% of the gross proceeds derived from exports. Uzbekistan's main export market is Russia. In 2011 Uzbekistan joined the three largest suppliers of fruit to Russia leaving behind on the volume of supplies such countries as Poland, China, Spain, Argentina, Morocco, South Africa and Italy. In the season of 2009/10 Uzbekistan was among the six largest suppliers of fruit to Russia. The main items of fruits exported to Russia fromUzbekistan were stone fruits (cherry, apricot, peach, etc.), table grapes, melons and watermelon, which accounted for 75% of all supples. Export of dried fruits is actively developing. .

Income of Uzbek suppliers from exports to Russia in the past season is estimated at U.S. $ 300 million, or 47% more than the previous year.[49]

6.1.3. Organic Production

MARAP HandelsgmbH was founded in 1999 in Vienna, Austria. The Austrian office has 12 staff. The company exports its organic products to many countries and it has its own sales offices. In Austria, the products are sold under the trademark «Bio-leben», in France - «La Vie Biologique», in England - «Life style organic». Products of Uzbek subsidiary has its two brands:«Pearls of Samarkand", and «Treasure of Silk Road».[50]

Silk Road Organic Foods is 100% subsidiary of the Austrian company MARAP. The company Silk Road Organic Foods founded in 2003, is situated in Samarkand, the ancient Silk Road, has become the leading producer of organic dried fruits, organic vegetables and organic nuts, not only in Central Asia.

In addition to certification of organic products since 2011, the company certifies its products under certificate of Fair Trade.

[49] http://agroportal.uz/news_read.php?id=24, 24.01.2012.
[50] Interview Josef Bertagnoli, Director of MARAP/Silk Road Organic Food, 23.11.2011, Bishkek.

Silk Road Organic Foods for 9 years, is closely working with organic producers - a group of small farmers "Turkistan Gulba"which grows organic and Fair Trade cherries, almonds, and organic fruits and vegetables.[51]

Last year, the Silk Road Organic Foods established a drying unit, which uses 100% solar energy. In such a way, the company doubled its production capacity and reduced CO_2 emissions by 200 tons

In Uzbekistan more than 60 full-time employees are working: 12 in the office, more than 50 - in the factory, as well as 300 seasonal workers.

Production processing capacity is 50 tons of fresh cherries per day, which corresponds to 8 tons of final product. In a season, the company processes 1,000 tons of cherries, 20 tons of apricots. In one truck a weekly 20 tons of organic products are exported. Products are exported to 45 countries (in Europe, America and Asia). In this case, organic products are exported to China at "unreasonable costs" by aircraft.[52]

Cost of production:

- the cost of cherry = 0.50 Euro / kg
- FT premium = 0.12 Euro / kg
- Labor costs = 1.5 - 2 euro / kg dried cherries
- Laser purification and pressure cleansing = 1 Euro / kg
- Transportation costs and the costs of documentation = 0.35 Euro / kg
- EU Customs Fees = 5.1%
- The cost of packing = 0.22 Euro / kg
- Transportation to the customer = xx € / kg (depending on destination)
- Storage costs = xx € / kg (depending on shelf life)
- Certification and quality controls
- The cost of laboratory tests.
- At the same time the company receives the gross revenues of 25% and net profit of 4% - 5%.[53]

In 2011 the Uzbek subsidiary accounted for 20% of the total turnover of the Austrian company MARAP. The plan for 2012 is 25%.

MARAP Channels of distribution and sales:

- processing plants (chocolate industry)
- supermarkets,
- other buyers.

[51] http://www.marap.at/unsere-marken/silk-road.html, 24.01.2012.
[52] Interview Josef Bertagnoli, Director of MARAP/Silk Road Organic Food, 23.11.2011, Bishkek.
[53] Interview Josef Bertagnoli, Director of MARAP/Silk Road Organic Food, 23.11.2011, Bishkek.

For 10 years MARAP invested 5 million euros of its own funds in organic production in Uzbekistan. At the same time MARAP is a leading producer of organic products in the world. In the production of dried cherries MARAP ranks first (95% of the world market).

MARAP / Silk Road Organic Foods are concentrated in the production of expensive organic products (dried fruits, berries, nuts, but not legumes and other agricultural products which are not expensive).

MARAP will continue to focus on markets where the company had already taken its niche and will further strengthen it. One of the major markets remains Europe and Switzerland. MARAP has no plans to expand in the CIS: MARAP tried to supply to Russia and Ukraine markets, but the results were disastrous. "They do not know or understand what is organic. Do not value and do not consume organic food staff."- Such was a conclusion of an Austrian entrepreneur.[54]

[54]Interview with MARAP Director is in Appendix.

6.2. KYRGYZSTAN

6.2.1. Preconditions

Kyrgyzstan has unique natural resources. The availability of numerous of cattle farming provides a sufficient amount of organic fertilizer. Kyrgyzstan's biosphere is least influenced by anthropogenic factors.[55]

Also, legislation and regulatory mechanisms promote the development of organic agriculture. Government has no influence on farmers' decisions. Farmers are independent and have no debt, unlike their Tajik colleagues. Kyrgyzstan has low taxes and customs fees in comparison with Tajikistan, which promotes the development of production, processing and export of organic products.[56]

6.2.2. The development of organic agriculture

Recently, organic farming evokes great interest among the population of Kyrgyzstan. In 2003 the project "Development of the production and promotion of trade with organic cotton" (Organic Cotton) was initiated. In 2007 a public fund "Bio Service" was established which is a professional service provider providing the whole package of services to various participants of the the value added chain of Kyrgyzstan organic products. The operating area includes three areas of the republic Kyrgyzstan: Jalalabad, Batken and Talas.

In 2008 the union "Bio Farmers" was established, which in 2009 was reregistered and transformed into agricultural commodity service cooperative () "Bio Farmer". Currently "Bio Farmer" brings together more than 1,000 organic farmers in Kyrgyzstan. Production of the brand "Bio Farmer" has European, U.S. and Japan organic certificates, and the international certificate of Fair trade.

Besides of the "Project for the development of production and promotion of trade with organic cotton," Helvetas / Swiss Association for International Cooperation, ICCO, Hivos / Holland and SECO / Swiss Secretariat for Economic Affairs are engaged in development of organic agriculture. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (German Agency for International Development) in the framework of the program "Promotion of Sustainable Economic Development" during the last three years is supporting the development of value added chain of organic medicinal herbs, as well as commenced works on organic apricot in Batken region.

The introduction of organic agriculture facilitates Kyrgyz farmers and processors to enter to the world market, which increases annually by 10%, and where organic farming products are sold more expensively then the common one. Thus, organic farming is beneficial to the farmer in the form of additional income, has a positive effect on product quality, on soil, water and environment in general.

[55] http://www.agro.kg/ru/plant_growing/898/, 24.01.2012.
[56] More detailed about taxes and duties in the Republic of Kyrgyzstan see in the Appendix.

But still in the way to development there are many obstacles yet. Therefore, widespread adoption of organic farming should be one of the priorities of the governmental policy. It requires:

• Development of regulatory acts contributing to the development of organic agriculture;

• Economic motivation of organic products producers, its certification and promotion to the global market;

• Training and informational support, etc.

6.2.3. Production analysis

So far the "Bio Farmer" has achieved significant results. Over 8 years of its existence, the number of farmers engaged in organic agriculture has increased by 25 times: from 38 at the end of 2004 to 977 farmers at the end of 2011. Correspondingly with the increasing number of farmers the organic area has increased by 27 times: from 95 ha in 2004 to 2,612 ha in 2011.

According to the requirements of Swiss certification agency IMO first organic cotton farmers produced in the third year (2006) in the amount of 18 tons (6.2 tons of cotton fiber). Now, farmers produce 431 tons of certified organic cotton with a status of "Organic" (152 tonsoffiber) and 107 tons of traditional cotton[57] (36.5 tons of fiber). The dynamics of the production isshown in Table 3.

Table 3. Production analysis of the «Bio Farmer"

№	Year	Number of farmers			Area			Production of raw cotton			Production of cotton fiber		
		beginning of year	end of year	% exception	Irrigation hectare	Organics hectare	Cotton hectare	Bio tons	traditional tons	Total tons	Bio tons	traditional tons	Total tons
1	2004	57	38	-33	122	95	40	0	75	75	0	24	24
2	2005	280	225	-20	295	277	100	0	166	166	0	60	60
3	2006	446	392	-12	499	372	138	18	251	269	6	88	94
4	2007	728	649	-11	1 086	748	257	89	374	463	33	134	166
5	2008	987	845	-14	1 496	1 102	442	168	663	831	57	217	273
6	2009	792	765	-3	1 432	1 198	311	236	155	390	83	54	137
7	2010	1 016	921	-9	1 644	1 644	515	225	154	379	73	50	122
8	2011	997	977	-2	2 661	2 612	645	431	107	538	152	36	188

Source: Abdulatib Khaldarov consultant of Helvetas.

57. Transition product is a product which is grown in the field which shifted to organic agriculture a year or two years ago.

6.2.4. A comparison of the profitability of organic and traditional production

"When using chemicals, the farmer has to spend quite a few money on them , because every year they are required more and more. But natural fertilizers are always at hand, such as: manure, compost from food and vegetation wastes, biohumus, which can be produced by each afrmerhimself. Of course, working with organic fertilizers requires more time and energy, but it quickly pays for itself. If you fertilize the soil with organic manure, then it will be enough for 2-3 years, which means reducing costs and no harm to the environment. Permission is granted to an additional feeding with biological products. . In Kyrgyzstan, Bishkek biofactory produces them, executive director of" Bio Service" SaparbekAlymkulov, in the interview with K-News shares his experience.

During the study 30 farmers - members of the "Bio Cotton" project and 30 independent traditional farmers - neighbors of organic fields were interviewed, in order to compare their production costs under similar initial conditions (water, soil and other characteristics of the neighboring fields are generally the same). Thus, traditional farmers on average for a production period spent 13,510 soms for agricultural materials, whereas organic farmers spend only 8,450 KGS. Using much less agricultural materials, organic farmers spend more labor and organic materials for fertilizing and and cultivating fields. Therefore, field expenses, which include application of organic fertilizers, plowing, soil preparation, sowing, weeding, chasing, harvesting, etc., of the organic farmers are much higher and costs 37,500 soms, at the same time when traditional farmers spend 34,200 soms. Since all taxes and other deductions do not depend on whether the farmer is engaged in traditional or organic farming, the sum of all payments are the same and amounts to 1,222 soms. Total cost of traditional farmer is 48,932 soms whereas the organic farmer spends 47,172.

An interesting fact is that despite to the lower costs of organic farmers compared to traditional, the yield of organic farmers is much higher and amounts to 2,600 kg / ha (traditional farmers receive 2,100 kg / ha).

Calculating profits the organic farmer has about 76,042 soms, when profit of the traditional farmers is just 30,448 soms (survey results and calculations, see Annex).
Thus, the production of organic cotton is 55% more profitable than the production of traditional cotton.
These calculations explain the rapid growth and success of the "BioFarmer" in Kyrgyzstan.
6.2.5. Pricing policies for organic products

The prices for «organics» are higher than for non-organic products. For example - cotton - the main exported overseas organic product. Kyrgyz organic cotton sells more expensive than cotton from other countries. Increase is about 40% to the price of traditional cotton. For example, now[58] the starting price for one kilogram is 30 KGS, 20% is added to this price , and the farmer gets the money not only - from the sale of cotton, but also from subproducts, like seeds, lint and motes.[59]

58. The price as of November-December 2011 in Kyrgyzstan

59. From interview with "Bio Service" Executive Director Saparbek Alymkulov: http://www.knews.kg/ ru/econom/1992/, 24.01.2012.

6.2.6. Export of organic products

Presently the "Bio Service" has been cooperating with partners from Germany and Switzerland, have orders from the UK. Also contacts are being established with Russia, Ukraine, Austria and South-East Asia. There were attempts to sell organic products in the local market, but consumers are not ready or do not understand the value of organic products and do not buy it because it is more expensive than ordinary. But all this might change in the near future. Therefore, the organization is planning to open his shop in Bishkek in 2012, which will sell organic agricultural and livestock products.[60]

The main export problem is the small volumes of production. Today, in Kyrgyzstan there is a cooperative of farmers with thousands of farmers and 2,6 thousand hectares of land. To solve this problem in 2011 export partnerships was established to jointly with other producers of Central Asia work together to promote organic production in the region, as well as to jointly export products abroad.

6.2.7. Certification of organic products

Today in Kyrgyzstan there no no rules and regulations for the certifying, which would determine local standards of quality, compliance of production methods of farming, etc. The shops sell products labeled "organic", "eco" and "halal", but no one inspects it and no one has a certificate.[61]

State agencies understand these problems and in 2011 developed a draft law on organic agriculture.

6.2.8. The difficulties in the conduct of organic farming

"First of all, it is the lack of manure and organic products. Secondly, it is the lack of labor force, since the fields are cultivated manually. Basically, now in these fields hired workers from Uzbekistan are working. Third, it is a lack of clean water for irrigation. Often water polluted with mineral substances from other fields reports to organic fields. Farmers have to lay separate irrigation canals and ditches to supply clean water. It would be good if the irrigation system was in good condition and the dams were strengthened that the harvest is not swept away by rains or floods. There is also a problem with uncontrolled import of seeds produced with the use of genetically modified organisms (GMOs), which contradicts to organic methods of farming"._ -Executive Director of" Bio Service" Saparbek Alymkulov openly shares difficulties faced by farmers, cooperative members in the interview with K-News.

6.2.9. Prospects of organic production in Kyrgyzstan

At present, Kyrgyzstan produces very small amounts. SaparbekAlymkulov thinks it would be better to take a direction for the production of organic seeds. In his opinion, it is more advantageous because it does not require a lot of resources, in contrast to livestock breeding and crops. As seed growing was a prestigious branch of Kyrgyz agriculture even in the Soviet erastill highly qualified specialists , remained in Kyrgyzstan.

[60] http://www.knews.kg/ru/econom/1992/, 24.01.2012.
[61] http://www.knews.kg/ru/econom/1992/, 24.01.2012.

Key to success of a farmer are seeds, if they are good, it means that the harvest is also will be good. Kyrgyzstan could become a country-producer of organic seeds. One example: presently the seeds of "Bio Service" marigold are purchased in Europe at a price of 300 euros per kilo. Cost of production in Kyrgyzstan would be 4 times cheaper - about 5 thousand soms per kilogram.

The other good news - the Government has established a working group to develop the deposit of organic ore - glauconite. This will give a great impulse to the development of organic agriculture, because glauconite can be used to improve soil fertility instead of synthetic substances.[62, 63]

[62] http://www.knews.kg/ru/econom/1992/, 24.01.2012.
[63] More detailed information in the Appendix Interview representatives of Cooperative Bio Farmer, 24.11.2011, Bishkek.

6.3. TAJIKISTAN

The agricultural sector plays an important role in the economy of Tajikistan. Production of the agricultural sector accounts for one quarter of Tajikistan's GDP[64], 30% of exports (mainly cotton, fruits and vegetables) and 33% of all tax revenues in the budget. Employment in agriculture makes 67%. Out of 900 thousand hectares of arable land 67% is irrigated land and 30% of irrigated land is used for cotton growing.[65]

Due to variety of agro-ecological territorial zones various crops such as cotton, wheat, rice, maize, barley, sorghum, tobacco, chickpeas, mung bean, lentil, peanut, sesame, onion, cucumber, tomato, garlic, melons, watermelons, pumpkins and other vegetables and fruits are grown in Tajikistan.

The agricultural sector of the Republic of Tajikistan is represented by the following main crop sectors of: cotton is grown in an area of 280 thousand hectares, animal breeding covers 220 hectares, vegetable growing covers 30-33 thousand hectares, melon and gourd growing 10-12 thousand hectares, potatoes 25 hectares , horticulture and viticulture-100-105 thousand hectares. In the economy of the country the share of vegetable production is significant and in terms of money it amounts to 15-17% of national income.

Production and yield of main crops such as corn, potatoes, grapes, vegetables and forage maize has increased during the period 2000-2008. Growing and harvesting of vegetables has doubled during this period. Growing and harvesting of raw cotton, rice and hay during this period has considerably reduced.[66] In addition to the above-mentioned crops other crops such as buckwheat, millet, golden bean, mung bean, fava beans and a variety of medicinal plants are grown in the northern, central and eastern mountain regions for a very long period.

The main fruits of the country are apples, peaches, plums, apricots, pomegranates, grapes, persimmons, etc., as well as the nuts: walnuts, pistachios, almonds, apricot pits. In addition to the diversity of crops in Tajikistan grows a large number of wild relatives of many crop species, which are mainly distributed in the mountains of Hissar, Darvoz and Badakhshan.

6.3.1. Agricultural production

Currently, the country widely produces vegetable crops such as onions, carrots, tomatoes, cabbage and cauliflower, cucumber, hot pepper and sweet pepper, eggplant, beetroot, garlic, spicy flavor and melons.

Onion and tomato occupy 75-80% of the total area of cultivation and production of vegetable crops. Out of melons and gourds watermelon, melon and pumpkin is grown. Their ratio is 60, 30 and 10%, respectively.

[64] As the result of 2010 the GDP amounted to 25 billion TJS, in 2009 – 21 billion TJS. «Азия-Плюс», (“Asia Plus”) issue 5 (692), 18.01.2012.
[65] «Азия-Плюс», (“Asia Plus”) issue (692), 18.01.2012.
[66] State Committee on Statistics of the Republic of Tajikistan, 2009.

Over the period of January-September 2010 the amount of gross agricultural output amounted to 6 billion Somoni (more than 1.3 billion U.S. dollars). According to the Statistical Agency of Tajikistan this index grew by 7.1% over the same period of 2009.[67-68]

The volume of gross agricultural output in the ten months of 2011 amounted to 12.1 billion Somoni (more than 2.7 billion U.S. dollars). This figure increased by 8.6% compared to the same period of 2010. The volume of livestock products amounted to more than 2.7 billion somoni, crops - more than 9.4 billion somoni. During this time about 992 thousand tons of cereals, 409 thousand tons of cotton, more than 715 thousand tons of potatoes, 103 thousand tons of vegetables and 212 thousand tons of fruit were produced. Thus, over the same period in 2010, the potato crop has increased by 16.5%, vegetables - by 8.6%, fruits - by 17.7%, while the grains harvest rates decreased by 12%.[69]

On the results of 2011 the volume of agricultural production in Tajikistan grew by 7.9% making $ 14.8 billion Somoni (3.1 billion U.S. dollars) compared to the previous year. The growth achieved at the expense of growth of production in the crop sector by 8.3% and livestock - by 7%.[70]

At the result of 2011 production of potatoes increased by 14% to 863 thousand tons, vegetables - by 9% to 1.2 million tons, of fruits by17% to 263 thousand tons[71]. Farmers procured 72.6 tons of fruits and 42.7 thousand tons of grapes.[72]

6.3.2. Horticulture and Viticulture

The fertile Fergana Valley has everything necessary for abundant fruit and vegetables growing. Thus, Tajikistan is one of the main producers of fruits and vegetables in Central Asia, including crops such as apricots, apples, peaches, pears, grapes, persimmons, pomegranates, citrus fruits, cherries. They represent a wide genetic diversity of the fruit by size, shape, color, time of ripening and quality. These species were diversified by man for hundreds of years. The importance of fruit growing in Tajikistan is testified by the amount of fresh fruit exports in 2010 which totaled to 102 million U.S. dollars. Thus the export of dried apricots in 2010 amounted to 39.4 million U.S. dollars. [73]

Compromise between cotton and grain growing surrenders to horticultural crops, which increased its share from 4% of the sown area in the 80ies to 8% in the 2000s. In absolute terms, growth was even more impressive, as the area under horticultural crops has increased from 33 thousand hectares in 1980 to 80 thousand hectares in 2007. This change occurred as a result of increasing farm area as well. The high positive correlation between the area under horticultural crops and the amount of

[67] As at October 1, 2010 in all categories of farms more than 1 mln. tons of whaet, 438,5 thousand tons of potatoes, more than 774,6 thousand tons of vegetables, 382,3 thousand tons of melons and gourds, 153,9 thousand tons of fruits and more than 65thousand tons of grapes were produced. Compared to the previous year production of potatoes increased for potatoes production increased by 9,8%, but production of wheat and grapes decreased by 7,3% and 20% accordingly.
[68] http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194&ELEMENT_ID=16660 &sphrase_id=3684, 27.01.2012.
[69] Agency for statistics referenced from: http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1 &SECTION_ID=3194&ELEMENT_ID=20575&sphrase_id=3684, 27.01.2012.
[70] CA-NEWS, referenced from: http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194 &ELEMENT_ID=21031&sphrase_id=3684, 27.01.2012
[71] Ministry of Agriculture of the RT, referenced from: http://www.fruitnews.ru/news/index.php? IBLOCK_ID=1&SECTION_ID=3194&ELEMENT_ID=21031&sphrase_id=3684, 27.01.2012.
[72] http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194&ELEMENT_ID=20945 &sphrase_id=3684, 27.012.2012.
[73] http://www.trademap.org/Country_SelProductCountry.aspx (цитировано из “Pre-feasibility study for Fairtrade Dried Apricots in Sughd region, Tajikistan” by Chogjmoo Uuj, November, 2011).

agricultural land in farms (correlation coefficient of 0.9 for 1980-2007) is explained by the fact that the small household plots specialize in the production of horticultural crops (high value-added), abandoning large-scale crops such as cotton and wheat.[74]

Cropping pattern indicates the importance of horticultural crops especially in the household farms: horticultural crops occupy 23% of the acreage of households, 5% of dehkan farms and 3% of the collective farms. Individual farmers have devoted more than two-thirds of the area under grain crops, mainly for animal fattening , which effectively compensates their inability to grow enough food crops on small plots of land set aside at their disposal.[75]

As the base line research[76] suggests 33% and 39.4% of domestic output of fruits and vegetables are produced in Sughd region. The increase in production of fruits and vegetables for six years (2003-2008) is 168% and 39%, respectively, production of fruits and vegetables are concentrated in private individual households - 55% -65%, of dehkan farms - 23% -25% and collective farms - 13 % -18%.

Apricot is particularly widespread throughout the territory of Tajikistan. It is grown at an altitude of 330 meters (Aini, Shaartuz) to 3000 m above sea level (Langar, Ishkashim). However, the main area of apricot growing is in the valleys in the foothills and mountains at an altitude of 2000 m above sea level and is concentrated in Sughd region. In the first place on the area of apricot growing stands Isfara district of Sughd region (about 8 thousand hectares), in the second place - Asht, Kanibadam and B. Gafurov districtsand in third place - Aini, Penjikent, Kuhistoni Mastchoh, Zafarad, Spitamen, J. Rasulov and Istaravshan districts of Sughd.

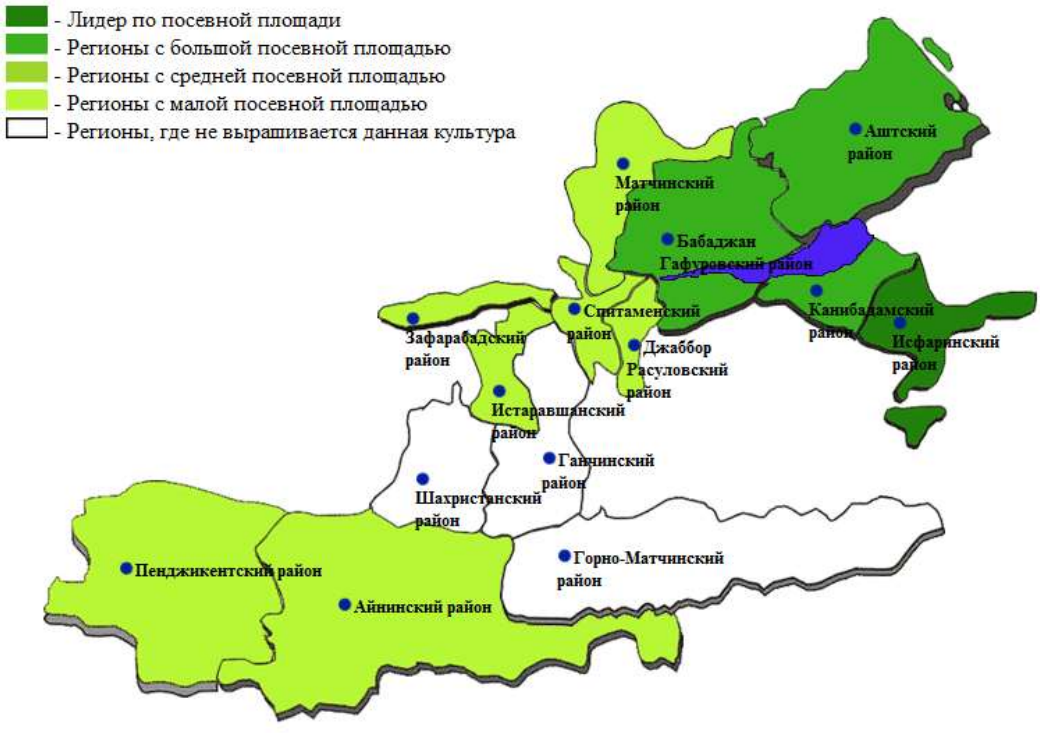
[74] Lerman Z., Sedik D.: The Economic Effects of Land Reform in Tajikistan, FAO, October 2008.
[75] Lerman Z., Sedik D.: The Economic Effects of Land Reform in Tajikistan, FAO, October 2008.
[76] Base line research was conducted by the Public Organization “Sughdagroserve Consulting” in the framework of of the Rural Development Program (RGP), 2010.

Table 4: Area of apricots growing Sughd, 2011

№	Region/town	Area, ha		Yield capacity, centners/ha	roduction volume , t
		Total	Fertile		
1	Ayni	588	534	35,8	1913
2	Asht	13658	6639	21,9	14540
3	B.Gafurov	6630	4144	19,6	8121
4	Gonchi	60	53	49,4	263,9
5	J.Rasulov	343	191	21,3	406,1
6	Zafarabad	554	365	28,2	1030
7	Istaravshan	157	108	15,8	170,3
8	Isfara	9404	7988	10,5	8387
9	Kanibadam	9004	5330	17,0	9061
10	Kushistoni Mastchoh	417	417	88,0	3670
11	Mastchoh	664	26	77,2	201
12	Spitamen	663	299	16,3	486,7
13	Penjikent	530	421	7,2	303
14	Shahriston	9	8	4,88	4,00
15	Khujand	5	5	17,9	9,623
16	Kayrakkum	2	2	22,0	5,162
17	Chkalov	1	1	41,7	4,704
18	Taboshar	2	2	8,8	1,637
	In region	**42692**	**26534**	**18,3**	**48579**

Source: Agricultural map АгроИнформ.ТЧ, agroinform.tj.

Figure 5: Area of sowing apricot in Sughd, 2011



Source: Agricultural map of Agroinform.ТЧ, agroinform.tj.

Presently local gene pool of apricot in Tajikistan consist of more than 300 varieties and forms, which are identified and described in the literature. Most famous of them are the "Khurmoi, Boboi, Mirsanjali, Kandak" and many others.

In the mountains and foothills wild plantations of subtropical nuts are located such as pistachios, almonds, walnuts figs and mulberries. The Tajiks harvest nuts and dry fruit for the winter, as well as a variety of sweets are prepared from the berries.

The high potential of horticulture and viticulture is reflected in the intense development of new and restoration of old orchards and vineyards in recent years throughout the territory of Tajikistan. Thus, in early 2010 a new garden was laid in the area of 50 hectares of collective farm named after Urunkhojaev. Three years later, it will be possible to gather the first harvest of apricots and peaches from this garden. Farmers believe that the fruit in the coming years may oust even the strategic crop i.e. cotton. Experts predict that in four years time twenty thousand hectares of new orchards should emerge in the north of the country[77].

For two months of 2010 220 new vineyards were planted. Out of the total area of vineyards, 94 hectares were planted on dry land. In addition, the restored gardens of the area of 158 hectares and vineyards in the area of 9 hectares.[78] As of March 1, 2010 new orchards in the area of 4.6 hectares have been planted, which is 2 times more than for the same period of 2009. By June 2011 it was planted more than 1thousand hectares of new vineyards.[79]. Also gardens in the area over 1.2 hectares and vineyards in the area of 334 hectares have been restored[80]. From the total area of 3,256 hectares of gardens stone fruits comprise 606 hectares,pomaceous ones 422 hectares, subtropical crops- 311 hectares and nut plantations. By June 2011 new garden in the area of more than 11 thousand hectares have been created. From the total area of irrigated land of the country gardens are planted on dry land in the area of 454 hectares.

During 2011 the area of orchards and vineyards has been increased and Sughd region as well amounting to 480 hectares. Gardens and vineyards in the area of 135 hectares were also restored. In 2012it is planned to create of new orchards and vineyards in the area of 4 ha. More than 2 million seedlings have already been prepared, of which 531 thousand are apricots, s 265 thousand are peaches, 228 thousand almonds, apples 385 thousand and 591 thousand of other fruit plants.[81]

6.3.3. Processing

Along with the consumption of fresh vegetables, about 80-90 thousand tons, or 13-15% of the total vegetable production, is used for industrial processing, mainly tomatoes are processed. Much of the tomato production is exported outside Tajikistan.

[77] http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194&ELEMENT_ID=14489 &sphrase_id=3684, 27.01.2012.
[78] Tajik Statistics Agency, referenced from: http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1 &SECTION_ID=3194&ELEMENT_ID=14724&sphrase_id=3684, 27.01.2012.
[79] http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194&ELEMENT_ID=18447 &sphrase_id=3684, 27.01.2012.
[80] http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194&ELEMENT_ID=18162 &sphrase_id=3684, 27.01.2012.
[81] Pressa-tj, referenced from: http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194 &ELEMENT_ID=20945&sphrase_id=3684, 27.01.2012.

85% of all processing plants are located in Sughd region. About 50% of them are engaged in processing of dried fruits and nuts. Along with their own production processors are engaged in the rendering services on dried fruit processing for the farmers of their areas (cleaning / washing, drying). More than 90% of the finished product is exported to Russia. For example, Isfara ORO - one of the largest processors of Isfara district which is engaged in the production and processing in Tajikistan, and for a successful business in Russia has created its own trading company AF Trade. Thus, Isfara ORO for several years successfully supplies dried fruit (6 species of raisins, 5 species of dried apricots, figs, prunes, wild rose, a mixture of dried fruits, dried apples), nuts (peanuts, walnuts, almonds, pistachios both cleaned and uncleaned), pumpkin seeds and sunflower seeds, beans, and candied fruits. To two largest retail chains of Moscow

There are a number of prerequisites for the successful processing of fruits and vegetables - especially a plentiful source of raw materials, availability of labor and the growing demand for agricultural products in the CIS countries.

But despite of high potential of processing agricultural sector on a number of reasons production of canned products in 2008 compared to 2002 decreased by 2 times. There are a number of reasons for that: lack of investment, outdated technology, obsolete and incapable support sectors, lack of storage facilities. According to 67% of the processing enterprises surveyed in 2010, by a team of Rural Development Program (RGP), working with the processors of fruits and vegetables in Sughd, the fact of reducing the capacity of the processing industry is influenced by the poor quality of raw materials and irregular supplies.

6.3.4. Foreign relations, import, export

Foreign trade turnover of Tajikistan in 2011 was equal to 4.4 billion U.S. dollars, which is 15% more than the 2010 figures. According to the Agency on Statistics the trade balance in 2011 was negative and amounted to 1.9 billion U.S. dollars.[82]

During its independence Tajikistan has had trade relations with 102 countries, 10 of which were the CIS countries. Exports in 2011 amounted to U.S. $ 1.3 billion, which is 5% more compared to 2010. Import of goods amounted to 3.2 billion U.S. dollars. Exports of goods of vegetable origin decreased have by 16%, of cotton fiber by 1%.[83]

The main trade partners in exports in 2011 were: Turkey - 43%, China - 20%, Afghanistan - 8%, Russia - 6%. Imports are mainly carried out from Russia - 30%, Kazakhstan - 13%, China - 13% and Iran - 5%.

A significant number of early fresh vegetables (cucumbers and tomatoes) and processed agricultural products are imported to the country. Shops are filled with jars of imported canned cucumber, tomato paste, ketchup, dried vegetables, seasonings, peas, corn and other fresh and processed agricultural products. There has been an increase of imports of vegetable products from CIS countries, as well as from Iran, Pakistan, Turkey and other countries.

[82] «Азия-Плюс», (Asia Plus) issue 5 (692), 18.01.2012.
[83] «Азия-Плюс», (Asia Plus) issue 5 (692), 18.01.2012.

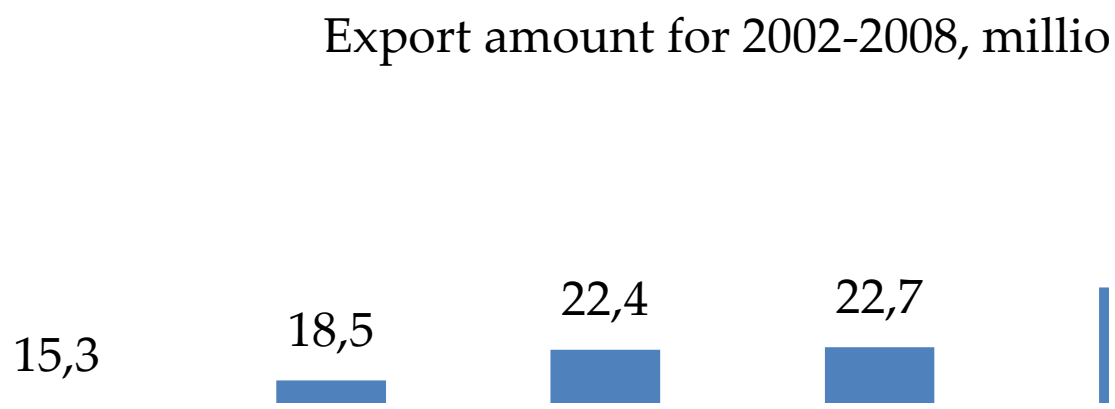
Over the last 4-5 years there was a significant import of vegetables, fruits and berries, juice and other processed agricultural products from China, Russia, Ukraine, Afghanistan and Uzbekistan.

In recent years, exports consisted of the following countries: China - 37.2%, Turkey - 13.5%, Russia - 9.4%, Uzbekistan - 8.6%, Czech Republic - 5.6%, Iran - 5% Netherlands - 4.3%.

If earlier in the structure of exports 80% was made by exports of primary aluminum and cotton, then every year, their share is reducing while the share of food agricultural products is growing. So in January - September 2009 74% of exports to Russia consisted of foodstuff and agricultural raw materials.

The high yield of fruit and vegetables in 2008 has enabled to greatly increas agricultural exports from U.S. $ 15.3 million in 2002 to 53.5 million in 2008 (Figure 6). At that 8-10% of agricultural production was processed.

Graph 6: Exports of products of plant origin (U.S. $ million, 2002-2008.)



Source: State Committee on Statistics of the Republic of Tajikistan, 2009.

Export of dried fruit in 2010 exceeded the export of electricity for 10 times. Exports of fruits amounted to 34.7 million U.S. dollars, the export of vegetables - 19.4 million U.S. dollars[85].

As of October 2011 Tajikistan has exported 126,2 thousand tons of agricultural products for 30,2 million U.S. dollars. The amount of dried fruit exports from Tajikistan at the end of 2011 amounted to U.S. $ 25 million. According to the Customs Service of the country within 11 months of 2011 were exported to more than 63 tons of dried fruit. The main destinations were Russia and Kazakhstan. Volumes exported to Europe and the United Arab Emirates were inconsiderable.[86]

[84.] «Азия-Плюс», Asia Plus) issue 5 (692), 18.01.2012

[85] Tajik Statistics Agency, referenced from http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194&ELEMENT_ID=17393&sphrase_id=3684, 27.01.2012.

[86] "Avesto" and Customs Service of the RT, referenced from: http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=&ELEMENT_ID=20740&sphrase_id=3684, 27.01.2012.

At present the share of the Russian market in the total exports of fruits and vegetables from Tajikistan reaches 80%. In 2010, the markets of Russia received about three thousand tons of fruits and vegetables from Tajikistan: cucumbers, tomatoes, onions, grapes, apples and lemons. In the future it is planned to significantly increase the volume of supply, as producers consistently increase the area under fruits and vegetables. [87,88]

Large volumes of agricultural products are being processed at the enterprises of the country, which produce canned foods and juices, which are supplied to the domestic market and exported outside the country. Grape, apricot and peach juices of Tajik company "Zulol" are in great demand in Russia, as well as dried fruit processed by enterprises ORO Isfara, "Barakat", "TaJFruit."[89]

According to the deputy chairman of the Chamber of Commerce of Tajikistan Asanali Karamaliev since the beginning of 2010 more than a ten major Russian companies have signed contracts for supply of vegetables and fruits from Tajikistan to the markets of the Russian Federation. The Chamber of Commerce assures that the number of companies interested in agricultural products is growing from year to year.[90]

The amount of exports of canned goods from Sogd in 2011 amounted to 602 thousand U.S. dollars, which is 943 thousand dollars less than in 2010. Experts believe that the decline in exports is due to the global financial crisis, decrease in the competitiveness of products of canneries and increased tariffs for rail transportation.[91]

However, the Sogdian processors are intend to increase production and are planning to ptoduce at least 60 million conditional jars of cans, which is almost twice more than in 2010. In the first half of 2011, 13 canneries have already produced 5.8 million conditional jars cans, which is 1% more than for the same period of last year.[92]

6.3.5. Challenges in the development of agricultural production

In order to identify the main problems faced by private farms surveys of representatives of agribusiness in Sughd, Khatlon and Gorno-Badakhshan[93] regions have been conducted. The total number of respondents was 572 entrepreneurs, including farmers - 547, suppliers of agricultural inputs - 25. By questionnaires the key problems faced by agriculture business have been identified. As a result of survey of farmer households problems that adversely affect their development have been specified. The most widespread and intractable problems faced by dehkan farmer are:

[87] http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194&ELEMENT_ID=18394%20& sphrase_id=3684, 27.01.2012.
[88] Tajikistan Consumers' Unions acts as an intermediaries and guarantors at execution of the Contracts on payment free base.
[89] http://www.toptj.com/News/2011/10/05/eksport_sel_khozprodukcii_uvelichivaetsya, 27.01.2012.
[90] http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194&ELEMENT_ID=18371 &sphrase_id=3684, 27.01.2012.
[91] http://news.tj/ru/news/sogdiiskie-dekhkane-ne-khotyat-sdavat-zadeshevo-vyrashchennye-frukty, 27.01.2012.
[92] Deputy Director of catering management company "Idorahoi khuroki viloyati Sughd"Muidin Kholikov in the article: http://news.tj/ru/news/sogdiiskie-dekhkane-ne-khotyat-sdavat-zadeshevo-vyrashchennye-frukty, 27.01.2012.
[93] Questionnaire was performed in the framework of the study "Measures to enhance economic efficiency of agriculture sector to achieve food security of the Republic of Tajikistan", 2010.

The lack of plant chemical protection substances.[94] In recent years, , no agrjtechnical activities and chemical treatment of orchards and vineyards against diseases and pests were carried out in Tajikistan. As shown by numerous examples, the reason for the low yield of orchards and vineyards is the spread of different types of fungal, bacterial and viral diseases and increased number of pests.[95] As a result of plant diseases and insect attacks farmers annually lose up to 50% of crops. On average, for the purchase of plant chemical protection substances each year from 100 to 300 U.S. dollars per 1 ha is spent.

- *The lack of mineral and organic fertilizers.*[96] In order to produce high yields farmers must fertilize the soil to maintain soil fertility.

For the purchase of fertilizers dehkan farm spends from 500 to 700 U.S. dollars per year per 1 ha. As a result of the high cost of fertilizers, many farmers cannot afford to purchase the necessary full range of quality mineral fertilizers. As a result of a substantial reduction in the volume of organic and mineral fertilizers there is a gradual decrease in the volume of organic matter - humus in fertile layer of the soil.

- Lack of quality seeds (69% of respondents)
- The quality of land,
- Lack of specialized agricultural machinery (75% of respondents)
- The problem of water availability (38% of respondents)
- Acute shortage of specialists,
- Difficulty in obtaining loans (27% of respondents)
- Difficulties in obtaining a certificate of land (44% of respondents) [97, 98]
- Debts.[99, 100]

The result of this study revealed the fact that the main two obstacles according to farmers are lack of plant protection chemicals and fertilizers in the country.

6.3.6. Initiative to promote organic agriculture in Tajikistan

Notably the lack of plant protection chemicals and fertilizers makes organic farming more attractive. So, besides the already mentioned two reasons in Tajikistan there areother favorable conditions for the development of organic agriculture:

[94]. 98% of respondents paid attention to this issue.
[95] Decree of Tajik Government “National program of combatting diseases and pests of orchards and vineyards” dd. 04, July 2006 № 290.
[96] More than 89% of respondents paid attention to this.
[97]. See Resolution of Tajik Government “About reorganization of agricultural companies and organizations over the period of 2002-2005” dd. 1.10.2002 №385
[98]. It shows that the reforms being conducted in the agricultural section of the country are not finalized
[99]. Debts of reorganized agricultural entities and organizations are distributed among the dehkan farms being established pro rata to the land share of each member. Thus a farm not having even commenced his business activity automatically undertakes a debt liability.
[100]. Decree of the President of the Republic of Tajikistan “About the mechanisms of debt reorganization to restructured or being restructured agricultural companies and enterprises” dd. April 15, 2003 №1054

- Lack of a specific need for chemical treatment, especially for cultivation of organic cotton
- a relatively small number of pests.

Due to favorable conditions for organic agriculture, as well as to increase the value added price of agricultural products to enter into international markets, to improve the environment and health of the rural population in Tajikistan, many projects and international organizations are interested in or already promoted the idea of organic agriculture.

6.3.6. Helvetas /ICCO

In 2009 in Sughd region ICCO (Netherlands Organization for Cooperation Development), together with Helvetas (Swiss Association for International Cooperation) launched a project "Development of organic origin production of." Tajik project uses the experience of the project "Organic Cotton" and the Public Foundation "Bio Service" of Kyrgyzstan, established by the same donors as in Tajikistan. The project is focused in the following purposes: market research, training, facilitation of certification, production and sales of organic products. The mission of the project is to fight poverty in rural areas of Tajikistan through the creation of sustainable value-added chain for organic products and its sales abroad. The project itself acts as a facilitator and operates through partner organizations: JSC "Sugdagroserv" / GS "SAS Organic," PO "Saodat" PO "Zarzamin" Advisory and Information Network Center of AIN and PO Rural Development Center "SOF."

The project aims to develop the production of organic cotton and organic cotton products, as well as production and sale of rotationion crops, both in the domestic and international markets. The project is working to inform local people about the advantages of organic agriculture, advises how to move from traditional to organic agricultural activities and supports farmers along the entire value-added chain. The project is aimed at the environmental, social and economic aspects such as improving the environment, improving soil structure, strengthening the local economy and stabilizing the society.

The project works in the cotton districts of Sogd region where water is not a limiting factor for agriculture. The scheme of crop rotation of cotton is 50% or less. Extensive livestock and access to the manure are comparative advantages of the area.

In the pilot phase of the project 81 farmers took part, with a total area of 121 hectares, of which more than half was allocated for organic cotton. Because of the serious violations committed during the cotton growing farmers, 42 were excluded. In 2010, 74 farmers were certified, 34 of them received the status of "BIO". As at the end of 2011 in Tajikistan, 189 farmers are doing organic agriculture. Total organic area is 463 hectares and 235 hectares are used fro cotton growing. In 2011, 80 tons of organic and 277 tons of raw cotton in transition have been grown. (Table 5).

International certification in Tajikistan since 2010 is being carried out by the Swiss Certification Agency IMO (according to European standard EC 834/2007). In the near future the use of standards such as GOTS, NOP, as well as the certificate of Fair Trade is planned.

Table 5: Analyses of organic production in Tajikistan

№	год	Number of farmers			Areas			Production of raw cotton weight			The production of cotton fiber net		
		At the beginning of year	At the end of the year	% exclusions	Irrigation ha	Organic ha	Cotton ha	Bio tn	Pri. tn	Total tn	Bio tn	Pri tn	Total tn
1	2009	81	39	-52	121	121	64	7	33	39	2	11	13
2	2010	107	74	-31	225	225	113	117	58	175	39	20	60
3	2011	238	189	-21	463	463	235	80	277	357	28	97	125

Source: Abdulatib Khaldarov Helvetas consultant.

Partner organizations are actively participating in the project implementation, as well as in all the initiatives that are in the region. In January 2012 partner organization 'SAS Organic "has participated at a conference on the establishment of organic standards for the countries of Central Asia and Tajikistan in particular.

Special achievements of the project is the signing of contracts for the supply of organic cotton and other organic products to Europe, to companies such as «it's organic», «Bella Foods» and others. For two years (2009-2010) the amount of cotton fiber to the company «it's organic» amounted to 72 tons.

The other of the project achievement was creation of a cooperative on organic farming, whose constituent meeting took place in Khujand on 01/18/2012.

6.3.6.2. UNDP

Also, the UN Development Program in the framework of the project "Promotion of Trade" in 2010 in Sughd supported the production of organic cotton and facilitated dehkan farms in the development of this initiative. In the project framework a demonstration plot was set up in Kanibadam district where trainings were conducted during the entire production period. As a result, these farmers received training both theoretical and practical knowledge of how using available resources to grow organic cotton.

6.3.6.3. PO «Saodat»

From November 2008 to November 2011 "Saodat" implemented the project "Durandesh", funded by Oxfam Novib (the total amount of project 350 thousand euros). The project was implemented with the advisory support provided by the Biological Management Association "Elkana" with the active participation of the international consultant Zurab Karbelashvili.

In May 2010 a study tour of key personnel was conducted to Georgia for training for certification on organic products, where they were introduced to the international laws and regulations of the

certification, the law of Georgia "On the implementation of the Biological Agro-production," the terms of certification of production of organic origin, in particular with ISO-65.

In the second phase of the project more than 80 members of farmer households have been trained to the principles of organic agriculture.

Since 2009, "Saodat" also has been actively involved in the successful implementation of the project "Development of Production of organic origin» Helvetas / ICCO.

In 2010 "Saodat" has attracted an international consultant for the development of organic farming from the UK, Philip Hichman. In cooperation with the international expert, a series of measures on organic land reclamation have been conducted in Ganchi and Spitamen districts. It is assumed that the advice and experience of Philip Hichman will positively affect solving the problems related to the conduct of organic farming [101]

6.3.6.4. NGO "Agency on Support of Development Processes Nau" (PO "ASDP Nau")

From October 2010 to September 2011 "ASDP RAU" has implemented a project on adaptation of communities to the impacts of climate change in Spitamen district of Sughd. One of the main objectives of the project is to develop the capacity of members of farmer groups to sustainable agriculture during adverse weather conditions, maintenance and development of adaptation measures in communities based on sustainable production of the crop.[102]

6.3.6.5Association of Dehkan farms by JICA support

In February of 2011 in the town of Nurek a seminar on the technology of organic agriculture was held. The seminar was organized by the Association of farmer households "Bogparvar" of Nurek towm with the support of the Japan International Cooperation Agency JICA. The aim of the seminar was to increase agricultural productivity through the dissemination of organic agricultural technologies while reducing the negative effects on soil condition.

Annually JICA conducts the training course on "Technology for Organic Agriculture of Central Asia" in Japan, which aims at increasing agricultural productivity and simultaneously reducing the devastating impact on the soil, through the dissemination of low-cost, and at the same time, environmentally friendly agricultural technologies. [103]

[101] http://www.saodat.tj, 2.02.2012.
[102] http://agencynau.tj/, 2.02.2012.
[103] National Information Agency “Khovar”, JICA representation office in Tajikistan, reference from: http://khovar.tj/rus/archive/26902-novye-tehnologii-organicheskogo-selskogo-hozyaystva.html, 23.01.2012.

7. COMPARISON OF TRADITIONAL AND ORGANIC PRODUCTION PROFITABILITY IN TAJIKISTAN

7.1. ON THE EXAMPLE OF PRODUCTION OF ORGANICAND TRADITIONALCOTTON

Like in Kyrgyzstan in late 2011 a survey of 27 farmers and 27 organic farmers - the neighbors who have traditional agriculture was conducted. The main crop is organic cotton, as it is the first crop in Tajikistan, grown on organic principles, and for several years being certified by international certification agency IMO. The results of the survey are the data shown in Table 6.

Table 6: Analysis of income and expenditure for organic and traditional agricultural practices, in TJS per 1 hectare

Traditional cotton, somoni per ha		**Organic somoni, somoni per ha**	
Costs for agr / l Materials: seeds, mineral fertilizers, chemicals, aprons, etc.	2.380	Costs for agr / l Materials: seeds, org. fertilizer, concoctions and potions, bio control, aprons and other.	1.690
Field expenses : plowing, soil preparation for sowing, planting, watering, manual weeding, cultivation, application of mineral. fertilizers, spraying against pests and diseases, chasing, cleaning, transportation	2.920	Field expenses: introduction of org. fertilizer, plowing, soil preparation for sowing, planting, watering, manual weeding, cultivation, spraying against pests and diseases, topping, cleaning, transportation	2.935
Taxes and other deductions: irrigation water, land tax, social fund, sales tax	1.327	Taxes and other deductions: irrigation water, land tax, social fund, sales tax	1.381
TOTAL EXPENDITURES	6.627	TOTAL EXPENDITURES	6.006
Yield (kg / ha) (25%)	2.250	Yield (kg / ha) (25%)	2.400
Income	8.555	INCOME (20% bio-supplement)	13.007
Profit	**1.928**	**Profit**	**7.001**

Source: Abdulatib Khaldarov Helvetas consultant .

In order to grow the organic cotton farmers in Tajikistan spends on agricultural materials TJS1,690 TJS in comparison with the traditional farmer who spends on agricultural materials TJS2,380 TJS. In accordance with the cotton growing technology of, an organic farmer's field costs do not considerablydiffer from the traditional farmer's field costs which is 2,935 and 2.920 TJSTJSTJS respectively. Taxes and all payroll taxes do not depend on the method of farming, so they make the same amount for organic and traditional farmers. However, since the yield of organic cotton is much higher than the traditional cotton, respectively so the income tax is also higher than that of the traditional farmer. Total cost of taxes and inputs of the organic farmers amount to TJS1,381 TJS, while the traditional farmer spends on taxes andTJS inputs 1,327 TJS. Total expenses for growing of organic cotton per 1 hectare is 6,006 Somoni. In the traditional cultivation for 1 ha of cotton the expenditure is TJS 6,627 TJS.

In spite of fear of farmers that without using chemicals, crop yields will fall, the natural balance in the soil is quickly recovering and yields of organic farmers proved to be 7% higher than the yields of traditional farmers and reached 2,400 kg / ha and 2,250 kg / ha, respectively.

Farmers receive income from the sale of cotton yarn, seeds, lint and motes. Organic farmers made a total income of 13,007 Somoni, traditional farmers 52% less 8,555 SomoniTJS.

If from the income to subtract the costs, we calculate the profit made by organic farmers which is 7,001 TJSTJS, and the traditional ones made a profit of 1,928 Somoni, which is three times less than the organic farmer's profit.

So the situation looks favorably for those of organic farmers, who have passed the transition period, under no any critical circumstances application of chemicals on their fields. There is no need to forget the fact that the organic product, in this case cotton, requires a special care for, process separate from other mineral products, strict storage in accordance with the standards and transportation. All these circumstances imply additional costs, just like the certification. Therefore, not all of the profits remain in the pocket of the farmer, and are spent to cover some of the above costs.

Let us also consider the situation of the farmers who are in transition stage and cannot sell their cotton with a premium to the organics. Assume also that the natural balance has not yet been restored and the yields of organic cotton are not higher than the traditional one. Expenditure on agricultural materials will remain the same as field costs. The cost of an organic farmer's taxes will be equal to the traditional costs, since the market for transitional cotton does not exist, so we assume that it will be sold as a traditional one. Thus, the total cost of the traditional farmer will remain unchanged 6,627 TJS and the total cost of an organic farmer would amount to 6,006 TJS. Based on the yield of 2,250 kg / ha, the income that the traditional and organic farmer would make shall amount to 8,555 TJS. Thus, the organic farmer's profits during the first two years of transition will be 2,549 somoni / ha, which is 621 Somoni more than the profits of the traditional farmer.

This analysis showed that even during the transition and / or at lower yields, organic farmer's profit is higher than the traditional one’s, as it does not incur high cost of chemicals.

7.2. ON THE EXAMPLE OF PRODUCTION OF ORGANIC AND TRADITIONAL APRICOT

A similar analysis was conducted to compare the revenues and expenses for growing of traditional and organic apricots. As in Tajikistan, there is no farmers growing organic apricots, calculations were made:

1) based on surveys of traditional farmers growing apricots,

2) based on flow charts for the growing and drying of organic apricots,

3) based on comparison of flow charts in Tajikistan and Kyrgyzstan,

4) based on a survey of Kyrgyz farmers growing organic apricots (these calculations, see in Annex).

Table 7: Analysis of revenues and expenses during the growth of organic and traditional apricot Somoni per 1 ha

Traditional apricot ,somoni per ha		**Organic apricot, somoni per ha**	
Costs for agr / l Materials: Chem. fertilizers, chemicals, containers, film for drying, sulfur for fumigation	2.645	Costs for agr /ls Materials: org. fertilizer, concoctions and potions, organic products, containers, film for drying	1.430
Field expenses: application of mineral fertilizer, hoeing around the trees, Forming & Trimming, whitewashing strains, loosening soil between rows, cleaning of irrigation networks, watering, harvesting, seed squeezing, stacking boxes for fumigation, transportation	4.590	Field expenses: application of organicfertilizer, hoeing around the trees, forming & trimming, whitewashing strains, loosening soil between rows, cleaning of irrigation networks, watering, harvesting, seed squeezing, stacking boxes for fumigation, spreading of fruits, transportation	4.840
Taxes and other deductions: irrigation water, land tax, social fund, tax on retail sales	990	Taxes and other deductions: irrigation water, land tax, social fund, tax on retail sales	1.080
TOTAL EXPENDITURES	8.225	TOTAL EXPENDITURES	7.350
Yield (kg / ha) (25%)	1.500	Yield (kg / ha) (25%)	1.500
INcome	16.000	INCOME (20% bio-supplement)	19.000
Profit	**7.775**	**Profit**	**11.650**

Source: Abdulatib Khaldarov Helvetas consultant.

Thus, the costs of agricultural inputs of traditional farmer, which consist of the purchase of mineral and organic fertilizers, chemicals (NWR), packaging, films, and drying, sulfur for fumigation amounts to 2,645 TJS per 1 ha. Organic farmer spends money to buy organic fertilizers, bio-products, as well as auxiliary materials such as packaging and film for drying. Total cost of its agricultural materials comprise of 1,430 somoni / ha.

Field works of a farmer consist of fertilizing, ripping around the trees, shaping and pruning, whitewashing strains, row spacing, irrigation networks cleaning, watering, harvesting, seed extrusion, packing boxes into the camera, strewing fruit after drying and transportation. Field

expenses of a traditional farmer amounts to 4,590 Somoni per 1 ha, as for the the organic ones it is 4,840 TJS per 1 ha.

Costs for irrigation water, land tax, social fund and the tax on retail sales for a traditional farmer amounts to 990 Somoni, as of the organic farmer it is 1,080 Somoni, which is explained by higher income from sales of organic apricot, and thus a higher tax on retail sales.

Thus the total costs of traditional farmer is 8,225 TJS ha, as of the organic one it is 7.350 TJSha.

The maximum income farmers make from the sale of dried apricots called Kaisa. We assume that buyers are willing to pay a premium of20% for organic products. In this case a traditional farmer's income from the sale of apricot stones and Kaisa will make 16,000 Somoni per 1 hectare. Selling organic Qaisa at aprice of 20% more expensive than the traditional ones and –apricot stones at the price of traditional ones as there are no buyers for organic stones- – the organic farmer will make 19,000 hectares of TJS. It should be noted that organic seeds have great demand in Europe in the cosmetic industry. Therefore, the real incomes of organic farmers are exceeding are listed here.

If to calculate the profit, then it will be for an organic farmer TJS 11,650 TJS ha, or 49.8% higher than the profit of traditional farmer whose profit is 7,775 TJS per ha.

7.3. ON THE EXAMPLE OF PRODUCTION ORGANIC AND TRADITIONAL BEANS

One of rotational crops, providing crop rotation and bringing in nitrogen compounds are beans. Notably beans and other legumes are ideal crops for crop rotation and fulfilling all the requirements for organic cropss such as organic cotton. Calculations for the cultivation of beans were taken from the average statistic survey of farmers who grow beans. The results are presented in Table 8.

Table 8: Analysis of revenues and expenses during the growth of organic and traditional beans, TJS per 1 hectare

Traditional beans, TJS per ha		**Organic beans, TJS per ha**	
The cost of agr/l materials: Materials, seeds, chem. fertilizers, chemicals, aprons, polypropylene. bags	1.770	The cost of agr / l materials: Materials, seeds, org. fertilizer, concoctions and potions, organic contlrol (Trichogramma, gabrobrakon) aprons, polypropylene. Bags	1.250
Field expenses: plowing, soil preparation for sowing, planting, watering, manual weeding, cultivation, application of mineral fertilizers, spraying against pests and diseases, harvesting pods, cleaning, transportation	2.970	Field expenses: Application of organic fertilizers, plowing, soil preparation for sowing, planting, watering, manual weeding, cultivation,c, spraying against pests and diseases, harvesting pods, cleaning, transportation	3.010
Taxes and other deductions: irrigation water, land tax, social fund, tax on retail sales	745	Taxes and other deductions: irrigation water, land tax, social fund, tax on retail sales	790
TOTAL EXPENDITURES	5.485	TOTAL EXPENDITURES	5.050
Yield (kg / ha)	3.000	Yield (kg / ha)	3.000
INCOME	7.500	INCOME (20% bio-premium)	9.000
Profit	**2.015**	**Profit**	**3.950**

Source: Abdulatib Khaldarov Helvetas consultant at.

Thus, based on the results of this comparative analysis, it is clear that due to lower costs for chemicals and increased income due to the bio-fertility, under optimal conditions, an organic farmer receives 96% higher profits than the traditional farmer.

7.4. ON THE EXAMPLE OF THE PRODUCTION OF ORGANIC AND TRADITIONAL MARIGOLD

Along with other crops Helvetas project in Kyrgyzstan had great success, growing medicinal herbs, in particular marigold, chamomile. As in the case with apricots, currently there are no farmers in Tajikistan growing organic marigold, so all data calculations are based on: surveys of traditional farmers, the process map for growing organic marigold and comparison with flow charts in Tajikistan and Kyrgyzstan, and survey of Kyrgyz farmers growingorganic marigold (consolidated calculations in Table 9).

Table 9: Analysis of revenues and expenses during the growth of organic and traditional marigold in somoni per 1 ha

Traditional marigold, TJS per ha		**Organic marigold, TJS per ha**	
The cost of agr / l Materials: seeds, Chem. fertilizers, chemicals, drying racks, polypropylene bags	2.672	The cost of agr /l Materials: seeds, org. fertilizer, concoctions and potions, organic products, drying racks, polypropylene bags	2.262
Field expenses: plowing, soil preparation for sowing, planting, watering, manual weeding, cultivation, application of mineral fertilizers, spraying against pests and diseases, harvesting, transportation	5.790	Field expenses: introduction of org. fertilizers, plowing, soil preparation for sowing, planting, watering, manual weeding, cultivation, spraying against pests and diseases, harvesting, transportation	5.830
Taxes and other deductions: irrigation water, land tax, social fund, tax on retail sales	1.864	Taxes and other deductions: irrigation water, land tax, social fund, tax on retail sales	2.133
TOTAL EXPENDITURES	10.326	TOTAL EXPENDITURES	10.225
Yield (kg / ha) (14%)	1.120	Yield (kg / ha) (14%)	1.120
INCOME	13.440	INCOME (20% bio-bonus)	16.128
Profit	**3.114**	**Profit**	**5.903**

Source: Abdulatib Khaldarov Helvetas consultant .

Thus, based on the results of this comparative analysis, it is clear that due to lower costs for chemicals and increased income due to the bio-fetility, under optimal conditions, an organic farmer receives 90% more profitthan the traditional farmer.

7.5. CONCLUSIONS

In the framework of this study four crops had been analyzed: cotton, apricots, beans, and marigold. When growing any crop organic farmer receives more revenue than the traditional one:

1) at growth of organic cotton organic farmer's profits is 212% higher than the profit of the traditional one,

2) profit from the bio-Apricot is 42% higher than profit from the traditional one

3) income from bio-beans n 96% than the profit from the traditional beans

4) income from organic marigold is 90% higher than the profit from the traditional marigold.

Also a transition period has been analyzed in which products are sold as traditional ones, if there is no market for "transitional" products, and the situation of crop losses due to a number of reasons. Even under these unfavorable circumstances, an organic farmer suffers a minimum losses compared to the traditional farming, as most costs are incurred in purchase of chemicals.

Therefore, organic production can be considered as a lucrative / profitable. As soon as the country will have its own market for organic products, it becomes much easier for farmers, simpler and more profitable to produce organic products for their domestic markets.

As today there is no organic market in the country it should be considered the possibility of entering international markets, not forgetting to take into account the costs associated with it.

8 ANALYSES OF THE POTENTIAL MARKETS

8.1. DOMESTIC MARKET

More and more often in supermarkets of large cities of Tajikistan one can find locally produced food with a label "ecologically clean", "organic", etc. (sour-milk products, honey, etc.). These products are the pseudo-organic products, which were not certified and do not meet any standard. This labeling is only a differentiating marketing ploy. There are no governing laws in the country businesses are not prohibited to use as an advertisement labeles "organic products". Currently in Tajikistan only cotton is sold as organic product. In neighboring Kyrgyzstan, other than cotton medicinal herbs, beans, and dried apricots are produced and sold. Neither in one, not in other country organic milk or honey is produced.

Yet such a marketing ploy speaks about the growth and awareness and paying the maximum attention by the local population to healthy foods. Increased public interest in the goods of organic origin is the result of activity of international organizations and projects that develop the idea of organic agriculture in Tajikistan, raise public awareness about the benefits of organics, arranging the various fairs and marketing campaigns. This trend suggests that in a few years the local market will be ready to consume not only products "GMO free", but actually certified organic products.

8.2. FOREIGN MARKET

The average growth rate of world market of biological products is about 10-15%.[104] On the average, people in the world are willing to pay extra 10% to 50% for organic products.

At the moment, full-fledged bio- products market is formed in the world in such market segments as: fruit and vegetables, milk and dairy products, baby food, agricultural raw materials for processing (mainly cereals).

According to recent data of the U.S. Department of Agriculture (USDA), all types of organic products accounts for 3% of the total U.S. market, while in Europe it ranges from 1% to 7%

Japan has traditionally been a market leader in organic products among Asian countries. Each year, demand for organic products in China, Thailand, Singapore, Malaysia and India is increasing, due to increased payment abilityof consumers. For example, the market for organic products in India over the past two years increased by 200%.

Developing countries are slowly moving in this direction, and often for that they have to pay substantial amounts. In the "developing" countries, bio-grains, fruits, vegetables, meat and milk are often cost much more expensive than standard counterparts. In China, prices for organic products may exceed the price of traditional products up to 700%, in Russia - up to 1000%.

[104] "Organic Food: Global Industry Guide", Datamonitor.

8.2.1. CIS

8.2.1.1. Russian Market

In recent years ever growing interest in organic products has been noticed in Russia. These goods usually arrive at the store shelves from Europe.

What is the market for eco products in Russia today, and whether it exists there at all? Let's look at the eco-supermarkets in Moscow, "Grunwald", "Globus Gourmet" or to St. Petersburg "SuperBabilon" where there is a separate section with eco products. The entire range of organic products is imported from abroad. There are no almost any domestic products. Most of the products on the shelves have a big enough shelf life (such as cereals, pasta, honey, coffee, juice, etc.) and have a very high price. But above all, consumers are interested in meat and dairy products, vegetables and fruits. And so it turns out that even those who would be happy to buy organic products, face a lack of range and come to such shops quite rarely.

It is the lack of government regulation and support in this area that hinders the development of the market for organic products in Russia.

Therefore, local food producers instantly respond to consumer preferences by displaying goods on the shelves with the words "ecologically clean," "eco," "organic," but, unfortunately, they have nothing to do with the certified organic products.

Summing up the results, we can conclude that in Russia, the market for organic products is still evolving. Among the main reasons for lagging behind from the West one may saythe lack of common understanding of the concept of organic production, unclear position of the state, the lack of activities to raise environmental awareness of population.[105,106]

8.2.1.2. Ukraine market

By the number of agricultural areas allocated under biologically clean fields in 2009 Ukraine took the 20th place in the world. At the same time, the majority of certified organic products made in Ukraine, is exported. As a result, the supply of the domestic market with such products is insufficient.

In addition to the production of basic raw materials (cereals, pulses, oil crops) meant for production of the final product, in the past two years, bio-friendly crop is actively developing, such as - growing of vegetables, fruits and berries. Dynamic development of a bio-processing of raw materials has laso commenced (there are already first certified cereals, jams, juices, syrups, fruits, meat products of Ukrainian origin).

Crammed with low-quality goods domestic market of Ukraine actively encourages consumers switch to the products with an impeccable "reputation." As an alternative to the standard products in Ukraine the demand for organic products is beginning to emerge. The data from recent sociological

[105] Natalia Galegyan: NP “St. Petersburg Ecological Union”, magazine “Molochnaya sfera” (Dairy sector), March 2009.
[106] In-depth analysis of Russia and Kazakhstan markets of dried fruits in the study carried out by the Association of Scientific and Technical Inteligencia of Tajikistan: “Joint research of Russia and Kazakhstan perspective export markets”, September 2010.

research confirms the interest of Ukrainian consumers to buying organic products. [107, 108]

Presently in Ukraine there are not so many specialized stores that sell organic products, and large retailers are just beginning to be interested in "healthy" products. Among those who trade organic products in Ukraine areknown for such stores as Natur Boutique, Delight, Glosssary and a number of online shops.

Recently, major retailers have begun to shape the proposal for environmentally friendly products, however, mostly imported ones. More and more space is being allocated for organic products in such networks as "Silpo», Metro and the "Megamarket". According to the manager on vegetables and fruits of the grocery chain "Megamarket" Artem Krishchenko when the network started selling organic products, there was almost no demand for it, because consumers knew little about these products. "We started from a 0.2% share of organic products, today it is 1.3% of the total share of group sales," - he said. Presently "Megamarket" sells 300-400 kilograms of organic products, mostly imported from Israel, Holland and Spain a month. In Europe, growth in consumption of organic products is 8-11% per year, while the proportion of organic products in the entire agricultural output is about 5%. "We have a share of organic sales in the overall percentage of sales / agricultural products in Ukraine less than one percent." The reasons for this, in his opinion, are firstly in lack of population's awareness of the fact that such products do exist. Secondly, there are very few companies who are engaged in processing and offering customers finished products.[109]

Nevertheless, consumers are showing a healthy interest in environmentally friendly products. Ukrainian market for organics is growing from year to year. If in 2008 the market volume of organic products was estimated in 660 thousand dollars, today it is 5 million U.S. dollars. [110] And the number of producers of such products over this period has increased from 92 to 142. Driver of its growth was the increasing demand for healthy food.

If we speak about the price of organic products, it is higher than the prices of those goods that are presented on the shelves, usually by 30-50%, says the head of the consulting department of the Association "Biolan" Svetlana Gorban. In the meantime organic food, despite the "promoted" trend of a healthy lifestyle, does not enjoy the widespread demand. Moreover the shopkeepers themthemselves are sying it. In one of the leaders of Ukrainian market of organic products - the store Natur Boutique - said that their sales this year have declined, while adding that the organic products which is available at their store is not much more expensive than the other products. "This trend is associated with low purchasing power of population", - says the head of the purchasing retail chain of Natur Boutique Liliya Savely. In addition to organic food products, whose share in the store is 30%, Natur Boutique sells organic cosmetics, bio degradable means. In general, these two segments are imported as in Ukraine there are no any domesticproducers which would have produced organic cosmetics and household chemicals.

[107] "Majority of buyers are willing to buy though expensive but ecologically clean goods", information agency RBC News September 13, 2010 .
[108] "Study of trends: Are the Ukrainians ready to buy ecologically clean goods", consulting company Appleton Mayer, September 2010 года.
[109] http://www.investgazeta.net/kompanii-i-rynki/kto-i-skolko-zarabotat-na-organicheskoj-161221/, 21.01.2012.
[110] http://vlasti.net/news/136275, 21.01.2012.

The rapid development of industry and the growing consumer interest and support are reflected in the governmental policy. On April 21, 2011 the Verkhovna Rada (Parliament) of Ukraine adopted the Law "On organic production," and also the state target program of the Ukrainian village until 2015 is designed, according which it is planned to increase the rate of growing of organic crops up to 10%.

8.2.1. Markets of other CIS countries

Besides such big markets as Ukraine and Russia, other CIS countries are more or less interested in promoting organic products in their domestic markets. Many countries have already started their own production, certified by foreign organizations which are export-oriented. The demand for organic products in domestic markets is growing and cannot yet be covered by domestic production. Therefore, most of the products are imported from abroad and are distributed through exclusive stores and internet.

8.2.2. Import market of products of organic agriculture in the EU

The EU has a common agricultural policy (CAP) - a unified sales and import policy, which also regulates agricultural imports from outside the EU. Natural products are subject to tariff regulation, as well as products of traditional agriculture. Agreement on Cooperation between the EU and African, Caribbean and Pacific countries determine the basis of long-term cooperation between Europe and 69 countries in these regions and sets them preferential tariff rates. Also, this agreement provides privileges for other developing countries. The goods from countries classified as least developed countries are not levied. To get the benefit, one must provide a certificate of place of origin of imported goods. CAP establishes quantitative restrictions and special fees from agricultural imports depending on product category, the season and country of origin. Importers must obtain an import license.

Resolution 834/2007, which came into force in 2007 is applicable to the EU countries for products of vegetable origin.. This document serves to ensure the safety of consumers from the pseudo-natural products and producers from unfair competition. Requirements for the labeling of natural products of plant and animal origin are established. If a product complies with all European standards documents, it may be referred to as «organic» in England as «biologisch» or «ökologisch» in Germany, etc. EU rules establish minimum requirements for the process of growing, producing, processing and import of products of organic agriculture. Each EU country is responsible for the application of all the European instruments in the field of organic agriculture and the establishment of audit and inspection. At the same time, countries are provided a certain degree of freedom.[111]

8.2.2.1 Austria

The main distribution channelis a network of retail trade (70%);direct sales from companies and sales through markets provide approximately 15% of sales, sales through specialized shops, bakeries, butcher shops, restaurants and canteens also make15%. On average, buyers overpay for natural products 59%.

[111] Review of the EU import procedures at the link: http://exporthelp.europa.eu/thdapp/taxes/show2Files.htm?dir=/requirements&reporterId1=EU&file1=ehir_eu11_05v002/eu/main/ovr_eu_010_0612.htm&reporterLabel1=EU&label=Overview+of+Import+Procedures&languageId=ru, 23.01.2012.

At present, the share of natural products in the retail trade accounts for 15-20% and it is expected to increase up to 30%. Although now 72% of Austrians buy natural food , sales will grow further as consumers have more confidence in such products.

About a third of natural products being sold are imported from the Netherlands, France, Hungary, Czech Republic, Germany and Italy. The cost of imports is about 72 million euros per year. 50% of total imports are vegetable from the Mediterranean countries and Germany. Supermarkets and large specialty stores themselves import large amounts of natural food. Importers of ordinary food have not yet shown significant interest in the production of organic agriculture.

In addition to the rules of the EU, import is regulated by the Austrian Food Code (Oesterreichischer Lebensmittelkodex), which includes standards for organic agriculture, that are obligatory for the goods produced or processed in Austria. For goods imported from other EU countries and third countries, these standards do not apply. Applications for import licenses are submitted to the Agency for food by the importer (Lebensmittelbehoerde) of the federal land, where the importing company is located.

There is a national labeling AMA, owned by Agrar-Markt-Austria-GesmbH. This labeling can be applied to all goods that meet the requirements of Regulation 834/2007 and the Austrian Food Code.

8.2.2.2. Denmark

Denmark is one of the leaders in the promotion of natural food, where 90% of all natural food is sold through supermarkets (FDB, Dansk Supermarket, IRMA, SuperBrugsen and others) and shops selling with discounts. Only 4% are sold through specializedstores and 7% by direct producers. The most popular products are cereal, milk, dairy products, eggs, fruits and vegetables. The share of organic carrots, eggs, butter and milk in sales has already exceeded 15%. 10% point in all categories of food products was reached in 2005. An average surcharge for organic food is 20-30%.

Due to the special state labeling of organic food, natural food is easy to find in Danishshops. This mark is widely known and enjoys great trust of customers.

As a rule, imported goods are processed or repackaged. Danish importers and producers are interested in expanding the supplier base and they prefer to buy food directly from producers.

Import of ready-to-eat products is minor, since the state labeling may be placed only on foods processed or packaged in Denmark. So, mainly raw materials and semi-finishedproducts are imported. Sales of natural fruits and vegetables are rapidly developing. Fresh vegetables are imported from the Netherlands, France, Italy and Spain. Fruits, regardless of country of origin, are mainly imported via the Netherlands. Products from natural tomato are very popular. There is a growing demand for organic frozen vegetables.

The state labeling of organic products was introduced in Denmark since the late 80s (StatskonrolleretOkologisk). It is applied to the Danish products and goods brought from abroad, but repackaged in Denmark, i.e. final processing of the product should be done in Denmark. . Importers, processors and packers must be registered, and their activities are subject to inspection. Unlike most

European countries inDenmark inspection and control functions are carried out only by public authorities

8.2.2.3. France

75% of French households are doing shopping in a supermarket once a week. Through supermarkets 42% of organic food is sold, through specialized shops 28%, directly and through the bakery - 30%. The share of restaurants, cafeterias and other service enterprises is increasing. Among the retail chains the main channel of retail sales of natural food is Carrefour.

The market for fresh fruits and vegetables, cereals, beverages, dairy products, meat and meat products, dried fruits, butter, coffee, tea, cocoa, sugar, honey, spices and herbs, ready-made food is most rapidly developing. The market offers good prospects for the import of grain, soybeans, rice and its products, legumes, fruits, frozen, concentrated purees and pastes, culinary and medicinal herbs and oils, cane sugar and honey, cooking oils and fats.

Domestic production can satisfy only a portion of demand. The main sources of imports are Germany, the Netherlands, Great Britain, Italy, Poland, Hungary, Slovakia and the United States, Canada, Belize, Bolivia, Colombia, Costa Rica, Dominican Republic, Guatemala, Mexico, Paraguay, Algeria, Burkina Faso, Cameroon, Ethiopia, Guinea, Madagascar, Morocco, Senegal, South Africa, Togo, Tunisia, Zimbabwe. Imports from Asia are extremely low.

France was one of the first European countries that have introduced national labeling for organic foods. In France, the logo AB (Agriculture Biologique) was designed, which replaced private labeling and is owned by the Ministry of Agriculture of France. The application of this logo on products shall be authorized after signing a contract with the owner of the mark and after meeting all requirements established by EU legislation. The sign may also be applied to natural products from other countries subject to meeting the requirements of French law to the farmers applying organic methods. However, products of plant origin should be produced in the EU, except for the exotic ones.

The law allows for the existence of private inspection and certification companies (Aclave, Agrocert, Certipaq, ECOCERT Sarl, Qualite France, Ulase

8.2.2.4. Germany

In 2002 organic food sales totaled to 3 billion euros (2.3% of market turnover of food products). By 2005, turnover has doubled. So far distribution channels is dominated by specialized shops (35% of sales). Directly 18% of products is sold, 35% in supermarkets. Nevertheless, the share of supermarkets is growing. The price increase varies from 18% to 142% due to inadequate supply and high transportation costs.

Domestic production provides 60% of demand. The most popular products are bread and pastries, dairy products, tofu, eggs, fruits and vegetables and meat. Much of the cereals and various mixtures of cereals and other foods of plant origin are produced domestically. There is a growing demand for frozen food.

Germany is Europe's largest importer of natural foods. 38% of all natural products are imported. Main article of import are fruits and vegetables both fresh and processed (30% of turnover and 50% of consumption). In addition, significant amounts of products are imported, like nuts, tea, coffee, cocoa, spices, oils and fats, bakery. Developing countries are important sources of imports.

Farmers' associations in Germany have developed different standards to complement the European ones. Associations issue certificates for products and inspection authority is vested in accredited organizations. It is desirable that imported products meet the requirements of private standards, not just the EU legislation. Standards of the German farmers' association, in contrast to the EU standards do not allow simultaneous use of organic and traditional methods on the same farm. The associations provide their members the right to apply appropriate labels on their products. The most famous marks are Bioland, Demeter, Naturland. The right to use these marks is provided on the inspection results.

In Germany there are 22 private inspection organizations, ten of whom are authorized to inspect importers. ABCert, Agreco, BCS, EcoControl, GfRS, IMO, Lacon are among them.

In October 2001, the Ministry of Consumer Protection, Food and Rural Affairs has introduced a national labeling - Bio-Siegel. This mark is well known already. The right to use this lable shall be given to the companies that complied with the requirements of EU Regulation 834/2007, and notified the owner of the mark on it. No any restrictions are made in respect of imported goods.

8.2.2.5.Italy

In Italy there are 55,902 enterprises, of whom 4,346 are processors, 155 are importers and 122 are exporters, there are 1,700 supermarkets and 1,000 specialized shops. In 2005, supermarkets have taken 60% market share of organic products. The price premium for organic products varies from 25% in supermarkets and 30% in specialized shops.

Domestic production does not cover the demand, so the products of organic agriculture are imported from Argentina, Chile and several European countries. Milk and dairy products are imported mainly from Germany and Austria, nuts - from Spain, the Dominican Republic, Argentina, Peru and New Zealand.

Products from the EU and the countries entered in the list of third countries are imported and sold as organic if they have a certificate issued by an accredited inspection body. Products from countries outside the EU, and not entered in the list may be certified for the Italian market, provided that it is certified by the state inspection body of the EU member country. If the inspection organization is not registered or accredited in any EU country, an application for granting import licenses is submitted to the Ministry of Agriculture and Forestry of Italy.

8.2.2.6. Sweden

All the natural foods in Sweden should have KRAV label (this mark is widely known and highly trusted by consumers). Inspection and certification functions are carried out by two private organizations - KRAV and SvenskaDemeterförbundet.[112] In Sweden, there is no national certification

authority and legislation governing organic farming. KRAV is the most popular accredited inspection organization. Its standard is stricter than those provided by European legislation requirements, but the most common and recognizable.[113]

Each year, the market is expanding by 20-30%. The share of organic food in the market is 4.5%. 91% is sold through retail stores, and only 7% directly by farmers. Retailer COOP Sweden is one of the leaders in the promotion of organic food (7% of sales).

The average price premium is low and is equal to 30%. Such products, which are not grown or produced in Sweden are imported: citrus cultures, tropical fruits, grains, vegetables, nuts, spices, coffee and wine. The most important source of fruits imports is the Dominican Republic, but the supply is insufficient to fully meet the demand. Also, food products are imported from the Netherlands, Denmark, Italy, USA, Israel and Argentina.

Organic farming is governed by two bodies i.e. bythe Ministry of Agriculture (competence covers agriculture and imports of fodder) and the Ministry of Food (competence covers the processing and import of natural food).

8.2.2.7. Netherlands

In 2002, sales totaled to 375 million euros, while the share of natural food in the food market amounted to about 1.5%. Low rates are due to the high cost of retail sales of these products in the Netherlands.

In 2001 the main channels of distribution were supermarkets (42.3%), followed by specialized shops (40.8%) and other channels (16.9%). Most retail chains offer natural foods in their stores: Konmar, Vomar, Dekamarkt, De NieuweWeme. In 1998, the largest supermarket chain Albert Heijn (Ahold) introduced their own labeling system and has ever since been actively promoting organic food.

The main items of imports are fresh fruits and vegetables, cereals, oilseeds, dried fruits, nuts, planting stock, coffee, tea, spices and herbs. Major suppliers are the countries of Central and Eastern Europe, as well as countries in the tropics and subtropics.

European Resolution 834/2007 is implemented by the Decree on agricultural quality of organic methods. The only inspection body is Skal. Application for issuance of import licenses is submitted to the Ministry of Agriculture.

8.2.2.8. United Kingdom

In 2003 sales volume reached to 1,750 million euros and market share was 1.5-2.0%. By 2005, sales volume reached € 2.5 billion (3%). The most popular products are fruits, vegetables and herbs. Supermarkets control up to 80% of the market. The second important distribution channel is trade with home delivery.

[112] http://www.antroposofi.com/biodyn/demeter/intro.htm.
[113] Källander, Inger; Organic Agriculture in Sweden, Stiftung Ökologie & Landbau (SÖL), Bad Dürkheim, Germany, 2000.

Domestic production is insufficient to cover the demand.

Almost 50% of imports come from EU countries; apart from them the United States, Egypt, Israel, Argentina, South Africa and Central America are important exporters. In total up to 70% of organic food is imported: 90% of alcoholic and soft drinks, 82% of vegetables, fruits and herbs, 70% of cereals, baked goods and baby food, 40% of dairy products, 100% tea and coffee.

The highest demand has been observed in the organic fresh fruits and vegetables. Supplier of these products is an established group of third world countries. The British impose very high requirements for marketable state of fresh fruits and vegetables. Processed fruits and vegetables such as: dried, frozen and canned have good prospects. The demand for baby food is also rapidly growing.

Supplies flowchart of dried fruit and nuts are very complex, and often dried fruits, which are essentially natural, cannot be sold as natural as their producers have not been certified. Also, it refers to the tea.

In 1987 in the UK has been established British case of natural food standards UKROFS as a body for monitoring and accreditation of private certification organizations. The Register has developed a number of official standards and created an independent system of certification and inspection of producers of natural food. UKROFS Standards are based on EU documents and supplemented by the requirements of British law.

In the UK there is no a national labeling for organic food. As consumers trust to supermarket chains, their names are used as a lable in conjunction with the word Organic: Marks & Spencer Organic, Waitrose Organic, Sainsbury Organic, Tesco Organic, ASDA Organic.

8.2.3. Switzerland

8.2.3.1. Access to the Swiss market and terms of import

To sell organic agricultural products in the market of Switzerland first of all it is necessary to meet the requirements of Swiss legislation. In order for the products imported into Switzerland were recognized as a natural (organic) ones, its producers, processors, exporters and importers must at least once a year pass through the certification. Certification is carried out by the specially authorized body and the inspection for organic farming. At the same time the Swiss Regulation on organic agriculture (Bioverordnung SR 910.18) contains a number of more stringent requirements than the EU Regulation on organic products. However, the rules for the transition to organic agriculture are less stringent. Many Swiss and European associations having their own brands set to the candidates the requirements that exceed the minimum standards of EU and Swiss legislation.

In Switzerland, Bioinspecta AG is the main organization dealing with certification and controls of production of organic agriculture. This organization exercises controls over majority of suppliers of goods bearing the mark BIO SUISSE, Demeter, Migros and Bio. Bio Test Agro AG conducts only checks of farms. Operations on processing are certified by SQS (www.sqs.com). Institute of market Ecology (www.imo.ch) conducts inspections of importers, exporters and processors.

Certification under BIO SUISSE standard[114] is one of the most common ones and it is compulsory if the product is sold under the trademark BIO SUISSE Knospe. This labeling greatly facilitates the sale of products.

Swiss Regulation on organic agriculture contains a list of countries having accredited certification and control organization in respect of which a simplified export procedure is provided (Tajikistan is not included into this list).

Access of products to the Swiss market from the countries not included into the list is governed by the laws about certification. This means that production, processing, quality control and labeling of organic products must be in compliance with requirements similar to those of the Swiss Regulation on organic agriculture. The ideal situation is to adapt the standards for organic agriculture to the local conditions and establishment of certification organizations.

When exporting it is necessary to ensure that product quality meets the standards of the market in Switzerland: it is not only the requirements of the Regulation on organic agriculture, but also other provisions of national legislation on product quality. In general, the Swiss are very careful to the quality of goods they purchase. Natural products must meet the same requirements as traditional agricultural products. Requirements to product packaging is also very strict.

A good form of searching for partners is participation in exhibitions and fairs, where consumers and counterparties can get familiarized themselves with the specific commodity. The most important event in organic farming is a German exhibition BIOFACH, which is actively visited by Swiss consumers. In addition, assistance in finding business partners is provided by the Swiss import program SIPPO[115].

8.2.3.2. Characteristic features of the Swiss market

The Swiss market is very diverse: hundreds of small and medium-sized enterprises are involved in production, processing and sales of natural products. In 2002 the turnover of this market amounted to 677 million euros (3.5% of the total turnover of the Swiss market). As intermediaries between suppliers and consumers two supermarket chains are dominating: COOP (50%) and Migros (25%). Presently 75% of products are sold through the two networks.[116] They are followed by specialized shops (16%), bakeries, butcher shops and small network (4%). The share of direct sales is 5%. Compared to other European countries, supermarkets are clearly the leaders in the market of organic food.

In addition, there are a number of wholesalers, importers and agents specialized in the import of natural products.

[114] BIO SUISSE is a Swiss association of natural agriculture organizations which uses its own standards and is an owner of Knospe trade mark.
Foreign importer cannot directly apply for certification under BIO SUISSE standard, application is filed via licensed organizations whose list is hosted at www.bio-suisse.ch. License is issued only to Swiss companies.
[115] www.sippo.ch.
[116] VARISTOR AG is intermediary between foreign importers and biggest Swiss supermarkets (http://www.varistor.ch/).

COOP Network sells natural foods since early 90s. In 2002 sales volume reached 526 million Swiss francs. The network has set for itself an ambitious goal: to double its turnover over the next year and win 10% of the market for basic products. COOP is the owner of the processing factories, some of which produce organic food. Natural products sold by COOP are labeled with signs BIO SUISSE, Knospe, some part of the products are sold under its own brand Naturaplan (not only natural but also the integrated products are sold under it). Bio.inspecta certifies products sold by COOP. The products range includes more than 1,100 items and is constantly expanding. In addition, COOP sells natural cotton textiles under the brand name Naturaline.

Migros brand enjoys ever growing significance in the Swiss market. In 2002, it accounted for 25% of sales of natural products and is turnover amounted to 264 million francs. In 2005 the company gained 6% in the total turnover of organic food. The range of goods offered by this network of stores comprises of 850 items with priority given to the local Swiss products. The range of textile and clothing made of natural fibers is constantly expanding.[117]

Along with the above mentioned retail chains a number of specialized wholesalers are functioning in the market. USEGO-Trimerco-Holding supplies various products to 5,000 retailers, including supermarkets Primo, Vis-à-Vis shops, Volg AG network, Manor, Spar, a number of independent retailers, many of which sell natural food products. Annual sales of natural products of these networks is about 10 million francs, the dynamics of growth is not as high as that of COOP and Migros.

Sales of natural products through catering and service companies is just emerging and is in the very beginning of its development, however its turnover is constantly increasing. The main project in this area is a joint venture between SV-Service and BIO SUISSE, which supplies organic food to university canteens and restaurants of COOP network.

Internet commerce in this case is not the best option, because it is difficult to sell fresh agricultural products through Internet stores. Moreover, those buyers on whom suppliers of natural products rely are not active Internet users. Attempts are being made to create an electronic trading platform for enterprises working with natural products. For example, Greentrade project (www.greentrade.net).

These dyas the majority of Swiss consumers are buying organic foods regularly: According to the survey of BIO SUISSE (2003), only 25% of respondents replies that they had never bought organic foods.[118]

However, buyers consider as natural ones not only certified organic foods (i.e. natural products in the narrow sense), but also an integrated product or products that meet higher quality standards. Market policies of trading companies are based on focusing on quality, environmental friendliness and safety of organic food.

[117] VARISTOR AG is intermediary between foreign importers and biggest Swiss supermarkets (http://www.varistor.ch/).
[118] In general the questionnaire results look as follows: 17% of respondents buy several times a week, 38% buy natural food not less than once a week, 28% natural food less than once a week and 17% never buy

Along with the growth of demand a dynamic development of the market is also taking place: sales of certified products in 2002 amounted to 1,056 billion francs (3.5% of the turnover of Swiss food market). Two-thirds of the country's natural products being sold can be produced domestically, the rest are the products that cannot be grown in Switzerland (coffee, citrus etc.). In addition, there is the need to import due to seasonal fluctuations in supply.

The gap between the prices of traditional and organic food products varies depending on the specific market and product. In Switzerland, the gap is on average 40-50%, and in the sector of fruit and vegetables it is higher and in the dairy sector lower. High prices are caused by higher production costs and the costs of sales, while at the same at pricing buyers' willingness to pay more for environmentally friendly, safe and quality products is taken into account. The highest prices are in specialized shops offering a wide range of natural products; in supermarkets and retail outlets prices are lower. In such commercial enterprises price gap between natural and traditional products is on average are following: dairy products - 10%, vegetables - 40-80%, potatoes - 50%, cereals - 40-50%, fruits and nuts - 50-60% .

For the majority of buyers acceptable gap is in the range of 10-30%, whereby preference is given to vegetables and fruits, as well as domestic products.

8.2.3.3. Imports of natural products

In the past, the range of imported products of organic agriculture has been very wide, but the volume of imports was limited to a number of factors that hampered the regular supply. Among these factors, strict requirements for quality imposed by BIO SUISSE standards, requirements of intermediaries, transport and logistical problems. But despite all the difficulties, the import of natural products is growing rapidly due to a constant demand (especially high demand for flour, bread, cornmeal, soy, rice, citrus fruits and dried fruits). In the long run imports volumes will continue to increase.

To import the products of organic agriculture into the Swiss market it is reccomended to use the services of a local importer, rather than trying to sell it directly. The importer can provide the exporter all the necessary information about the market situation, quality standards, the terms of market access, import clearance procedure. It is equally important that the importer could provide transportation and logistics services to speed up delivery of goods to the buyer. Commercial users often prefer to buy goods from a supplier known to them, who will undertake the costs of imports and delivery.[119]

8.2.3.4. Market development trends

In recent years, organic food market in Switzerland has been developing very rapidly. Projections of future development are very different: retailers (particularly COOP, trying to become a major retail supplier of such products) and BIO SUISSE has a more positive view than the processing and wholesale companies. The latter forecast that the growth rate of the market of natural products will be reduced from 20% to 5-10%, and BIO SUISSE in contrary expects a doubling of the market within

[119] As a successful partner from the Swiss side, uzbek-austrian processors named VARISTOR AG (Interview mit Josef Bertagnoli, Director of MARAP/Silk Road Organic Food, 23.11.2011, Bishkek).

3-5 years and increase of sales to 2 billion francs a year (this corresponds to not less than 20% of growth per year).

So far it is not clear what factors will provide an annual increase of 20%. Recently, such increase was provided by penetration of natural products into the market, expansion of the range, but now almost every supermarket offers a fairly wide range of natural, environmentally friendly products. The market has already established and strengthened. Material increase and a large share of the market now can only be achieved by replacing the conventional agricultural products by products of organic agriculture through more proactive promotion or as a result of loss of customer confidence in the traditional food. Such processes are not observed presently.

8.2.3.5. Potential of import market of organic foods (dried fruit and nuts)

Almost all sectors of the market have significant potential for growth. Information about emerging opportunities for entrepreneurs is based on the results of a special study conducted by the Research Institute of Organic Agriculture (FiBL).

The natural and climatic conditions limit production of natural food in Switzerland itself, forcing it to import. High demand leads to a further increase in imports. The share of imported products depend on the product group. In 2001, domestic production and imports compared as follows (in tons): cereals – 11,800/67,667 (85%), oilseeds - 80/8573 (99%), potatoes - 11 000/198 (0%) and vegetables - 19 700/5 253 (21%), fruits and nuts - 3 600/10 995 (75%), wine - 10 400/433 (0%), milk - 191 000/0 (0%), eggs - 26 200/0 (0%).

Switzerland imports less food than other countries such as Germany and England. Due to the high cost of goods produced by Swiss farmers and high tariffs, export volume is also small.[120]

Organic dried fruit and nuts do not create difficulties with transportation and logistics and are important ingredients in bakery products, cereals and various blends. It is projected increase in demand from the bakeries, the greatest potential for growth in the sector have nuts (5-10% per year).

Dried fruits are well represented in specialized shops and in supermarkets.

No difficulties arise at importing dried fruit and nuts as domestic production is not sufficient. This product has a long shelf life, so it can be transported by sea. Nuts are usually bought in Turkey, almonds - in Turkey and California figs - in Turkey, dates - in Turkey and the United States. Other nuts and dried fruits are imported from Morocco, Tunisia, Costa Rica, Togo, Cameroon, Italy and other countries.

The countries of Asia and South America are expanding the delivery of these products so it should be expected a decrease in their prices. Exporters would like to see in Switzerland, a more liberal market access conditions and the Swiss Importers want products of higher quality. One should keep in mind that the Swiss standards are stricter than the European ones.

[120] Analysis of individual groups of goods in the framework of this project that are not priority ones you can find in the Appendix.

8.2.4. China Market

In the past years the Chinese have begun to pay particular attention to issues of health, nutrition and environmental protection, which resulted in stricter requirements for food and the emergence of the concept of organic food in China. Organic foods can be found on the shelves of supermarkets in big cities. There are also specialized shops of organic products. One of the limiting factors for the development of the domestic market is the high price of organic products. The consumer can accept the additional cost of 10-20%, but the price is often 3-5 times higher than for traditional food. Local media have made every effort to raise awareness and promote the concept of organic food.[121]

In 2009 the market of organic products was estimated to $ 20 million whereas half if it is going for further processing and export, while the other half remains in the country for final consumption.[122]

China imports organic foods, especially raw materials and semi-finished products (ingredients of processed foods, most of which is exported afterwards). Organic sugar, dried fruits, nuts and honey are the main imported ingredients.[122]

Another category of imports is earmarked for final consumption in the domestic market which is growing rapidly since the mid-2000s. This is mainly those goods that cannot be produced domestically. Originally it was a finished product, but increasingly China imports semi-finished products that can be further packaged in China. The main import items are fresh tropical fruits, dried fruits, nuts, spices, quinoa, honey, coffee and snacks.

In 2005 Rules on the Organics came into force that impacted on the import of organic products. To import and sell organic products in China, it must comply with the Chinese organic standards and certification requirements.

8.2.5. The North American market

In recent years sales of organic products in the U.S. have continued to grow despite the crisis state of the economy. In 2009 sales of organic products increased by 5,3% which corresponds to 26.6 billion U.S. dollars. U.S. $ 24.8 billion are represented by organic food (3.7% of the total food market). The remaining 1.8 billion accounted for sales of organic non-food items.

Meanwhile, forecasts for 2010 continue to show strong growth of organic sales in North America.

8.2.5.1. U.S. Market

The result of the study carried out by Organic Trade Association OTA revealed the fact that 4 out of 10 families spent on organic products in 2010, more than in past years. This confirms the fact that the market for organic products in the U.S. in 2010 rose by 8%.

[121] http://www.ifoam.org/growing_organic/2_policy/case_studies/china_market_development.php, 21.01.2012.
[122] Organic Food Products in China: Market Overview, International Trade Centre (ITC), Geneva: ITC, 2011.
[123] More detailed about import potential of China see http://oneco.biofach.de/de/search/news/?focus=0010906b-d982-46b1-ba75-2155dc34b278, 23.01.2012.

10 years after the introduction of state rules 72% of surveyed parents[124] knew about the labeling of the Department of Agriculture USDA on organic products. In 2009 65% of respondents knew about it. The study also shows that 3 out of 10 families were "new buyers in the market of organic products." This fact suggests that there is still a need to raise public awareness about the benefits of organic farming and organic products.

Part of the organic products meant for domestic market of the USA is produced in the country and some part is imported from Australia (cereals, juices and beverages, meat products), China (tea, pumpkin, sunflower, soy, mushrooms, green beans), Thailand (rice and vegetables, soybeans, shrimp), Turkey (dried and fresh fruits, vegetables, nuts, spices, cereals, oil crops and oils, honey, juice), Mexico (coffee, vegetables, sesame, corn, bananas, papayas, apples, avocados, honey, soybeans, cocoa, palm oil, nuts), Uruguay (meat, wine, honey, rice, milk, citrus fruits), Denmark (dairy and meat products, cereals, snacks, groceries, beverages) and other countries.

Through imports, local companies seek to reduce their costs. Therefore, not only coffee and bananas are imported, as well as domestically produced products (soybeans, fruits, vegetables and beef).

8.2.5.2. Canadian Market

Total sales of organic products in the Canadian market amounted to 2 billion Canadian dollars (1,26 billion euros).[125]

Canada focuses on the export of organic products. Every year, Canada exports organic products worth more than 390 million U.S. dollars. The final destination is the United States, Europe and other countries. Since 2008, Canadian sales agency actively supports entrepreneurs, exporting organic agricultural products abroad by a grant program.[126]

In the U.S. and Canadian markets there is a fierce competition and the tendency to support domestic organic agriculture.[127] In order to supersede the other producers of organic goods from the shelves of American and Canadian supermarkets it is necessary to excel in quality and in price the competitors as well as to invest considerable amounts marketing as American and Canadian consumers are wary of "unknown" goods from abroad.

8.2.6. Markets of other countries

In Asia, where 60% of the population of the planet is concentrated, the market for organic products is estimated at 650 million euros, which is less than 3% of the world figures. The highest level of organic products consumption is in Japan which is equal to 340 million euros. On average, a resident of Japan spends 3 euros a year for the purchase of organic products, which is much lower than in Western Europe and in the United States.

[124] As part of this study parents 1,300 households were surveyed.
[125] Canadian dollar = 0.63046 Euros, average exchange rate 2008; source: www.oanda.com/lang/de/currency/average
[126] http://oneco.biofach.de/de/news/?focus=4d114e31-66e1-49a2-a743-6d77af521ec8, 22.01.2012.
[127] More detail in the article "U.S.: The Report advices to direct agriculture towards organic"http://oneco.biofach.de/de/search/news/?focus=a9582994-716d-4be9-81ff-5d9c1e8f0d1c, 23.01.2012.
[128] Mazurova A., Geography of the world market of bio-organic food, Moscow, 2009.

It should be noted that actual sales are somewhat higher because the statistics includes only organic products that are certified by the Japan Agricultural Standards (JAS), while much of the imported organic products certified by other organizations have not been taken into account by the statistics.

In Australia and Oceania (mainly New Zealand), the consumption of organic products also remains at a low level, accounting for just over 230 million euros a year. However, it is 4 times more than in 2000, 2001.[129] Consumption of organic products in Australia is 1.5% of the sales of all foods. On average, an Australian resident spends 12 euros per year for the purchase of organic products that is lower than in most Western European countries, but it is 4 times higher than in Japan. Sales are made primarily through a number of supermarkets (Woolworths and Coles) in major cities (Sydney, Brisbane, Melbourne, Canberra). The most sold organic products are fruits, vegetables, dairy products and beef.

There is a consumption of organic food though in a small scale in several Latin American countries, mainly in Brazil and Argentina. Fresh fruits and vegetables are the most popular, consumption of organic tea, coffee, jams, dairy and grain products is growing.

In Africa there is almost no a market of bio food. The exceptions are Egypt and South Africa. In Egypt, half of the produced organic herbs, fruits, vegetables and tea reports to the domestic market. In some African countries, consumption of "natural" foods, which, however, usually are not related to organic products is becoming popular however their popularity is probably linked to their better taste compared to traditional products.

Lately organic products have been playing an important role in the consumption basket of the Arab countries. Particularly it is observed in such countries as the UAE. In 2010, the local market produced more than 2 tons of organic products. This is a 15% increase compared to 2009.[130] Launching a production reflects the growing of consumer interest in environmentally friendly products. Presently Arab countries' market is disregarded. But, according to experts as awareness of population with incomes above the average increases it will consume more organic products. If you draw a parallel between the demand for exclusive products and the demand for organic products, one can state with confidence that in five years time, Arab countries will hold a special place in the world market for organic products.

8.3. CONCLUSIONS

Thus, the global market of organic products can be divided into the countries with a predominantly exporting and importing feature. The first category includes the developing countries (Africa, Latin America) and countries with large areas under organic farming (Australia). The second category includes the developed countries that are unable to meet market demand and import the missing volumes of organic products. This category of countries can be divided into countries with high rates of growth over the last 10 years (and the first signs of market saturation) and countries with low growth but high growth potential market for organic products. The first group is characterized by high competition, reducing the difference between the price of organic and inorganic products,

[129] Mazurova A., Geography of the world market of bio-organic food, Moscow, 2009.
[130] http://oneco.biofach.de/de/news/?focus=05c265f1-2652-4982-9c6e-a45508b67ea9, 22.01.2012.

well-established distribution channels, a clear legal framework regulating production and import of organic products. These features are characteristic of markets approaching saturation. It does not mean that this market cannot be accessed. This means that access to such market is associated with high barriers to entry, with a strong competition and low profit margins.

The second group of countries-importers of organic products does not have its relevant legislation or have just introduced its own regulatory acts. Organic products are only beginning to conquer the shelves of exclusive shops and a large proportion of the population still does not know the difference between traditional and organic products. In these countries, the price gap between the organic and inorganic products is measured not in tens but in hundreds of percent. In these countries, only population with high income can afford organic products. Strong relationship between foreign suppliers and local importers have not yet developed in such countries and there is no strong competition in this field. Notably these countries are potential markets for organic products from Tajikistan.

In order to compare countries and regions and identify priorities for the organic production in Tajikistan, a group of experts have developed a set of criteria by assigning them those having positive and those having negative impacts. The specific gravity suggests us to what extent the particular criterion is important for determining the export potential of organic products abroad. The results of the analysis are provided in Table 10.

Table 10: Determination of the countries / regions for potential export of organic products from Tajikistan

Criteria	Specific weight	Europe	North America	CIS	China	Arabian countries
Interest in organic products from Tajikistan	8	3	3	5	7	3
Future market potential (potential market size)	7	9	9	7	7	3
Premium to a price for organic products in comparison with inorganic	6	3	3	8	10	7
High competition in the market	5	8	9	3	3	3
Market size / market saturation	4	5	5	1	1	1
Market growth rate	3	7	8	3	3	2
High demand for quality of products, their packaging and marketable state	2	10	9	4	5	4
Import restrictions, import licenses, the high import taxes	1	10	9	1	3	1
Total score (the highest is the best indicator)		**36**	**37**	**118**	**142**	**65**

Source: Polina Voitovich, GIZconsultant at SAS Consulting.

Thus we see that countries where markets for organic products have not yet fully formed represent a particular interest for the products of from Tajikistan. In the first place comes the neighboring China, then come CIS countries and in the long run come Arab countries. It should taken into account that in

such countries as Russia successfully function the Consumers' Union of Tajikistan and the Chamber of Commerce, who are willing to act as guarantors in concluding transactions with Tajikistan.[131] Tajik products also have good chances in the markets of Europe and America. But it is necessary to make every effort to penetrate into these markets.

However, the results of this analysis should not be taken as a definitive answer. This analysis provides a course of action. For a more sophisticated analysis other factors and criteria that directly affect the success of the business such as transportation opportunities and costs should be included.

The potential of organic products on the domestic market still remains unclear. According to the experts, the growing of interest of local people to healthy food and keenness of international projects, organizations and local governments to sustainable agriculture and minimizing adverse impact on the environment should increase the demand for organic products.[132] It is necessary to take into account the fact that these days in Tajikistan, for nutrition and quality of food special attention is being paid, especially among populations with high incomes. This layer of population lives in the cities and does its shopping mainly in supermarkets. Demand of this target group is highly flexible, that is why, fluctuations, price increases will not affect the consumer basket. Based on these data we can conclude that the demand for organic products will be determined by the size of the target group.

However, to achieve optimal results awareness raising campaigns and promotions should be carried out which would raise awareness about the benefits of organic products.

[131] http://www.fruitnews.ru/news/index.php?IBLOCK_ID=1&SECTION_ID=3194&ELEMENT_ID=18394&sphrase_id=3684, 27.01.2012.
[132] http://oneco.biofach.de/de/news/?focus=0c71b4bc-adce-41bb-a89d-4c5dedf0b9dd, 23.01.2012.

9. OBSTACLES TO ORGANIC AGRICULTURE

This study suggests Tajikistan has all opportunities for production of organic goods, as well as the potential for exporting abroad. Now let's consider all the obstacles that are associated with both production and the processing and marketing of organic products in order to accurately determine the maximum available potential. Despite all the prerequisites and the first successes of various projects, organizations and initiatives in Tajikistan there are several difficulties which are to be overcome on the way to effective organic farming.

If we compare Tajikistan and Kyrgyzstan, neighboring countries, participating in one and the same project, it becomes clear that in Kyrgyzstan there are more advantages for the development of organic agriculture, both from the government perspective and from the climatic conditions, characteristic features of the country and farmers:

- In 2011, Kyrgyzstan has developed a draft law "On organic agriculture", which is not done in Tajikistan yet,
- Taxation facilitates the entire agricultural and processing sector in Kyrgyzstan, which is also not the case in Tajikistan,
- Reduced customs duties promote the export of Kyrgyzstan, in Tajikistan customs duty (for cotton in accordance with Liverpool quotation as at the day of shipment) only complicates customs procedures, and does not promote the export of goods abroad.
- In Kyrgyzstan, the farmers are independent, individual and have no debts, in Tajikistan land reform is not over yet, so there are a large number of farms in the process of transformation, the farmers are partly independent and partly with the land debt obligations for the land.
- Large-scale livestock breeding in Kyrgyzstan is a good source of raw materials for organic agriculture, whilst in Tajikistan cattle farming is not so developed to fully meet the needs of organic farming in organic fertilizers.
- Lack of motivation of Tajik farmers to be engaged in organic agriculture (evaluating all the pros and cons, the farmers are not convinced that organic production is beneficial for everyone who does it, as do farmers in Kyrgyzstan).

Thus, on the one hand development of organic agriculture is hampered by the lack of legislative and regulatory acts. Because organic agriculture (yet) isn't in the focus of government programs, no benefits, no subsidies, no government support is provided for it as in other CIS countries (Ukraine, Georgia, Armenia).

On the other hand development of organic agriculture requires entrepreneurial spirit for establish production and processing of high quality products and with it enter the world market, as it happened in case with Uzbekistan. Starting just from the scratch, MARAP / Silk Road Organic Foods has become a world leader in the production of organic products (95% global market share of organic dried cherries).

Entering the world market facing up with intense competition from entrepreneurs from other countries must be considered (high quality and low-cost fruits and nuts from Turkey and Iran:

organic apricots from Turkey (BIO Suisse certificate) cost 4 euros / kg, compared with non-organic Tajik apricots of highest grade are 5 euro / kg without the cost of transportation, storage, etc.), volatile and rapidly changing markets, the big risks in the production of high quality and safe products, the isolated location of Tajikistan, the lack of an established infrastructure at the international level, harsh climatic conditions, remoteness from major trade routes.

Thus, transportation costs contribute to production costs. While transportation the cargo truck / container from Tajikistan to Europe costs 5,000 euros, from Turkey it can be delivered for 1,000 euros, and from China for 800 euros. Therefore, it is feasible to supply to Europe only expensive and exclusive organic products to cover all expenses, including transportation costs. According to the Austrian businessman, Tajik (organic and inorganic) apricot has no chances in the European market, Switzerland and the United States.

So, knowing that no facilitation can be expected either from the government or (yet) from the private sector / investor, does this mean that organic production of Tajikistan has no chance. No way! We should not expect any assistance help from the outside, whereas in Tajikistan has sufficient prerequisites and opportunities for successful organic farming. To be successful, we should only work and develop what is already available in Tajikistan.

10. CONCLUSIONS AND RECOMMENDATIONS

10.1. DEVELOPMENT AND SUPPORT OF ENTIRE VALUE-ADDED CHAIN

We have analyzed both production and selling opportunities of the Tajik organic products and came to the conclusion that it has every right to exist, to develop and to a market share, both in domestic and external markets.

The subject of this section is to analyze the following steps and new ideas for the development of organic production in Tajikistan.

Based on the global experience, the experience of developing countries, the experience of neighboring countries and the CIS, it becomes clear that it is impossible to approach the issue of organics narrowly within the production and processing framework. To achieve maximum success, it is necessary to approach organic production as a complex and develop it at all levels. The following is required for that:

1. the interest of public authorities and defined prioritization of organic production in the state program of development,
2. development of domestic rules and principles of the organic matter provided in the legislative acts that comply with international standards on organics,
3. the adoption of legislation on organic agriculture and the introduction of a national certification which is recognized in those countries where organic products are exported from Tajikistan,
4. the reduction of customs duties and taxes on production and processing of organic products
5. increasing public awareness about the benefits of healthy food, about importance of organic agriculture for society, economy, environment, and each person in particular,
6. increasing the knowledge and skills of farmers in running organic farming, consulting, soft loans, programs to support organic agriculture,
7. investments in organic processing to produce high quality, exclusive products that can compete in world markets and represent Tajikistan in the international exhibitions,
8. to create all conditions for the development of local organic market and contributing to its promotion, marketing, awareness campaigns,
9. to establish trade relations with potential partners in priority countries (see 8.3)

10.2. DUAL CERTIFICATION

Due to dual certification i.e. Organic and Fair Trade Certification in 2011 MARAP was able to increase its revenues by 5%. At the end of 2011 in the frameworks of the Program for Rural Development RGP conducted a Pre-feasibility study for Fair trade on Dried Apricots in Sughd region, Tajikistan[133]. The study has confirmed the fact that the products certified under organic standards and the standards of Fair Trade satisfy firstly requirements of two target groups (groups with an interest in organic products and groups interested in the products produced in accordance with the principles of Fair trade), secondly it is higher valued and hence price premium may be higher than the amount of allowances to supplement organic Fair Trade, which leads to higher profits of the producers themselves.

Therefore, one of the main messages of this study is the recommendation of a "dual" certification.

10.3. ORGANIC PRODUCTS WITH MAXIMUM POTENTIAL

For the domestic market a high potential will have those products that are not a food for the average family. The maximum potential will have organic baby food, as well as organic, fresh and dried fruit and vegetables, especially out of their usual season. Out of the season increase in price of organics will not be so noticeable as the price of fresh fruits and vegetables out of season, sometimes ten times higher than price for them during the season. There will also be popular special health-improving teas, breakfasts of organic cereals and dried fruits. That is, the products that today are being imported from abroad are consumed only by a layer of the population that can afford it and who pays special attention to healthy food.

Therefore, our recommendation to Tajik producers and processors is to produce high quality organic products, which will be able to replace expensive imported inorganic products.

As this study is carried out in the framework of the project which supports and develops a value-added chain of dried fruits, nuts and honey, let's consider the most common type of dried fruit produced in Tajikistan i.e. dried apricot. Calculating the profitability of organic apricot and its chances in the world markets, it is clear that the Tajik dried apricot is not competitive on world markets (Turkish dried apricots have better quality and are cheaper) and the costs of its production is not much differ from the cost of production of traditional dried apricot.

However, the Tajik dried fruits, nuts and honey have the potential to fast-growing and not saturated markets of Russia, Kazakhstan and other CIS countries, China and other fast-growing and developing markets of Asia.

Data of International Studies, interviews with organic producers of Kyrgyzstan and the organic processors from Uzbekistan suggest that special exclusive products or crops (like cotton) have a good potential as the market for organic industrial crops has just started to grow and have not yet reached its saturation.

[133] Uuj-Miller C.: Pre-feasibility study for Fairtrade Dried Apricots in Sughd region, Tajikistan; RGP, November 2011.

Therefore, Tajikistan can produce and process high-quality industrial crops such as cherry, buckthorn, pomegranate, i.e. those products in which the exclusive processors abroad can be interested: bio-cotton for Adidas, Nike, H & M and other branded clothing producers, bio-vegetables and bio-fruits for exclusive producers of organic chocolate and candy, baking, yoghurt and other products.

10.4. COUNTRIES AND REGIONS WITH A MAXIMUM OF POTENTIAL

Becoming such states like China and India as economic superpowers, leads to growth of the middle class and because this layer of population becomes more educated and wealthy, it begins to consume more organic food. It is expected that this development will transform the countries producers of organic products into major consumer countries.

Countries where markets for organic products are not yet fully formed represent particular interest to the products of Tajikistan. A special potential for Tajik organic production provide China and CIS countries (Kazakhstan and Russia). Presently the market for organic products of the Arab countries is too small. But it is growing constantly. This market represents a great potential for organic production from Tajikistan, especially for those products that are not produced in a given country, but imported from abroad

10.5. "ECO" - TOURISM AS INNOVATIVE MARKETING CHANNEL FOR ORGANIC PRODUCTS

Interesting possibilities are being explored in countries that are increasingly becoming targets of tourists and are increasingly visited by tourists with a particular emphasis on the cuisine of the region (e.g. Fiji, Cook Islands and Samoa). Thus it is possible to link organic farmers and small producers directly with hotels, restaurants and other travel providers.

In Hungary, for example, there is already an Association of "eco"-tourism, which was supported at one time by an international project. In the framework of these project "eco"-villages were created which are included in the tour program of "eco" tourists. Local cafes, hotels and restaurants collaborate with bio-farmers. Therefore, tourists can book a variety of organic dishes for breakfast, lunch and dinner and at that eat only organic products. Tourists can also visit the organic farmers and buy handicrafts from organic agricultural products and organic products, both fresh and processed (dried fruits, jams, marmalades).

Tajikistan itself is a country with great tourism potential. These days there are already tourist associations and the company arranging trips to remote villages. Also, there are many projects involved in production of crafts and souvenirs for tourists. Combining efforts of these projects, by organizing joint activities of associations and farmer households engaged in organic production we can achieve great things.

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ANNEXES

ANNEX 1

Rules of organic products imports into the EU

Import rules contained in the documents of the EU on organic agriculture have great importance for the world market of organic food. Organic products imported into the EU must be produced, processed and certified in accordance with equivalent standards. [134]

There are two ways to obtain a permit for import into the EU:

A. According to the list of third countries. A country or certification authority may be added to this list, for this the country must have adopted legislation on organic agriculture and the system of inspection and controls. In addition, it is necessary to provide a certificate of conformity and other documents on the ways of conducting organic agriculture. The functioning of the system of inspection and control and effectiveness of the legislation are inspected by EU experts. Currently, the list includes: Argentina, Australia, Costa Rica, Israel, New Zealand and Switzerland. Goods from these countries must be accompanied by a certificate of inspection of importing products of organic agriculture.

2. Through the process of obtaining a license, which is applicable to the countries not included in the list. The predominant part of the products of organic agriculture is being imported through this procedure. As a rule, certification bodies functioning at the international level assist exporters and importers to collect all the required documents. Requirements for a package of documents are different in different EU countries, but there are always the following principles. The license shall be issued to the importer only by the bodies of the country where the goods will be imported. The company must conclude an agreement with the European certification organization for inspection. If it is an imported from a country which is not included in the list of third countries, the importer applies for a license to the local authority. The application is accompanied with the documentation confirming compliance with all requirements of the EU to the natural products. The product cannot be released into circulation on the European market as long as there is no import license is obtained. Usually such licenses are issued for a certain period of time after expiration of which the new application is submitted. Each consignment must be accompanied by a certificate of inspection of the imported products of organic agriculture.

As of January 1988, all inspection organizations accredited in the EU, must comply with the requirements of standard EN 45011. As a result of the equivalence principle this is applicable for all inspection organizations of third countries exporting goods to Europe.

In February 2000 the European Commission introduced a logo for the production of organic agriculture, which can be used in all EU countries by producers complying with the requirements of EU legislation on organic agriculture. Logo can be applied only to the goods consisting no less than 95% of the production of organic agriculture and have been processed, packaged and labeled in the EU. In addition, the logo can be applied to goods from countries with a similar system of inspection and controls that is, the ones included in the list of third countries.

[134] Review of import procedures to the UE at the link: http://exporthelp.europa.eu/thdapp/taxes/show2Files.htm?dir=/requirements&reporterId1=EU&file1=ehir_eu11_05v002/eu/main/ovr_eu_010_0612.htm&reporterLabel1=EU&label=Overview+of+Import+Procedures&languageId=ru, 23.01.2012.

The European logo is used on a voluntary basis and can be applied in conjunction with national or private labels.

There are national labels in Denmark, Austria, Sweden and other countries and are trusted by consumers.

ANNEX 2

The potential of imported market of organic food products in Switzerland

1. Vegetables, fresh and stored

Swiss retail and wholesale companies prefer to deal with vegetables grown in the country. Import has secondary importance, adding to domestic production for seasonal fluctuations. Exporters and importers should very carefully monitor the situation on the market as import quotas are set each week. The volume of imports of vegetable is growing constantly. The main exporting countries are France, Spain, the Netherlands, Austria, Israel, Canada, China, USA and Romania. In the future, more vegetables will be purchased in the Mediterranean countries (especially in winter time), especially in Israel and Egypt. Germany and Austria will also deliver more vegetables for further processing and long-term storage of vegetables.

Import growth will cause the pressure on prices in the domestic market. The demand from large retail chains is growing. Sufficient volumes of domestic production and customs legislation are almost completely eliminating the import of cabbage, celery, carrots and beets from the stores. Domestic production is protected by high tariffs, but the law provides for periods of high and low tariffs. Periods of low rates coincide with periods of insufficient domestic supply (from November to April).

Most of the Swiss prefer to buy vegetables grown in neighboring countries. Transoceanic vegetables have little chance to hit the market, because the standards do not permit air transportation. Importers require from suppliers high quality and simple logistics.

Foreign suppliers and Swiss importers repeatedly appealed to the relevant authorities in Switzerland to expedite consideration of applications for import. In particular, they have offered to provide documentation for the import as at the end of the month, not by each batch. Importers want more transparency in the field of import quotas as for foreign suppliers they wish BIO SUISSE standards complied with EU legislation.

2. Processed vegetables

The trend towards the consumption of finished products or semi-finished products has increased the demand for processed vegetables. The highest demand has been observed for natural products, with quality brand Knospe. There are already companies engaged in processing vegetables grown with environmentally friendly technologies. In Switzerland, for example, there is a long tradition of making vegetable juices, which are exported to many countries around the world. In addition, companies are interested in export of processed vegetables.

As in the case with fresh vegetables, processed vegetables are sold primarily through retail chains of COOP and Migros. In the future, it is expected an increase of demand for such products, especially by the restaurants.

The lion's share of raw material is grown in Switzerland itself, the import has an auxiliary character (only tomatoes, broccoli and cauliflower are imported). The main source of imports of processed

vegetables is Italy, in smaller quantities these products are imported from France, Hungary, Germany and Holland. There is little demand for transoceanic vegetables but provided that they are transported by sea. But in any case, products from neighboring countries will be more competitive, because, firstly they have lower transportation cost, and secondly, long-term transportation is discouraged for environmental reasons.

The market of processed vegetables is not enough developed yet, supply of some products is not sufficient. At the same time information on the market of processed vegetables is scarce. In general, the situation reminds the one of the fresh market. Importers would like to see more suppliers of processed vegetables in the market.

3. Fresh fruits

In Switzerland, during the 90-ies organic agriculture commenced to supply considerably larger quantities of seed crops. Now their share is 4-5%. However, production of cherries did not increase due to the problems with crop protection procedures from pests and environmental standards non-compliance. Nevertheless, retailers are interested in expanding the range of organic fruits. Demand for exotic fruits (citrus, kiwi, bananas, mangoes, etc.) grown by organic methods increased. Therefore, the potential of this market sector remains high: for example, the market for citrus fruits is increasing annually by 10-20%. It is expected that in the period to 2008 the market of ecologically clean fresh fruits will continue.

In Switzerland peaches are grown in very limited quantities due to the excessive humidity of the climate and therefore they are mostly imported from Mediterranean countries. Citrus and exotic fruits are supplied exclusively from abroad. Lemons and oranges are supplied from Italy and Spain. The main suppliers of bananas are the Dominican Republic, Mexico, Uganda, Peru and Cameroon. Mangoes and grapes are supplied from Ghana and Cameroon, pineapple, papaya and passion fruit from Ghana and Uganda, figs, pears and apricots from Turkey and various berries from Poland. Suppliers of other fruits are Israel, Germany, Austria, Argentina and Chile.

The market of ecologically clean tropical fruits is relatively young and is fraught with tremendous opportunities for suppliers of traditional delicacies and fruits. An increase of supply of exotic fruits id noticed all around the world that has a positive effect on the price situation and the availability of these products. During the periods of sufficient supply of fruits by national producers import is levied with high taxes.

Importers and trading companies would like to receive the fruit that look more pleasant and beautiful and with a longer shelf life. In turn, foreign suppliers are constantly complaining about problems related to compliance with the requirements of BIO SUISSE standards. The most difficult to fulfill the condition of the complexity of the system of organic farming and the ban on the import of goods by air (it is necessary to process the harvest to increase shelf life). It is necessary to provide customers with more detailed information, because many people do not know the difference between the ecologically clean and those exported in a free trade mode. Another tricky issue is the use of ethylene for ripening bananas.

4. Fruit juices

Apple, pear and grape juices are being in Switzerland for many years so far, as well as other fruit and berry juices (black currant, strawberry and other fruits). Natural juice can be bought almost everywhere.

Although at the end of 90s the demand for apple, pear and grape juices increased (by 80% per year), now the main growth is expected in the sector of citrus juices. Natural citrus juices are being supplied to Swiss supermarkets since 2000. Currently, the juice market is based primarily on the juices of citrus fruits, and here the potential for development is far from exhaustion. Natural pineapple and mango juices can only be bought in specialized shops, they are rarely supplied to supermarkets but the demand for these goods is high. In the near future, the demand for any exotic fruits juices will rapidly grow (especially pineapple juice).

Among wholesalers of exotic and tropical fruit juices baby food producers dominate. Experts believe that the sale of natural orange and grapefruit juice will increase annually by 20%, and pineapple juice by 30%.

Apple, pear and grape juice is produced in the domestic market. Imports from neighboring countries are low. Orange juice is imported from Brazil, Cuba, Egypt and Italy, grapefruit from Cuba. Latin American countries are more important exporters of citrus fruit juices, as their products are of higher quality.

Switzerland has a policy of stimulating imports of all kinds of juices, especially in autumn and winter. The main problems in this sector include: trading companies would like to see an increase in the supply of orange juice and increase the reliability of the sources of imports.

5. Spices and medicinal herbs

Natural spices and herbs long ago have taken a strong position in the market of Switzerland. Such companies as Weleda and Bioforce have developed high quality products that are being exported all over the world. The demand for the product of the group under consideration for a long time is kept at a high level, but the market is developing unevenly. Medicinal plants and their products are sold through specialized shops of natural products and pharmacies. One-third of imported spices and tea is sold via retail trade specialized shops, a third reports to processing and a quarter in the retail network. The rest is sold through the mail.

Buyers wellcomed a variety of herbal teas and spices, so the potential for these products is huge: over the past six years, the annual increase in turnover was equal to 15%.

Strict requirements are set for these kind of products that came from abroad: it must comply with organic standards, the area of collection and exact composition of the product, the standard of environmental safety and the official license fee should be specified.

The share of tea plants collected in natural conditions is less than 5%.

Domestic supplies of spices and medicinal plants are not sufficient to cover the demand, but the national product is preferred because of its freshness. The source of imports is primarily European countries. Spices are purchased in those countries where they grow: in Albania, Sri Lanka, Indonesia, India, Morocco, Egypt, Turkey, Argentina, Nicaragua, Croatia, France, Hungary, Madagascar. The volume of domestic production of tea may cover up to 20% of demand. Herbal teas are imported from Argentina, Hungary, Czech Republic, Croatia, Turkey and in small quantities from France, Tanzania, Sri Lanka and India. Black and green tea is imported from India, China, Nepal and Sri Lanka.

Exporting countries are rapidly expanding production in addition new suppliers from Eastern Europe and South America is emerging in the global market. Tightening competition will inevitably lead to lower prices and improve quality.

Swiss importers are constantly faced with insufficient high-quality products from plants collected and grown in small farms and encourage suppliers to introduce an effective quality management system. Providers should pay particular attention to the lack of finished products of synthetic substances used to combat diseases and pests. This is especially essential for tea, because it is mainly produced in the factories that do not comply with the requirements of environmental cleanliness. Presented in shops and supermarkets product range varies depending on product group. Importers strive to stability of supply and demand advance notice of any circumstances that may lead to a decrease in production and exports. Since the products concerned are imported in small lots, administrative and certification costs are higher than for other natural products.

6. Crops

Grain and products of them hold the first place in the natural products market. Presently it is the most sold product of organic agriculture. The main buyers of natural grains are flour mills, producers of various mixtures of cereals and animal feed. As a result, products are supplied to the retail market. In recent years, the annual increase in cereal market was 10-20%. The main product is a natural bread.

Even in the supermarket shoppers can find a wide selection of natural cereals and products from them. Wholesale and retail companies assess market prospects as very good and expect annual growth of 5-10% per year. High demand for eggs and pork will result in increased imports of feed grains.

Switzerland imports up to 90% of natural cereals. Main sources of imports are the U.S. and Canada; as well the grain is imported from Brazil, China, Hungary, Austria, Ukraine, Argentina, Australia, France, Italy, Spain, Israel and Morocco. Feed grain is imported from Romania, Hungary, Germany and Ukraine. Rice is imported from China and Thailand. In future, the best price offers will be received from Eastern Europe that will compete with offerings from other countries. The Swiss market for the grain is carefully monitored and regulated by the government. Importers are also required to purchase grain from local producers. Import of coarse grains is not limited in any way.

7. Oilseeds

This segment of the market in general can be called as established. Oils used for cooking, are imported by medium and large trading companies, retail chains, processors, restaurants and companies in the sector of services. Natural olive oil enjoys great demand and the demand for other types of oil has increased in recent years by 35%. Customers report that the range is gradually expanding and is already able to satisfy the most sophisticated requirements.

Much of natural oils and oilseeds being sold are imported: from Argentina, Peru, Guatemala, Mexico, South Africa, Australia, USA, Canada, Hungary, Italy, Austria and Romania.

Semi-finished oil is subject to high import taxes. The high saturation of the market does not allow hoping for significant growth.

Products labeled by BIO SUISSE logo cost higher than other products. Importers and wholesalers want to buy goods at lower prices and would like to see less variation in prices. It can attract new suppliers and give the market a new impetus for growth.

Importers are hoping toward further liberalization of international trade, reduction of tariffs and restrictive duties. For importers it is important to have suppliers from countries with different time of the harvest - this allows to ensure stability of supply.

As seeds are exposed to the harmful effects due to violations of the rules of cleaning and washing of vehicles, the samples at importing into Switzerland go through expensive laboratory assays.

8. Beans

Beans, peas, lentils, soybeans and other legumes in the Swiss market of natural products hold a secondary position; the dynamics of this segment is low. The main buyer is processing industry. The maximum annual increase in sales is 10%, higher rates should not be expected.

The share of imports is high: peas and lupines are imported from Hungary, USA, Canada, China, Brazil and Argentina, soy from the USA, Canada, Argentina, Italy, Hungary, Austria, Romania, Peru, Guatemala, Mexico, South Africa, Brazil and Australia. The proposal on the global market is growing, which we cannot say about Swiss market demand, so the market cannot be considered as important one. The main problem is low consumption of legumes by Swiss. In connection with the introduction of new rules in 2004 the demand for animal feed made from the beans should increase.

9. Textile

Textiles from organic cotton among Swiss consumers enjoy very high demand due to the efforts of trade companies Remei and COOP. Over the past years, sales increased by 45% annually. Presently, the sector aims to ensure that the textiles is to be produced from natural cotton only. The growth potential is enormous: annual market growth for the foreseeable future will be no less than 30%.

All the natural cotton is imported mainly from India, Turkey, Egypt and Tanzania. It is processed in Switzerland itself, as well as in India, Germany, Greece, Lithuania, Croatia and other countries.

BIO SUISSE does label textiles made from natural cotton, but administrative conditions of imports are very favorable, since there are no almost any barriers. International Association of textile manufacturers from natural cotton (InternationalerVerband der NaturtextilwirtschafteV, IVN) attempted to harmonize existing standards with by uniting the producers, exporters and trading companies and introducing two-tier labeling system, but still the process is completed.

ANNEX 3

The terms for access of organic agriculture products into the Swiss market

1. CUSTOMS REGULATIONS AND VAT

General rules on customs clearance are applicable to products of organic agriculture. High taxes are collected from such goods as sugar, vegetable oils and dairy products. For certain categories of products special import licenses are require which are issued only to Swiss importers. Processed products are subject to higher customs fees than raw materials.

Like in the EU, for the import of certain goods from some developing countries the system of preferences Generalized System of Preferences is applicable. Imports from least developed countries in general are not subject to import customs fees.

Importers of food products pay VAT at the same rate as the Swiss producers i.e. 2.4%.

2. Administrative rules

Organic and traditional agriculture products, regardless of their place of origin, must meet the requirements of the following regulations:

- Law on Food (Lebensmittelgesetz) and the Regulations on food staff (Lebensmittelverordnung); these standards constitute foundation of Swiss legislation on food market;

- Regulations on components having foreign origin and ingredients of other foods (VerordnungueberFremd-und Inhaltstoffe in Lebensmitteln); this standard specifies the maximum content of various chemical substances of unnatural origin in food;

- Regulation on the permitted additives into food (Verordnungueber die in LebensmittelnzulaessigenZusatzstoffe);

- Regulation on hygienic and microbiological requirements to food and related goods, to facilities and personnel (Verordnungueber die hygienisch-mikrobiologischenAnverordnungenanLebensmittel, Gerbrauchsgegenstaende, Raeume and Personal); this standard sets a very stringent requirements for the content of microorganisms in food and drinking water ;

- Regulation on nutritional value (Naehrwertverordnung);

- Regulations on specifying of goods' origin, raw materials and ingredients used in food production (Verordnungueber die Angabe des Produktionslandes von Lebensmitteln, Lebensmittelzutaten und Rohstoffen);

- Regulation on the identification and designation of the quantity and weight at transport and sale (Verordnungueber das Abmessen und die Mengendeklaration von Waren in Handel und Verkehr).

3. Regulation on organic agriculture

Products of Swiss organic farming should meet the requirements of this provision, which also requires compliance with the requirements of other documents regulating certain aspects of agriculture. Goods of foreign origin must meet the same requirements.

Regulation on organic agriculture in Switzerland and the EU similar standards set minimum, basic requirements. Most of private standards are more restrictive. Prior to adoption of the Regulation agriculture standards were established by BIO SUISSE. The Swiss Regulation was developed on the basis of the EU Regulation № 834/2007 on organic production, but contains requirements for the transition of the entire production into organic agriculture. However, the requirements to the process of transition are less strict: there is no a "zero year" provisions over which the production facility is not considered to have transited into organic agriculture. Therefore, transition in Switzerland takes two years, not three, like in the EU.

If any product is acknowledged as a natural in accordance with the rules of the EU, it is automatically recognized as such in Switzerland and vice versa, that is, the principle of reciprocity is in place. WTO rules and bilateral agreements of Switzerland-EU does not allow the existence of any kind of trade barriers. Since June 1, 2003 the bilateral agreement between the EU and Switzerland in the field of agriculture is in place which recognizes the requirements of Swiss and European standards in the field of organic agriculture as equivalent ones. Therefore, the additional requirements of Swiss Regulations are not applicable to products imported from the EU (but this does not apply to private standards: to be eligible to apply appropriate label their requirements must be met).

4. Requirements for import

Regulation of food imports from outside of EU is based on the principle of equivalence: the production, inspection, certification and labeling of natural products from developing countries must comply with the requirements contained in the Swiss Regulation on organic agriculture.

In order for the product was recognized as organic (biologisch / oekologisch) one, a producer, processor, exporter in the country of origin and the Swiss importer must be certified. Certification is carried out at least once a year and only by accredited organizations. In Switzerland, at the federal level the following organizations have accreditation:

- Bio.inspecta

- IMO (Institut für Marktökologie)

- SchweizerischeVereinigungfuerQualitaets-und Management Systeme (SQS - Swiss Association for Quality and Management Systems).

Those countries in which there are requirements that are equivalent to ones of Switzerland can be entered into a special list of the Federal Department of Economics.

If the country of origin is not included in the list, the Swiss importer shall submit an application for a single license to the Federal Office for Agriculture. Such application shall be accompanied by a certificate of conformity for products and the producer. Based on these documents Federal Office

makes decision on issuing a license. Only after obtaining a license products can be imported into Switzerland as a natural food product. Each batch must be accompanied by a certificate for import, which is a confirmation that all requirements of the production terms and conditions are satisfied and that the inspection was conducted. Certificates are issued by certification organizations accredited at the federal level:

- In case of imports from the countries listed in the above list, a certificate shall be issued by certification organizations of the relevant country. If goods produced outside EU but having EU certificate are imported from EU, no additional certification is required then;

- In case of import from countries that are not listed in this list, the certificate must be issued by the organization listed in the application for a single-time license.[135]

[135] http://www.vneshmarket.ru/content/document_r_F847364F-6D16-44AD-B68A-C1526BCECDF7.html

ANNEX 4

Terms and conditions of certification and import of organic products into China

The name of regulatory act and / or a standard: National Standards for Organic Products, GB / T 19630-2005.

http://www.fas.usda.gov/gainfiles/200507/146130183.pdf

An authorized public authority: Standardization Administration of China (SAC) and the General Administration on Quality Supervision, Inspection and Quarantine (AQSIQ).

STANDARDIZATION ADMINISTRATION OF CHINA

No. 9 Madian East Road

Haidian District

CN-Beijing 100088

Tel: +86 10 8226 2624

Fax: +86 10 8226 0660

E-mail: sac@sac.gov.cn

Web: http://www.sac.gov.cn/sac_en/

GENERAL ADMINISTRATION OF QUALITY SUPERVISION, INSPECTION AND QUARANTINE

No. 9, Madian East Road

Haidian District

Beijing100088

People's Republic of China

http://english.aqsiq.gov.cn/

Date of adoption: 2005

Regulation and / or Certification: Chinese standard defines the general specifications and requirements to organic production of agricultural crops, edible mushrooms, wild plants, domestic animals and birds, water breeding products , bee-farming products and unprocessed foods.

Imported products: China does not provide equivalent agreements with other countries. USA producers certified by USDA are not allowed to sell their products as organic if they are not certified in China. The same situation is true for all other countries.

Certification: mandatory.

There are 26 local and 6 international certification agencies.

Two biggest Chinese certification bodies are: China Organic Food Certification Center (COFCC) and Organic Food Development Center (OFDC).

Joint ventures: BCS (Changsha); ECOCERT (Beijing); IMO (Nanjing), JONA and OMIC

Requirements to foreign certification bodies:

Regulations on Certification and Accreditation (Order № 390 of the State Council of China) Requirements for all certification bodies + all additional requirements for foreign certification bodies

Requirements for approval of certification bodies (RMB 3 M, 10 staff members ...)

Foreign certification bodies must be accredited in their countries

Foreign certification bodies should have experience in organic certification for more than 3 years

Accreditation: GOVERNMENT

Certification and Accreditation Administration of China (CNCA)

China does not allow foreign evaluation bodies such as the U.S. Department of Agriculture for accreditation of certification.

Additional information: http://www.globalorganictrade.org/countries.php?idx=11

ANNEX 5

Taxes and fees in the Republic of Kyrgyzstan

From January 1, 2009 the new Tax Code is in force in Kyrgyzstan .

The Government provides the following key positive aspects by adoption of the new code:

- reducing taxes from 16 to 8;
- reduction of VAT from 20 to 12 percent;
- provision of a number of benefits for the priority sectors, in particular for the processing industry;
- provision of a simplified tax regime;
- improved administration.

Nevertheless, currently an interdepartmental governmental committee is fine tuning the Tax Code. Considering the impact of the global economic crisis, inter-governmental commission proposes to reduce the tax burden for taxpayers.

Presently in Kyrgyzstan there are the following types of taxes:

• Income Tax - 10%

• Profit tax - 10%

• Value Added Tax - 12%

• Excise tax (depending on the type of excisable goods)

• A tax on use of natural resources (Royalty);

• Sales Tax - 1.5-3.5%

• Property tax. It should be noted that at present the taxpayers pay only the tax on movable property. Up to December 31, 2009 a moratorium has been entered into effect on property tax in the Republic of Kyrgyzstan;

• Land tax (depending on the region of Kyrgyzstan).

ANNEX 6

Interview Josef Bertagnoli, Director of MARAP/Silk Road Organic Food, 23.11.2011, Bishkek

MARAP is interested to cooperate and purchase fresh high quality organic products from Tajikistan.

But for the beginning Joseph proposed to supply one truck (20 tons) of organic cherry, organic pomegranate (only dark red) or organic sea buckthorn in 2012.

If it will be possible to export and if there are no any problems with the border crossing, he will buy a lot more.

Unfortunately, he is not interested in legumes at all.

About MARAP:

- In Austria Bio-leben
- in France La Vie Biologique
- In England, Life style organic
- Uzbekistan: Silk Road Organic food: Pearls of Samarkand & Treasure of Silk Road
- 12 employees in Austria
- 12 employees in the office in Uzbekistan and 50 - in the factory
- 300 - 500 seasonal workers

Production capacity on processing:

- 50 tons of fresh cherries per day = 8 tons of finished products
- In the season 1,000 tons of cherries, 20 t of apricots are processed

Export volume = One 20t truck a week

Exports to 45 countries: Europe, England, Switzerland, Sweden, USA, China (exports to China by air. They are willing to pay big money for the organics produced by European companies abroad!)

Value for: 1 kg of dried cherries = 8-9 kg of fresh cherries

Cost:

- the cost of cherry = 0.50 Euro / kg
- FT premium = 0.12 Euro / kg
- Labor costs = 1.5 - 2 euro / kg of dried cherries (???)
- Laser purification and pressure cleansing = 1 Euro / kg
- Transportation costs and the costs of documentation = 0.35 Euro / kg
- EU Customs Fees = 5.1%
- The cost of packing = 0.22 Euro / kg
- Transport to the customer = xx € / kg
- Storage costs = xx € / kg
- Gross income = 25%
- certification and quality assurance
- Cost of laboratory tests
- Net profit = 4 - 5%

In 2011 trade turnover of Uzbek subsidiary was 20%

2012 - Plan - 25%

Channels of distribution / sales:

- processing plants (chocolate industry)

- supermarkets
- other customers

A production line for processing, removing seeds and drying of fruits was installed in Uzbekistan

Investment in 2011 in line "lot-for-lot" = 1.5 million euros (200,000 euros - grant funds but have not yet received)

Over 10 years 5 million euros (own funds) have been invested

MARAP is a leading producer of organic products in the world. In the production of dried cherries MARAP holds the first place (95% of the world market).

At that MARAP had not ever received any grant or other forms of aid.

MARAP is self-taught enterprise, which learnt lessons from it's own mistakes

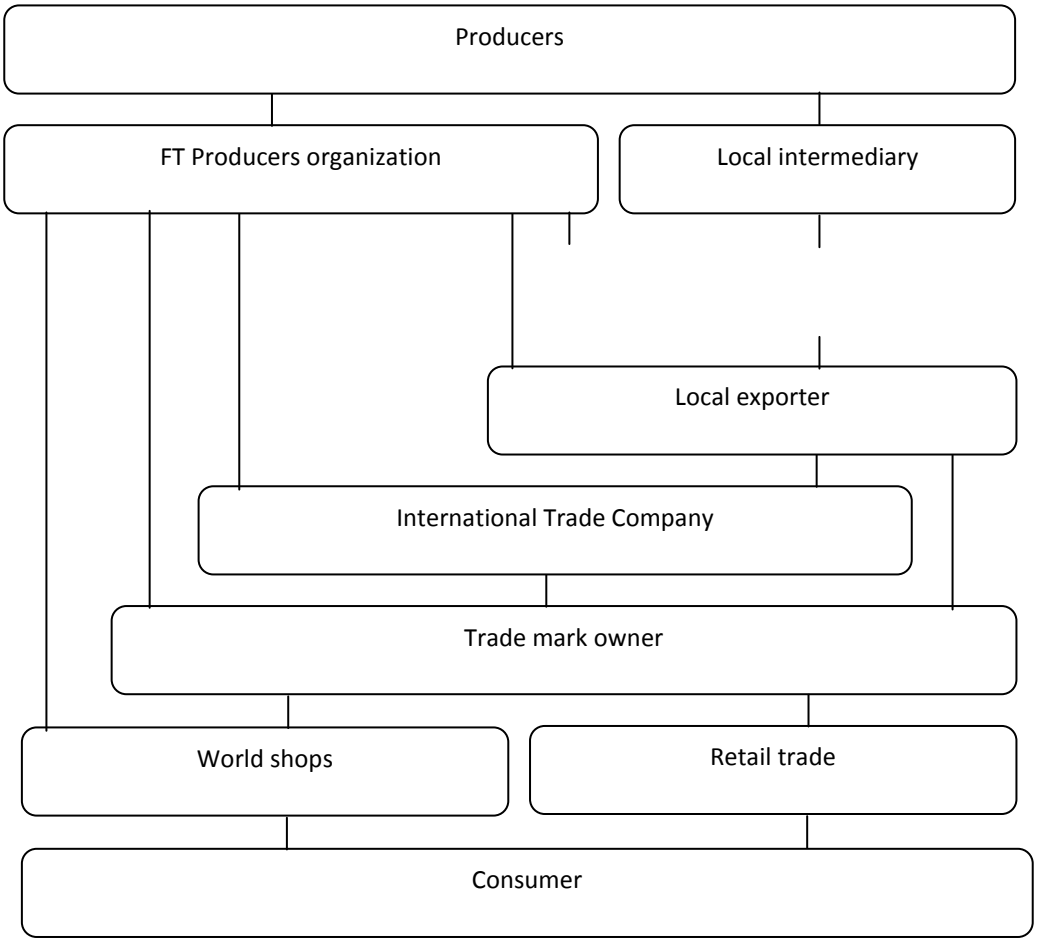
In 2011 - 150 farmer households in Uzbekistan received $ 100,000 FT prize

MARAP as a processor and seller does t not receive any benefits from the FT, bears the costs of FT certification

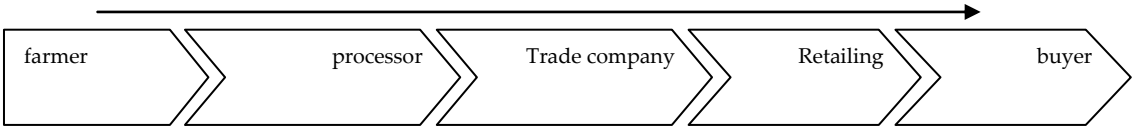
Information about FT prize (can be found on the page FT on the Internet). The prize differentiates by crops and different methods of crop processing (illogical, FT thinks to change this rule in the future)

- for cherry 0.12 euro per kg
- for sesame 0.22 euros per kg

Example - value-added chain chart



FT awards scheme payments



FT award

FT certification

at each stage of the value-added chain, only the farmer-producer receives the a
for each type of processing, the country / region separately

Important!
Product is certified, not a farmer

MARAP believes in organics, and FT, as thereby it makes their products unique and retains the market

MARAP has trust based long-term relationships with producers and buyers as it is required by FT

Organic beans: the market is too small, the price is too low

Transportation costs from country X to Europe

- Tajikistan - more than 5,000 euros per truck / container
- Turkey - around 1,000 euros per truck / container
- China - no more than 800 euros per truck / container

Therefore it is feasible to transport to Europe only expensive / premium organic products

Example: Organic apricots from Turkey (BIO Suisse certificate) 1 kg = 4 euros (compared to Tajik inorganic of the highest grade xx € / kg)

Therefore, Tajik apricots have no much chance in the market of Europe and Switzerland

From recent time, large supermarkets (Coop &Migro) supplement their range of goods only by organic products

Marap has no plans to expand in the CIS

MARAP made some attempts to supply to the markets of Russia and Ukraine, but results were disastrous. They do not know or understand what is organic. They do not value and do not consume organic products.

The market of dried apricots: Tajik apricots against the Turkish ones, which are already on the shelves of Western supermarkets and are being successfully sold

The logic of supermarkets:

To remove one product from the shelves, a new one, yet unknown to the consumer and the supermarket product must ensure a considerable margin to the product that is going to be replaced. I.e. the new product should have lots of advantages in comparison with that which is on the supermarket shelves

Potential co-operation to enter the Swiss market - trading company VARISTOR (only premium quality)

VARISTOR buys: spices, teas, nuts, dried fruits

VARISTOR sells in Switzerland in retail stores and supermarkets, Bulkware

VARISTOR focuses on organic (Bio Suisse) and FT

90% of all VARISTOR clients offer organic products

Question: how do you dry apricots, no preservatives, no sulfur. Is it real? Or have you a secret?

Answer: there is no secret. We really dry the apricots without a preservative and a single gram of sulfur. And our dried apricots can be stored for up to 2 years without change, loss of quality, etc.

Question: how do you do it?

Answer: The secret lies in a set of small parts that are particularly important:

Discipline of farmers (farmers supply us with only excellent, perfect apricots without any defects, disease and other damage)

Hygiene of personnel is observed (from the head to the tail of processing none of the human hand touches apricots). All the processes are completely hygienic. Workers wear sanitary gloves and without them they do not touch any product. Thus we can say that our apricots are "sterile", so they do not spoil.

ANNEX 7

Interview with representatives of Cooperative Bio Farmer, 24.11.2011, Bishkek

Agricultural Commodity and service cooperative "BIO Farmer", KYRGYZSTAN

Chairman of cooperative - ZhanibekBorkoshev

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Productio nmanager –Nurbek Kannazarov

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Everything started from a conference on organics in 2003.

It also had all the prerequisites for the organics in Kyrgyzstan:

- mountain areas (clean)
- there is no pesticide production in the country
- poor farmers

After the decision on conducting organic farming training was conducted.

In 2004, the production began its activity with 38 farmers in the area of50-60 ha of land.

Progress: In 2011 - 2,600 hectares of land, more than 1,000 farmers / farmer households, among them several cooperatives.

Organic farmers grow cotton, beans (different varieties of beans, chickpeas, soybeans), herbs (calendula, chamomile, sunflower seeds), apricots (dried is without sulfur).

Only clean places are used for drying of apricots, any risk of dirt, bacteria and disease penetration into apricots is minimized.

Presently the apricots are still transitional, it is the second year. After 2 years they will be organic.

Processors are working with the standard of food safety HACCP.

Farmers themselves are preparing the soil, fertilize it with compost, bio-humus Baikal + M (on the use of which farmers have permission from the IMO &IndoCert).

There is a bio-lab for generation of beneficial insects which are used as plant protection means.

The use of manual labor in the organic agriculture: fertilizing, weeding after the rains, harvesting of medicinal plants from May to September (nearly every day or every other day).

From 1 hectare it has been harvested 1,200 kg of dry marigold per year.

1 kg of dried calendula is 4.8 euros.

It has been sold in Switzerland at this price.

Transport - plane

Cost of production + transportation = almost 4.8 euros / kg

In a truck is 7 tons

From Kyrgyzstan to Europe a truck is 3,500 - 4,000 dollars.

Polina Voytovich, 24.11.2011, Bishkek

ANNEX 8

Calculationsof income,expenses and profiton growingorganic andtraditionalcotton,apricots, beans, and marigoldin Tajikistan

Tajikistan Cotton	Traditional aggri-re			organic aggr-re		
	number	price	amount	number	price	amount
Materials						
Seeds	100	4.2	420	100	3.5	350
Organical fertilizers (tn)	-	-	-	20	50	1000
Mineral fertilizers (kg)	500	3	1500	-	-	-
Chemicals	2	80	160	-	-	-
Broths and extracts (ISO)	-	-	-	20	2	40
Bio-control (Trichogramma, gabrobrakon)	1	150	150	1	150	150
Other materials						
aprons	10	15	150	10	15	150
Totally agr-l materials			**2,380**			**1,690**
field works						
Application of organic fertilizers	-	-	-	4	50	200
plowing	1	280	280	1	280	280
soil preparation for sowing	1	250	250	1	250	250
seeding	1	100	100	1	100	100
irrigation	5	50	250	5	50	250
manual weeding	2	100	200	2	100	200
cultivation	5	60	300	5	60	300
mineral fertilizers	1	60	60	-	-	-
spraying against pests and disease	1	40	40	1	40	40
embossing	1	40	40	1	40	40
harvesting	2500	0.5	1250	2250	0.5	1125
transportation	1	150	150	1	150	150
Total cost of field			**2,920**			**2,935**
Taxes						
irrigation water(1000 м3 = 20 somoni)	8	20	160	8	20	160
tax on land	1	180	180	1	180	180
social tax	1	180	180	1	180	180
sales tax 10%			807			861
Total taxes			**1,327**			**1,381**
Total expenses			**6,627**			**6,006**
Yield per 1 ha			**2,250**			**2,400**
Incomes						
fiber (33%)	742.5	1600	5653	792	2630	9911
seeds (57%)	1282.5	2	2565	1368	2	2736
lint, uluk (3%)	67.5	5	337.5	72	5	360
Total incomes			**8,555**			**13,007**
profit			**1,928**			**7,001**
Difference						**52.04%**
A Index' 13:37 GMT 2011.21.11	102.4	2285.40				
conversion USD - TJS, NBT.TJ official rate 0	4.7581					

Source :AbdulatipKhaldarov, Helvetasconsultant.

Tajikistan Been	Traditional aggr-re			Organic aggr-re		
	number	price	amount	number	price	amount
materials						
seeds	70	5	350	70	5	350
Organic fertilizers (tons)	-	-	-	10	50	500
Chemical fertilizers (kg)	300	3	900	-	-	-
chemicals	2	80	160	-	-	-
Broths and extracts (ISO)	-	-	-	20	2	40
Bio-control (Trichogramma, gabrobrakon)	1	150	150	1	150	150
other materials						
aprons	10	15	150	10	15	150
polypropylene bags	60	1	60	60	1	60
totally agri-al materials			**1,770**			**1,250**
field works						
Application of organic fertilizers	-	-	-	2	50	100
plowing	1	280	280	1	280	280
soil preparation for sowing	1	250	250	1	250	250
seeding	1	60	60	1	60	60
irrigation	5	50	250	5	50	250
manual weeding	2	100	200	2	100	200
cultivation	3	60	180	3	60	180
mineral fertilizers	1	60	60	-	-	-
spraying against pests and disease	1	40	40	1	40	40
harvesting the pods	20	50	1000	20	50	1000
cleaning	10	50	500	10	50	500
transportation	1	150	150	1	150	150
total field expenses			**2,970**			**3,010**
Taxes						
irrigation water (1000 м3 = 20 somoni)	8	20	160	8	20	160
tax on land	1	180	180	1	180	180
social fund	1	180	180	1	180	180
tax on retail sales (3% of the cost of sales)			225			270
all taxes			**745**			**790**
totally all expenses			**5,485**			**5,050**
yield per 1 ha			**3,000**			**3,000**
incomes						
beans	3000	2.5	7500	3000	2.5	7500
Surcharge on bio products (20%)			0			1500
totally incomes			**7,500**			**9,000**
profit			**2,015**			**3,950**
difference						**96**

Source :AbdulatipKhaldarov, Helvetas consultant.

Tajikistan Marigold	Traditional agg-re			Organic aggr-re		
	number	price	amount	number	price	amount
Materials						
Seeds	10	50	500	10	50	500
Organic fertilizers (tons)	-	-	-	10	50	500
Chemical fertilizers (kg)	300	3	900	-	-	-
Chemicals	2	80	160	-	-	-
Broths and extracts	-	-	-			50
bio preparations	-	-	-	1	100	100
other materials						
shelves for drying	4	1000	1000	4	1000	1000
polypropylene bags	112	1	112	112	1	112
totally materials			**2,672**			**2,262**
field works						
Application of organic fertilizers	-	-	-	2	50	100
plowing	1	280	280	1	280	280
soil preparation for sowing	1	250	250	1	250	250
seeding	1	60	60	1	60	60
irrigation	5	50	250	5	50	250
manual weeding	2	100	200	2	100	200
cultivation	5	60	300	5	60	300
mineral fertilizers	1	60	60	-	-	-
spraying against pests and disea	1	40	40	1	40	40
harvesting (normal 50kg/day/mar	8000	0.5	4000	8000	0.5	4000
transportation	7	50	350	7	50	350
Totally field expenses			**5,790**			**5,830**
Taxes						
irrigation water (1000 м3 = 20 sc	8	20	160	8	20	160
tax on land	1	180	180	1	180	180
social taxes	1	180	180	1	180	180
Sales Tax (10%)			1344			1613
Totally Taxes			**1,864**			**2,133**
Totally all expenses			**10,326**			**10,225**
Yield per 1 ha	**8000**	**0.14**	**1,120**	**8000**	**0.14**	**1,120**
Incomes						
marigold flowers (14%)	1120	12	13440	1120	12	13440
Surcharge on bio products (20%)			0			2688
total incomes			**13,440**			**16,128**
profit			**3,114**			**5,903**
difference						**90**

Source:AbdulatipKhaldarov, Helvetas consultant

Tajikistan Apricots	Traditionsl agg-re			Organic agg-re		
	number	price	amount	number	price	amount
materials						
Organic fertilizers (tons)	10	50	500	10	50	500
Chemical fertilizers (kg)	300	3	900	-	-	-
chemicals	5	45	225	-	-	-
Broths and extracts	-	-	-			50
bio preparations	-	-	-	1	100	100
other materials						
container	100	7	700	100	7	700
the film to dry	20	4	80	20	4	80
sulfur for fumigation	30	8	240	-	-	-
totally aggri-l materials			**2,645**			**1,430**
Field works						
Application of organic fertilizers	-	-	-	7	50	350
mineral fertilizers	2	50	100	-	-	-
tillage around the trees	4	50	200	4	50	200
Forming and trimming trees	5	50	250	5	50	250
whitewashing the trunks	2	50	100	2	50	100
chizelevanie between rows	1	90	90	1	90	90
cleaning of irrigation networks	3	50	150	3	50	150
irrigation	3	50	150	3	50	150
harvesting	20	50	1000	20	50	1000
extrusion of seeds	50	30	1500	50	30	1500
stacking boxes into the camera	10	50	500	10	50	500
fruit after fumigation	8	50	400	8	50	400
transportation	1	150	150	1	150	150
totally field expenses			**4,590**			**4,840**
Taxes						
irrigation water (1000 м3 = 20 somoni)	7.5	20	150	7.5	20	150
taxes on land	1	180	180	1	180	180
social taxes	1	180	180	1	180	180
tax on retail sales (3% of the cost of sales)			480			570
Totall taxes			**990**			**1,080**
totally all expenses			**8,225**			**7,350**
Yield per 1 ha	**6000**	**0.25**	**1,500**	**6000**	**0.25**	**1,500**
incomes						
Kaisa-market price	1500	10	15000	1500	10	15000
seeds-bones	400	2.5	1000	400	2.5	1000
Surcharge on bio products (20%)	-	-	-			3000
totally incomes			**16,000**			**19,000**
profit			**7,775**			**11,650**
difference						**50**

Source :AbdulatipKhaldarov, Helvetas consultant

ANNEX 9

Calculations of income, expenses and profit on growing organic and traditional cotton in Kyrgyzstan

Kyrgyzstan cotton	Traditional a / c			Organic a / c		
	quantity	price	summ	quantity	price	summ
Materials						
Seeds	55	80	4400	55	54	2970
Organic fertilizers (tons)			-	12	300	3600
Chemical fertilizers (kg)	300	25	7500	-	-	-
Pesticides	1	500	500			-
Decoctions and infusions (ISO)			-	20	25	500
Bio-control (Trichogramma, gabrobrakon)	1	150	150	1	420	420
other materials						
skirts	8	120	960	8	120	960
Total a / c material			**13,510**			**8,450**
Fieldwork						
organic fertilizers implemantation			-	3	500	1500
plowing	1	2000	2000	1	2000	2000
soil preparation for sowing	1	1600	1600	1	1600	1600
seeding	1	1200	1200	1	1200	1200
watering	3	1200	3600	3	1200	3600
manual weeding	2	2500	5000	2	2500	5000
cultivation	5	1200	6000	5	1200	6000
mineral fertilizers implemantation	1	1200	1200			-
spraying against pests and diseaseь	1	500	500	1	500	500
embossing	1	500	500	1	500	500
cleaning	2100	6	12600	2600	6	15600
transportation			0			0
Total cost of field work			**34,200**			**37,500**
Taxes						
irrigation water (1 hectare = 250 som)	1	250	250	1	250	250
land tax	1	486	486	1	486	486
social fund	1	486	486	1	486	486
sales tax (0%)	0	0	0	0	0	0
Total taxes			**1,222**			**1,222**
Total all costs			**48,932**			**47,172**
Productivity of 1 ha in kg			**2,100**			**2,600**
Revenue						
fiber (35%)	2100	37.80	79380	2600	32.50	84500
seeds (57%)			0	1482	22	32604
lint, uluk (3%)			0	78	55	4290
Support for transportation				2600	0.7	1820
Total revenues			**79,380**			**123,214**
profit			**30,448**			**76,042**
Difference						**1**
cost of 1 kg raw cotton			**37.8**			**47.39**
Difference in the price of 1 kg raw cotton						**25%**
conversion USD - KGS, NBKR official rate 09.02.201	46.9009					

Source :AbdulatipKhaldarov, Helvetas consultant