

Project: “Inventory of Post-War Situation of
Land Resources in Bosnia and Herzegovina”
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Agricultural Market in BiH
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I Analysis of general conditions in agriculture

Introduction

Before analyzing market of agricultural products in BiH in details we should mention basic categories of such market and their parameters such as:

- a) Agricultural products as goods: quantity, quality, assortment, exported product, imported product, etc.
- b) Money: amount of money, term of payment, interest rate, profit, etc.
- c) Offer: amount and value of the agricultural products offered, quality of products, assortment of products, number and size of bidders, position of bidders, etc.
- d) Demand: amount and value of the agricultural products in demand, number of present and potential consumers, consumers' buying funds, proneness to spend etc.
- e) Prices: purchase prices, selling prices, subsidized prices, prices that cover the costs and certain financial result, prices that do not cover the costs of production, etc.
- f) Competition: number of present and potential competitors, individual strength of competitors, position of competitors, way competitors act, etc.
- g) Economic relations with foreign countries: export, import, inflow of foreign currencies, outflow of foreign currencies, support of export, protective measures regarding import, foreign investments in agriculture, etc.

Analysis of the general conditions in agriculture. Share of primary agricultural production in GDP

During the 80-ies, socialism, one of the two leading socio-economic systems crashed. From that moment in most of the countries of Central and Eastern Europe process of transition from socialism to capitalism started. Transition meant: stabilization and liberalization of the prices, privatization and restructure. The war from 1992-1995 stopped this process in BiH. After the war, transition was continued following two (three) different paths because of the organization of BiH (two entities and Brcko District) and according to similar or different laws and solutions. Agriculture in BiH is nowadays facing, at the same time, need for mending war damages as well as process of transition from planned to market economy.

Main characteristics of the present situation in agriculture are:

- (GDP) in BiH in the year 2002 was 11.62 billion KM. Share of primary agricultural production in GDP was 12.41% or 1.141 billion KM. It is obvious that share of agriculture is decreasing (13.30% in 2001 13.74% in 2000). Probable

reason for such situation is decrease of international financial support. Average rate of annual increase in agriculture in BiH in 2000 was 2%, and in 2001 1.5%.

- It is estimated that animal breeding has a share of about 50% in overall agricultural production. This share is much lower than it was before the civil war, and is very low in comparison to developed countries.
- Domestic food production covers just about 35-40% of overall nourishment needs. Before the war it was 60%.
- Agricultural products take significant part in deficit in foreign trade exchange. Deficit in agricultural products equals 200\$ per person (in Croatia 73\$, in EU 71\$).
- Rate of using natural resources, at the first place arable land, is another important parameter that describes general situation in agriculture. In the year 2001 in FBiH 50% of arable land was uncultivated, and 33% in RS, with trend of future decrease in share of cultivated land.
- Parameters of productivity in agriculture are placing BiH at the bottom of European scale.
- Beside potatoes, BiH is not producing any other important agricultural product in the amount enough to satisfy domestic needs.
- Average age of people working in agriculture is increasing every day. There are no young people willing to work in agriculture.
- Among the farmers there is very small number of those who produce agricultural articles.
- Foreign markets have been lost.

Analysis of structure of crop and vegetable production, fruit growing, wine growing and animal production in overall agricultural production before (1986 -1990) and after (1997 -2003) the war

1. Pre war status (period from 1986 -1990)

1.1. Crop and vegetable production

Extent and structure of plant production in BiH were influenced by decrease of arable land and increase of uncultivated arable land. When it comes to structure of cultivated arable land, cereals had a share of 61.5%, vegetables 12.6%, plants used for animal feeding 23.7% and industrial plants 2.2%.

1.2. Fruit growing and viticulture

In mentioned prewar period there were 93000 ha of orchards in BiH with approximately 24 million fruit-trees among which were 20 million of fruitful trees. Around 92% of fruit trees were in private property. Plantings of fruit trees were owned by state and were maintained with modern machinery and technology but the share of these fruit trees was only 8% of overall number.

1.3. Animal production

If analyzed in long-term perspective period from II World War to 90-ies was characterized by decrease in number of: cattle of about 300,000, horses of about 85,000, sheep of about 500,000. Increase of herd was detected in pigs-about 300,000 and poultry-about 600,000. In 1990 there were: 873,605 cattle; 1,319,000 sheep; 613,586 pigs; 99,803 horses; 8,544,000 poultry and 74,901 beehives.

2. Post war status (period from 1997 – 2003)

2.1. Crop and vegetable production

Apart from high amount of uncultivated arable land, which was around 40% in post war period, there was an inadequate use of cultivated land. Cereals had a share of 60%; industrial plants 1%, vegetables 15% and plants used for feeding animals 24%. Corn had a share of 60% in overall cereals; soya and tobacco had a share of around 50% in industrial plants; potato had a share of over 50% in vegetables and as for plants used for feeding animals clover had a share of around 40%.

2.2. Fruitgrowing and viticulture

According to numerous sources following data describes general situation in fruit growing in the year 2003. Total production of fruit in 2003 was approximately 320,800 tons. Structure of this production was as follows: plums 63.0%; apples and pears 24.5%; cherries 6.6%; other 5.9%. These data reveal unfavorable situation because of the biggest share of cheap fruit, while expensive ones (almond, walnuts, grape, strawberries, figs.) have very small share.

2.3. Animal production

According to author's estimation (based on data from Government of RS – Department on Agriculture, Forestry and Water Resources and Government of FBiH – Federal Department on Agriculture, Forestry and Water Resources), structure of species in overall number of animals in the year 2003 was: 470,000 of oxen; 620,000 of sheep; 350,000 of pigs; 15,500 of horses; 5,700,000 of poultry and 96,500 of beehives.

These data shows that only bees have exceeded pre-war number while all other species are far bellow pre-war number. Apart from being lower than in pre-war time, these numbers are much lower than number of animals that could be bred by using domestic natural resources and number of animals that could satisfy demand for meat and meat products in BiH.

Analysis of ecological aspects in agriculture

There are two aspects to be discussed:

a) Influence of conventional production on environment and human health

Monitoring of the influence of conventional production on environment and human health is not being done at all, so it can be analyzed partially by estimating.

b) Ecological (organic) production

Organic production in BiH started in middle 80-ies as an individual initiative on small farms. Most of these individuals organized both conventional and organic production.

Current organic production in BiH can be divided in couple informal groups: ecological fruits (plums, apples, pears) in northwestern and northeastern Bosnia; ecological wine in western Herzegovina; herbs, honey and forest fruits in eastern Herzegovina.

There is an ongoing implementation of the project on ecological food production in BiH. The aims of this project are to: create an institution for food certification in BiH, educate advisors on this subject, modify parameters of ecological production to match conditions in BiH, help to maintain legislative part of this production (laws etc.), help promotion of this kind of products.

In developed countries there is a significant increase in ecological production mainly because of the increase in demand for such products. Other reason is need to decrease traditional food production, which affects environment in a negative way (pollution and degradation of soil, water pollution etc.).

Analysis of the aspect of agriculture supporting institutions

Both entities as well as Brcko District have they own agricultural policy and create different systems of support of development in agricultural production. At the moment we cannot say that there is consistent agricultural policy in BiH. In both entities certain more or less successful, partial organizational and economic measures are being applied. The most important problem in application of those measures is lack of financial support. Legislation partially exists in BiH-mostly laws concerning export.

Credit policy is mainly based on international financial support (state itself takes loans from international financial organizations, donations etc.). In the beginning loans were given through state institutions, but it did not end well mostly because people did not return loans they got.

Nowadays loans go through commercial banks, but they have insufficient funds, interest rates are high, terms for returning loans are short, too high guarantees are requested. Both entities started to regress interest rates by themselves in order to improve present situation.

Another way of delivering funds is through micro credit organizations. It is fast and simple access to funds, but interest rates are very high (1-3% per month).

Next step should be saving-credit cooperative societies, which would be based on principles of mutual trust and mutual crediting of their members. This would make those funds accessible to farmers and country population.

II Analysis of agricultural production for domestic market and export

Analysis of agricultural production for domestic market and export will be done regarding:

- natural resources
- situation in agricultural production
 - cattle breeding (milk, meat, and other cattle products)
 - crop (seed, cereals, vegetables)
 - fruit growing, viticulture

1.Natural resources

Structure of agricultural land in BiH

Category	Ha
Total land	5,112,900
Cultivable land	1,585,000
-plough land and gardens	1,018,000
-orchards	93,000
-wine yards	6,000
-meadows	468,000
Grasslands	932,000
Fish farms, marshes and cane yard	8,000
Total agricultural land	2,525,000

Category	
Share of agricultural land in total land %	49.4%
No of farms	569,581
No of ha of agricultural land per farm	4.43
No of ha of cultivable land per farm	2.78
No of ha of plough land per farm	1.79

BiH is heading towards minimum of cultivable land per person and nowadays it is 0.17ha per person. In the Canton of Tuzla situation is even worse, average cultivable land per

person is 0.10-0.08 ha. There is continuous presence of different ways of permanent or temporary destruction of soil. The most endangered are the soils of the highest quality (class I, II and III), which are covering 15% of total arable land. Almost all infrastructures are located on this kind of soil. It is estimated that approximately 3,000-5,000ha of land is permanently lost. By using land in a mentioned way, it will by time be transformed into lower categories of quality. Approximately 10,000ha is destroyed by mining and only 1,000 ha or 10% has been turned into arable land again.

Before the civil war only 0.6% cultivable land was irrigated. In order to improve output and at the same time to improve offer of agricultural products at the market it is necessary to develop irrigation system.

Almost 200,000 ha of land in BiH is mined and it is estimated that it would take 40 years for all the mines to be removed if cleansing continues at the same speed as present.

Around 100,000 ha of high quality plough-land is owned by state. Giving that land to the people interested in modern and profitable production should solve this problem.

Main problem of agriculture is uncultivated plough-land (approx.400,000 ha in BiH). Around 50% cultivable lands in FBiH and 30% u RS is not being cultivated. There is a trend of increase in uncultivated land.

Small size of estate is a huge obstacle in gaining profitable agricultural production. Average estate covers 4.5ha and it is usually divided into 7-8 smaller and separated parcels.

There are no relevant data about number of estate owners, nor about number of agricultural and miscellaneous farms, because no agricultural census has been done. Number of owners is constantly increasing, and size of estate is decreasing. Little parceled and scattered estate is limiting factor for any serious productive-management schemes in modern agriculture.

2. Animal husbandry

During the war there was a significant decrease in number of all kind of animals. After the war there were some projects with international financial support, which resulted with increase in basic herd. However only in bees was a success in reaching the number as before the war, while numbers of all other kind of animals are much lower than before the war and much lower than could be bred at 1.4 millions ha of meadows and grasslands in BiH.

Since 90% of public farms have faced bankruptcy and private ones are not supported as they are in the EU, domestic production returns to its prewar positions at the market of agricultural products very slowly. It is estimated that before the war, share of small private animal breeders at the domestic market was 30%, share of public ones 45% and 25% of goods were imported. In the first quartile in 2004 imported meat had a share of 60%, public farms had a share of 15% and private farms 25%.

Livestock, meat, meat products, fat and oil are goods that create most of the foreign trade deficit in BiH. During first nine months of the year 2003 goods 226.6 millions KM of worth were imported, while at the same time goods only 6.2 millions KM of worth were exported. BiH is import-oriented country in this area because of the inexistence of strategy on development.

Share of FBiH in total import of livestock, meat, meat products, fat and oil equals 82% (185.2 millions KM). When analyzing import of live animals it is possible to see that cows have a share of 83.5%, followed by pigs, sheep, goats etc. Most of the animals come from Poland (63%), Hungary, Austria and Romania. When doing analysis in details it becomes obvious that 5 companies from Hercegovinian-Neretvian canton import half of the entire livestock imported in BiH. One company from Posušje imported more animals than entire RS (among first 10 importers there are no companies from RS).

Certain aspects of animal breeding have stronger organic connection with natural resources in BiH. These are production of beef, production of sheep meat, production of pork, fish breeding and breeding of bees. Acceleration in development of these parts of animal breeding would increase activation of domestic resources and would increase domestic production in goods that are in lack (milk and dairy products, beef). Apart from that increase intended for domestic market there are huge possibilities for export of animal products (sheep, fish, honey).

2.1. Market production of milk and dairy products

Results of research revealed that import of dairy products is 30 times higher than export. According to data of Foreign trade chamber in 2003 BiH exported milk and dairy products 3.9 million KM of worth, while the import was 89.1 million KM. Approximately 60% of milk is imported Croatia and Slovenia. In the period from January to September 2003 goods 30 million KM of worth were imported from Croatia and at the same time import from Slovenia had 22.3 million KM of worth. Third position holds Germany with export of mentioned goods to our country 15.3 million KM of worth.

During the same period BiH exported milk and dairy products to Croatia 2.5 million KM of worth, and to Serbia and Montenegro 591,000 KM. Croatia and Slovenia have subventions and that is the reason for competitive price of their products although it has to cover cost of transportation. Our producers cannot be competitive because there is no any intervention from the side of state.

Officials in Department on agriculture, forestry and water resources have opinion that lack of export of dairy products is a consequence of high standards in many countries, especially in EU. There are no customs taxes for export of our goods to EU but problem are standards in EU, which are so high that BiH cannot satisfy. In EU milk is not examined by determination of the amount of fat, as it is situation in BiH but by determination of amount of proteins and number of microbes.

Regulations in the area of milk quality in RS are couple of decades old and are not harmonized with those of EU. That makes it obligatory for government departments in charge to create new regulations and standards. Those standards cannot be applied all at once but something has to be done as soon as possible.

There are around 50 dairies in BiH. Most of the public dairies have not been privatized and are using approximately 10-20% of their capacity. There is an increasing number of mini dairies. Some of those have already reached capacity of manufacture of 50000 liters of milk per day. Installed capacities for milk manufacture in BiH are around 500 million liters of milk per year and that is much more than amount of milk bought off as a market surplus. On the other hand BiH imports more than 50% of need for milk and dairy products. Solution for this situation would be in increase of number of cattle, changes in breed structure, increases of milk production per animal and increase of amount of milk bought off.

Production of milk in the present situation in BiH could be an engine of development of the entire agriculture, because it could activate huge number of farms in BiH. Therefore milk production should be treated as strategic orientation.

2.2. Market production of meat and meat products

Even nowadays when meat consumption is very low, there is a huge lack of meat at the market. Following the increase in income of population, demand for all kind of meat will grow. It is estimated that at the year 2007 consumption will be around 48kg of meat per person and it will continue to grow. That is in contrary to consumption of some other food, which has already reached saturation or is close to it (flower, oil, potatoes, etc). Because of the war damages and faulty guided agrarian policy production of meat stagnates, except poultry and pork. Meat manufacturing industry is importing cheap meat and animals from abroad and this is the reason for disproportion in development of this industry in comparison to development of primary agricultural production.

Production of beef

Among all kind of meat BiH has a hugest lack in beef. Reasons for such situation are numerous: inexistence of stabile supportive measures for bullock fattening, massive calf butchering, inexistence of breeding programs in order to improve beef population and to create biological capacity for meat production, lack of interest of meat industry to develop it's own raw materials basis etc. Production of bullock meat implicates phase as well as territorial partition in which would so-called final fattening been organized in a regions were corn is being produced (possibility of implementation of cheap technologies using provisions produced at farms).

Production of sheep meat

Development of sheep breeding is not limited by demand nor the imported sheep meat could be compared with domestic one. Sheep breeding is the most important way of using natural resources-grasslands and so it is condition for demographic covering of significant part of BiH. However, consumption of sheep meat significantly falls behind consumption of other kinds of meat.

Production of pork

Intensive production could be organized in flat ground parts of BiH, parts where corn is being grown. In recent years this production is being developed because of the availability of cheap concentrated feedstuff but it should be more protected from foreign competition. Pork is also an important raw material for manufacturing industry.

Meat processing

There are around 30 major butchereries in BiH. Beside those there are few dozen of smaller ones. There are 20 companies, which manufacture meat. They produce goods for domestic market because export to EU is not yet possible. At the same time meat, live animals for butchering, as well as products made of meat are imported.

When it comes to import of meat FBiH imported goods of 30 million KM worth while total import of BiH was 32.6 million KM. For example three companies from FBiH (Meat Industry Mostar, »Meat Corporation« Kiseljak and »Suša komerc« Visoko) imported more meat than entire RS.

According to amount imported, first position holds poultry (8.9 million KM), then pork then other kind. Main suppliers are Poland, Slovenia, Croatia, and Austria.

As for meat products BiH imported goods 54.9 million KM of worth. FBiH had a share of 40.4 million KM. Those goods are provided mostly from countries, which signed contracts on free trade with BiH (Slovenia, Croatia, Serbia and Montenegro). The biggest importers are: »Droga« and »Podravka« from Sarajevo, »Eurobest« from Kakanj, »Miteks Company« from Banja Luka, »Radia« from Mostar, »Prodex« from Grude and »Paloč« from Gornji Vakuf. Biggest demand is for products from Serbia and Montenegro because of the acceptable prices and good quality but it is very hard to provide them these days. Products from Croatia are expensive, and from Slovenia even more because they invest lots of money in advertising. Among domestic producers in RS biggest demand is

for products of meat factory »Tulumović« from Banja Luka while in FBiH biggest demand is for products of meat factory »Lijanović« Široki Brijeg.

2.3. Other aspects concerning market of animal products

On the territory of BiH there are around 10 official ostrich farms (Goražde, Trebinje, Ostružnica, Srbac etc.). One-year-old ostriches are mostly exported to Belgium and some other EU countries.

Japanese quails can be successfully bred at farms but what has to be provided is adequate placing, adequate care, nutrition and adequate health care. In order to reach maximum output it is of great importance to provide adequate placing (accommodation). Interest in breeding quails increases everyday. At the moment it is organized as an unconventional production but in very near future there will probably be certain number of farmers who will deal with quail breeding as a main production.

One of the most interesting reveals during this research was an example of an economist from Šehovici, which decided to undertake unusual enterprise-to build up first snail farm in RS without importing basic herd nor expensive equipment. He used domestic materials and collected basic herd in countryside. Soon after founding farm he was contacted by a customer from Italy who offered to buy off 300 tons of snails. World snail market will not, according to reliable information, become saturated in next 20 years. Demand for snails is extremely high in pharmaceutical industry, which bought off entire amount of snails produced in France last year. Snail production has a huge potential especially because it is possible to place snail farms on the land that cannot be used for other kinds of intensive agricultural production.

3. Crop (seed, cereals, vegetables)

In the period from 1997-2003 there was around 40% of uncultivated arable land. Cultivated land was divided as follows: 60% cereals, 1% industrial plants, 15% vegetables, 24% plants used for feeding animals. As for cereals: 56-57% corn; 28-30% wheat and other 15%. Main part of crops concerning industrial plants was tobacco and soy. More than a half of all vegetables was potato. As for plants used for feeding animals: 38% was clover, grass-clover mixtures around 15%, grass and legume mixture approximately 12%. Average harvest output of all cultures in BiH was almost the lowest in Europe.

Huge part of agricultural production is intended for own needs of a producer and it is not exposed to market competition, which would significantly increase average harvest output. For that reason it is necessary to stop producing a bit of everything and to focus on specialized production for the market what requests organized buying off.

Except of couple of products (tomatoes from Herzegovina, around Bijeljina; peppers from Herzegovina; cucumbers from the region of Lijeve polje; potatoes from

Lijevce polje and Herzegovina) needs of population in food in BiH cannot be satisfied with domestic production. BiH is highly dependent on import of main products of plant production (all kind of cereals, early fruits and vegetables). Industrial plants (oil beet and sugar beet) are practically not produced, so the offer of domestic production equals zero.

3.1. Problems in production of seed and planting material

Quality of reproductive material from the point of genetic potential and sanitary correctness is the basic of agricultural production and it's development. Domestic seed production is not satisfying needs for certificated seed of domestic agricultural producers. Using self-produced, non-certificated seed results in variable harvest output and low plant resistance, which then requires huge chemical protection. Indirectly it results with decrease in offer of primary agricultural products and at the same time it results in higher price in comparison to imported goods.

3.2. Production and offer of cereals at the market

In production of bread cereals there is an obvious existence of certain restrains such as: small estate, non cultivated land, obsolete machinery, disloyal foreign competition, variable prices at the international market towards which domestic mill and bake industry is completely oriented.

In next five years period it is planned to activate land resources, to increase level of production and to satisfy approximately 50% of domestic needs. Similar situation is with corn, which is more profitable because of multiple uses in human and animal diet. In a structure of sowing cereals are represented by 60%, and corn takes about three quarters of that 60%. Objectively there is no any other production than cereals that could activate uncultivated arable land.

Apart from 18 public mills, there are at least 100 smaller private mills in BiH. Total capacity of all mills in BiH is around 520000 tons of cereals per year. Beside approximately 20 big bakeries there are dozens of smaller ones in BiH, which are mostly oriented to small local markets.

3.3. Vegetable production and offer

Vegetable production is one of the most profitable productions in agriculture. World trend shows increase in consumption of vegetables and BiH has perfect conditions for this production. At the moment production can satisfy domestic needs to a certain level. There is a huge demand for raw materials in factories that manufacture vegetables and which have possibility to increase export. However it is estimated that natural resources are being used 30% only.

The biggest problem in increase of vegetable production is a disorganized purchase system and a lack of modern distributive infrastructure (collection centers with coolers, mobile coolers, modern market centers etc.)

3.4. Problems in production of plants used for feeding animals and industrial plants

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Approximately 25% of cultivated land is being used for production of plants that are used for feeding animals (clover and lucerne have a share of 75%). In order to use entire natural resources and to rationalize production of milk and meat as well as to decrease the dependence on imported concentrated nutrients it is necessary to increase sowing of mentioned cultures. This production has to be stimulated by direct financial support for new sowing following the criteria of minimum of sowed land. Measures to improve quality and to increase output of natural meadows and grasslands have to be included in the system.

Although in the northern plain part of BiH there are suitable conditions for growing most industrial crops, they are not produced any more. Since "Bimal", only oil factory in BiH, can guarantee the collection of approximately 50,000 ha in next 5 years it is necessary to include plants used for oil production in the system of support.

3.5. Other aspects concerning market of crop products

On every single agricultural estate, no matter how big is it, farmer is managing different processes of production and produces different products.

For example at one estate farmer can grow wheat, hop, corn, hay and at the same time produce milk, fatten calves and bullocks. Because of producing so many things what takes lots of time it is impossible for the farmer to analyze precisely efficiency of production by using different calculations.

Basic calculation of market business of a farmer according to positive regulations of RS and BiH can be presented with following scheme:

<i>Final value of crops</i>	
+	
<i>Market value of output which is used in other productions at the farm;</i>	
<i>Market value of output which is used for private needs</i>	
<i>and subvention</i>	
	- (minus)
<i>Starting value of plant production</i>	
	=
<i>Output of plant production</i>	
	- (minus)
<i>Variable costs: seed, fertilizers, chemicals, irrigation, temporary manpower</i>	
	=
<i>Total profit of plant production</i>	

4. Fruitgrowing and viticulture-offer of fruit and wine

Number of fruit-trees nowadays is about 3.5 million lower than before the war (1989-23.9 million and 2003-20.4 million fruit-trees). War itself and a lack of planting resulted in trees getting old and perishing of plantations. As a consequence we are facing decrease in all fruit species, but the share of certain fruit species in overall fruit-trees number is like it was before the war. Two thirds of all fruit-trees are plum trees and others equal one third. Such situation is not good because of the low fertility of plum trees and lower price of plums than some other fruit (peach, pear, apple) or grapes. This structure has to be changed as soon as possible since fruit growing is the most profitable kind of agricultural production in BiH especially if irrigated. Fruit growing can be done on small estates with significant employment and high profit per square unit of land.

Main problem in viticulture is an unsolved problem of protection from foreign competition. Foreign competition supplies domestic market with products, which are usually without certificated quality. Viticulture is profitable if grape is used as raw material in manufacturing industry as well as if used for direct consumption.

Nowadays there are 20 companies, which manufacture fruits and vegetables. Main problem in this field is insufficient, variable in quantity and quality market surplus of fruits and vegetables. Products made of fruits and vegetables are distributed at domestic market since there are not competitive enough to be exported on foreign markets.

III Analysis of demand for agricultural products

Analysis of demand for agricultural products should be based on following parameters:

- consumption of agricultural products per person;
- satisfaction of demand with domestic agricultural products;
- satisfaction of demand with imported agricultural products.

According to insufficient accessible data, consumption of agricultural products per person in BiH reflects unfavorable socio-economic situation. Consumption of flower is too high while consumption of vegetables, fruits, meat, dairy products and eggs is low. Consumption of sugar is relatively low. Energy intake is satisfactory in general but the structure of food intake is not. Most of the energy is provided from cereals while only 18.5% of overall energy is provided from animal sources.

Satisfaction of demand with domestic products is not even close to full possibilities, and for that reason 2/3 of demand is satisfied with imported goods. Reasons why consumers buy imported products are: low prices, huge advertising, better design and general opinion that buying foreign products is "in". Low prices of imported products most often mean poor quality (for example meat frozen for long period of time). Sometimes those products are not even used for human diets in countries they are being imported from (guts, heads, ears, etc.).

Another important reason for insufficient demand for domestic products is inexistence of organized system, which would provide safe buying-off of agricultural products with guaranteed minimal price. This system should also have standards in quality, shape, weight and other characteristics when buying off products. Because of the lack of market organization producers are sometimes forced to destroy their products. It happens that they plough cabbage, tomato plants etc., since there is nobody purchasing their products when time for sale comes.

Structure of total demand for agricultural products is negatively affected with bad habits of population in diet. Most often it means low intake of fruit, vegetables, healthy food, products made of healthy food etc. Consumption of these products would be much higher if production is organized according to principle »right product in right time at right place«. That could be accomplished for example, by using hot water from thermal wells ("Banja Vrućica" Teslić, "Terma" Gračanica) or thermal power plants (TE "Gacko", TE "Ugljevik"). Department on Development of TE "Gacko" is planning to use

hot water to heat the glass houses during winter. This would generate two effects: surplus of produced energy would be used and environment would be protected.

IV Estimation of production of agricultural products in next 5 years

Estimation of agricultural production in next five years should be based on most important parts of agriculture and most important agricultural products:

- animal-breeding (milk, meat and other animal products),
- crops (seed, cereals, vegetables),
- fruit growing and viticulture.

Since almost 2/3 of consumed agricultural products are imported there is a huge possibility to increase production and offer of agricultural products in next five years. If appropriate conditions are provided production and offer of agricultural products could be doubled in next five years, which means that, they could grow each year for approximately 20%.

Production of some agricultural products with higher competitive advantages could grow even faster (fruit, vegetables, healthy food, non conventional animal products), while production of some others that cannot keep up with foreign competition would grow slower (corn, pork, poultry etc).

Prediction of agricultural production is not possible without adequate strategy on development of agriculture that has to be created and applied by state itself together with its entities. We will point out some of the factors, which significantly influence quality of estimation of some representative agricultural products such as milk and dairy products on one hand or fruit and vegetables on the other hand.

In both cases state itself should create support measures for small enterprises and individual entrepreneurs in sector of production and trade of agricultural products. Those support measures should be in compliance with EU document on small enterprises, which refers to:

- 1) Education and training for entrepreneurship;
- 2) Cheaper and faster start up;
- 3) Better legislation and regulation;
- 4) Availability of skills;
- 5) Improving online access;
- 6) Getting more out of the single market;
- 7) Taxation and financial matters;
- 8) Strengthen the technological capacity of small enterprises;
- 9) Successful e-business models and top-class small business support.

As for industry of milk and dairy products, after 5 years period share of 30% in value of entire animal production should be achieved. What has to be kept in mind is that

higher terrains (hills and mountains) are suitable for production of high quality milk (it can be protected by some regulations from disloyal foreign competition), while lower plain terrains are more suitable for production of different dairy products (hard and soft cheese, creams, yogurt etc.).

Very useful would be a special fund in which would producers invest their money during the successful periods of business and from which it would be possible for them to take convenient loans and other kind of financial support when needed.

The most important thing in fruit and vegetable production is a well-organized purchase system and “clusterization” of the entire chain (production-collection-manufacture-selling), which means creating a group of enterprises connected around same interest-cluster of enterprises.

There is an interesting example of “Vitaminka” from Banja Luka, which manufactures fruit and vegetable. This company provides raw materials by direct cooperation with producers of fruit and vegetables. Direct cooperation has proved to be very effective model. However, “Vitaminka” does not have good cooperation with trade and export companies. This is the only reason why “Vitaminka” is not capable of increasing the amount of cooperation with individual producers. At the moment there are over 300 of individual producers in RS and FBiH, and approximately that much abroad mostly in Serbia and Montenegro. What is interesting is that those producers from abroad provide 2/3 of necessary raw materials.

V Estimation of consumption of agricultural products in next 5 years

This estimation depends on several factors. According to the author's estimation it will be necessary to get approximately 1.5 billion \$ of financial aid in next five years. Apart from this starting level of GDP is low.

Taking mentioned facts in consideration it can be estimated that GDP will grow approximately 4-5% per year in next five years. If we try to estimate consumption of each product separately we would find some differences.

Consumption of wheat and rye would be decreased since there will be certain economic grow which would moderately decrease present, too high, consumption.

Moderate increase in consumption of potatoes, other vegetables and fruits could be expected.

Significant increase in consumption will most probably affect the most expensive products: all kind of meat, fish, and other products of animal origin.

Due to the economic growth the structure of the diet will improve, but achieving the goal of a healthy diet will take a longer period than just 5 years.

VI Institutional regulation and development of the market of agricultural products in BiH

A) Legislation on market of agricultural products

Most of the present laws need changes and supplement with legislative acts (statutes, regulations, etc). At the moment laws can be applied only partially. Speaking in general we can say that not so many things has been done to create new necessary laws and regulations and to adjust existing laws according to EU standards. Most urgent tasks are modifications or creation of completely new laws such as: Law on agricultural land, Law on measures of improvement of animal breeding, Law on certification and protection of agricultural and forest plant breeds, Law on veterinary medicine, Law on agricultural superintendence, Law on provision and direction of funds for agricultural development, etc.

In BiH there is a Ministry for agriculture in each entity and seven cantonal departments of agriculture in FBiH. This organization is not functional nor it is appropriate to needs in this sector. Reform in administrative structure should reinforce capacities of entity's departments on agriculture for fulfilling basic duties such as: analyzing and creating of agrarian policy (especially in market oriented agriculture), collecting and distributing market information, preparing and conducting regulations, administration of natural resources.

Problems:

- low efficiency and fragmentation of administrative and supervising services including border supervising teams,
- undefined system of control and certification of goods in production and trade
- inexistence of net of diagnostic laboratories,
- lack of experts in major departments,
- lack of competence and influence of both entities' departments on agriculture concerning: import regime, certification, manufacturing industry, and development.

Priorities:

- to create legislative acts, which will make possible application of Law on plant health protection in BiH as well as Law on veterinary medicine in BiH,
- to enable office for veterinary medicine in BiH to execute its functions determined by law,
- to found administration on plant health protection in BiH,
- to execute a project on reorganization of the departments on agriculture,
- to create functional connection between federal and cantonal departments on agriculture,
- to modify veterinary medicine services according to EU regulations.

In order to fulfill conditions for inclusion into process of Stabilization and joining EU it will be of great importance to cooperate with EU in following areas:

- development of private farms and channels of distribution, stocking, and delivering goods,
- modernization of rural infrastructure (transport, water supply, telecommunications),
- increase in productivity and quality by using appropriate methods,
- instruction and follow up of using methods against pollution regarding incoming materials,
- development and modernization of manufacturing companies and their methods of delivery,
- improving of industrial cooperation in the field of agriculture and knowledge exchange,
- development of cooperation in the field of animal and plant health by providing instruction and organizing control in order to adapt present standards to those of EU.

B) Defining strategic productions

In BiH no strategic productions have been defined for long-term investment. Since there are quite limited financial resources it is necessary to define limited number of strategic productions which have competitive advantages and which can be effectively supported with financial resources available.

Strategic productions should be chosen according to following criteria: possibility of selling products-demand for products, natural resources, needs of population and a level of available satisfaction of needs, decrease of foreign trade deficit, possibility for export.

According to mentioned criteria it is possible to define certain strategic products whose production would be supported by mentioned Law regarding support in agriculture and other laws and measures of non financial nature. Other productions will be developed through entrepreneurial activities, with an entrepreneur-farmer accepting risk, but with an active care of institutions in charge.

Priorities in animal production

Strategic productions in this area should be: production of milk, production of beef, production of sheep meat, production of pork, fish production, production of honey. Apart from choosing strategic productions it is necessary to found advisory institutions and institutions for certification of ecologic (organic) animal production.

Priorities in crop production

Productions that should be supported are: cereals production, fruit growing (planting new trees), viticulture (planting new plants), plants used for feeding animals (new sowing, natural meadows and grasslands), industrial plants, seed and planting material. Advisory institutions as well as institutions for certification of ecological plant production are necessary.

Priorities from the aspect of ecology:

- to found a system of monitoring on land, water and air pollution,
- to found system of registration and check up of pesticides and other protective device in entire BiH,
- to create and adopt law concerning genetically modified organisms (GMO)
- to protect environment,
- to increase the offer of agricultural products on domestic and foreign market,
- to protect river deltas and underground water basins,
- to protect customer interests.

C) Institutionalization of the system of support in agriculture

Budget share planned for support in agriculture in BiH in 2003 was around 25 million of KM (approx. 0.80% of the budget). Already low, financial support was used for certain productions according to ad hoc decision of entities' governments because there were neither laws nor programs, which could regulate this area. System of financial support is renewed each year and so producers cannot make any long term plans for production.

In RS in July 2002 the law on providing and guiding of financial support for development in agriculture was adopted by which it is planned to take 4% of the budget of RS for this purpose in long-term. In the year 2003 it was possible to take only 2.35% of the budget for this purpose. In FBiH it is planned to create same law and by this law it is planned to take at least 3% of budget of FBiH for the mentioned purpose.

In the period from 2004-2007 it is necessary to take at least 3% of budget for the purpose of supporting development in agriculture. Primary subjects for this support should be article producers and organized associations of producers.

Improvement of availability of financial services

Both entities in 2003 started to subvention of interest rates (6% in RS, 4% in FBiH) for loans intended for agriculture.

Adequate loans for farmers, associations and entrepreneurs for development of primary agricultural production are not available. For that reason technical and technological transformation of agriculture did not occur and so agriculture is not able to cope with international competition.

Projects of renovation

Several projects related to revival of agriculture have been applied. Although there were some significant funds involved results failed because of the concept of this projects and leading of the project according to the approach top-down. Apart from that, low repayment of loans could be the reason for current unfavorable loan policy.

Problems:

- unavailability of acceptable loans for agriculture,
- inexistence of modern financial services (leasing, guarantees, crops insurance).

Priorities:

- to provide funds in budget for subvention of interest rates,
- to create agrarian fund for credits in agriculture.

D) Adaptation of foreign trade regime

When there is a lack of funds for support in agriculture, protection from international competition is the government's main tool for: repairing war damages, technical and technological transformation and increase of competitive strength. There is no country that would in this critical phase of transition give up active protection of domestic production. It is also allowed by the rules of WTO.

BiH imports around $\frac{3}{4}$ of overall needs for milk and dairy products. It is almost the same with beef. Countries, which export goods, give their producers huge subventions and they stimulate export. Our country does not have enough funds to support domestic production in competition with foreign goods.

Production of milk in BiH is an engine of development of entire agriculture, and the way it was treated before was slowing down general development in this sector. Similar situation is with other productions, which should be protected by increasing custom taxes.

In general we can say that BiH is not capable to fight international competition just by domestic financial support.

Bilateral contracts concerning free trade have been signed with Croatia, Slovenia, Serbia and Montenegro, Macedonia and Turkey. These contracts include all of the agricultural and industrial products without so called positive and negative lists of products. According to these contracts, BiH has signed immediately to cancel taxes for it's own goods and progressive decrease of taxes (3-5 years) for import of products from these countries. BiH did not increase export, mostly because of extra non-tax measures in mentioned countries, because of the institutional disorganization and because of the lack of goods for export.

Signing the memorandum of understanding in the framework of the Stability Pact for Southeastern Europe, BiH committed to sign contracts with rest of the countries in the region (Albania, Romania, Bulgaria, Moldova). At the beginning of 2004 started system of non-tax trading with some of these countries, which resulted in even worse situation in domestic agricultural production.

According to unilateral measures of EU, preferential trading regime is set between BiH and EU, which gives privileged position to our country, which then means exception of taxes and canceling quantitative limits for all agricultural and industrial products (except goods which are subject of tax quotas: wine, some sort of fish, calf). On the other hand BiH committed not to increase taxes. Preferential regime at the moment harms BiH more than it is useful, since it is necessary to provide certificates on origin, certificates concerning fulfilling of standards of quality and appropriate certificates, modified according to EU regulations.

Nowadays at the time of the entering WTO, BiH has very low protective bases for the major agricultural products. Those bases will have to be decreased after entering WTO.

Mostly because of the inadequate regulatory frame and low functionality of institutions, quality control of imported products is almost not performed at all nor the re-declaration of goods. This situation disables effective protection of interests both of producers and consumers.

Problems:

- up to now foreign trade policy led BiH into dependence of import of numerous agricultural products and created huge foreign trade deficit,
- lack of adequate policy of protection of domestic production, modified according to conditions and rules from the Agreement on agriculture and Agreement on veterinary and phyto-sanitary measures of WTO.

Priorities:

- to create adequate policy of protection of domestic agricultural production and provide instruments for its application,

- to parry agrarian protectionism of neighboring countries,
- to improve import protection of agro-industrial products (import regimes, taxes, contingents and other non tax measures) and to provide instruments of application,
- to develop system of support for the export of agricultural and food products,
- to pay attention to increase the number of non tax protective measures.

E) Strengthening of cooperative societies and associations in sector of agriculture

Cooperative societies organize production and distribution at local level and they are the factor without which small farmers could not survive. General Law on cooperative societies in BiH regulates this area. In BiH there are around 210 cooperative societies, mostly of old-fashioned type, which are not adjusted to new ways of business. Apart from that there is no any kind of financial stimulation for their members as it is in European countries. In BiH there are three alliances of cooperative societies and one business alliance.

In developed countries associations of citizens are way of organizing in the areas which state itself is not accessing in appropriate way (local level). They are also partners to the state in creating development concepts, strategies and policies. Farmer associations and experts in agriculture are basis of qualitative changes in this area.

Problems:

- getting back taken property to cooperative societies,
- important role of cooperative societies is not appreciated,
- lack of confidence as well as lack of help to cooperative societies in BiH,
- most of the cooperative societies are not able to organize buy off and trade.

Priorities:

- to apply Law on cooperative societies in BiH strictly,
- to create favorable environment for foundation and development of autonomous, economically capable and democratically lead cooperative societies,
- to strengthen alliances of cooperative societies,
- to educate in the field of activities of cooperative societies,
- to support foundation of non governmental organization of agricultural producers,
- to work on modern ways of connecting different economic subjects (public and private companies and organizations) in order to connect entire production chain of certain agricultural product (for example cluster of wine, cluster of medicinal herbs, cluster on fruit manufacturing etc.).

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