

## **Sector priorities - Agriculture**

Agriculture is the essential activity for rural areas and the basic occupation of its inhabitants, as well as crucial for maintaining ecological balance and for environmental protection. Agricultural and ecological conditions in BiH are, generally speaking, favorable for most types of agricultural production. However, agriculture in BiH suffered enormous damage in 1992-95 war and has been recovering very slowly in the post-war period.

The presented objectives and guidelines for agricultural policy actions are given as a response to a recognized burning need to improve the situation in the sector. Agricultural policy must be based on strengthening the competitiveness of the sector, taking into account, at the same time, the challenges and difficulties which will be the result of international integration processes.

### **1. Current situation**

- The gross domestic product (GDP) of BiH in 2001 was 10.233 billion KM<sup>1</sup>. The share of primary agricultural production in the GDP was 12 percent, i.e. 1.228 billion KM,
- In 2001, the consolidated budgets for agriculture totalled about 0.7 percent of the total consolidated budgets of BiH, entities and cantons,
- It is estimated that livestock production makes up about 50 percent of overall agricultural production. This share is significantly lower than before the war, especially in comparison with developed countries,
- Domestic food production makes up just 35 to 40 percent of domestic food needs, which is significantly lower than before the war, when it accounted for about 60 percent,
- In the overall foreign trade deficit, agricultural products account for a significant share. The deficit of agricultural products per capita is 200\$ (compared to 73\$ in Croatia, 71\$ in the EU),
- The level of usage of natural resources, especially land, is the second important indicator of the situation in the sector. In 2001, 50% of arable land in FBiH, and 33 percent in RS was unused<sup>2</sup>, and the trend is that the surface area of arable land continues decreasing, which could lead to the total collapse of this sector,
- The indicators of productivity in agriculture put BiH at the bottom of the scale for European countries<sup>3</sup>,
- Except for potatoes, BiH has not ensured self-sufficiency in any other major agricultural product,
- The age structure of the population working in agriculture has deteriorated,
- Few agricultural producers have capacities for commodity production,
- Loss of foreign markets.

#### **1.1. Problems**

- stagnation and negative trends in the sector
- unresolved legal status of farmers and their families
- transformation of the sector, which would enable the establishment of market conditions, including foreign competition, has not been carried out
- lack of adequate policy towards the sector (credit policies, incentives, legal regulations etc.)
- lack of a development perspective
- lack of structural harmonization between primary production and processing
- lack of adequate protection of domestic primary agricultural production
- neglect of professional institutions
- challenges of accession to European and world associations.

#### **1.2. Priorities**

- activating natural and human potentials
- increasing competitiveness of the sector and of its productive subjects
- decreasing dependence on the imports of agricultural products
- decreasing the overall trade deficit
- improving demographic coverage of the vital territories
- increasing employment
- shaping a sector which will contribute to economic growth

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<sup>1</sup> Central Bank Bulletin, third quarter of 2002

<sup>2</sup> Statistical bulletin 1 – BiH 2002.

<sup>3</sup> Statistical bulletin 1 – BiH 2002.

- reforming of working and living conditions in rural areas to enable the population to realize their economic, cultural and social potentials
- improving and preserving the natural environment, in parallel with the promotion of the sustainable and ecological agriculture

## **2. Legal Framework**

The laws currently regulating the sector are listed in the following tables, together with the year of their adoption. The existence of by-laws is marked with a (+).

### I BiH

Existing laws	Year of adoption	Bylaws
1. BiH Law on Veterinary Medicine	2002	-

### II FBiH

Existing laws	Year of adoption	Bylaws
1. Law on Cooperatives	1997	+
2. Law on Agricultural Land	1998	+
3. Law on Medicines in Veterinary Medicine	1998	-
4. Law on Waters	1998	-
5. Law on Measures for the Improvement of Livestock Raising	1998	-
6. Law on Recognition and Protection of the Sorts of Agricultural and Forest Plants	2000	-
7. Law on Veterinary Medicine	2000	-
8. Law on Seed and Plant Material for Agricultural Plants	2001	-
9. Law on Tobacco	2002	-

### III RS

Existing laws	Year of adoption	Bylaws
1. Law on Brandy and Wine	1997	-
2. Law on Tobacco	1997	-
3. Law on the Agricultural Inspectorate	1997	-
4. Law on Agricultural Land*	1997	+
5. Law on Plant Protection	1997	+
6. Law on Seed and Planting Material	1997	+
7. Law on Measures for the Improvement of Livestock Raising	1998	+
8. Law on Agricultural Cooperatives	1999	-
9. Law on Ensuring and Directing Subsidies for Development of Agriculture and Rural Areas	2002	+

### **2.1. Problems**

The majority of aforementioned laws lack bylaws (rule books, manuals etc.), so that, in practice, they can only be implemented partially. Some of the key laws do not exist at all. Also, there are no adequate regulations for the registration of agricultural producers as legal entities. Currently, they can only be registered in the same way as other sole proprietors. The responsibility of the state of BiH is to enable free imports and exports of goods and services, through legal enactments, under the same conditions for the entire area of BiH. In general, one can say that little has been done in the post-war period in connection to the adoption of necessary laws and regulations and their harmonization with European standards.

### **2.2. Priorities**

In the coming medium-term period, the priority task is to pass the Law on Phyto-sanitary Protection of Plants and bylaws for the Law on Veterinary Medicine.

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\* The new RS Law on Agricultural Land is in preparation.

### **3. Institutional Framework**

#### **3.1. Administrative Institutions**

There are two entity and seven cantonal ministries of agriculture existing in Bosnia and Herzegovina. In three cantons in FBiH, the agricultural sector is under the auspices of ministries of economy (in Sarajevo, Gorazde and West Herzegovina cantons). In all the aforementioned ministries, 250 officials are engaged in the part concerning agriculture (excluding forestry). Some 200 desk officers in municipalities cover agriculture.

The authorities of entity ministries and the ministry in the District of Brcko are not identical. In FBiH, the authorities are divided with the cantonal ministries of agriculture, water management and forestry. The reform of the administrative structure should strengthen the capacities of the entity ministries of agriculture in carrying out their basic responsibilities: analyzing and creating agricultural policy, especially within a market oriented economy, collection and dissemination of market related information, preparation and implementation of regulations, and management of natural resources.

The Ministry of Foreign Trade and Economic Relations of BiH (MFTER), i.e. the BiH Council of Ministers (CM BiH), have considerable authority with respect to this sector, which determines the foreign trade regime. Since 2000, the Office for Veterinary Medicine has existed within the Ministry of Foreign Trade, but it has not yet fully assumed all its functions. Without any bylaws, the BiH Law on Veterinary Medicine cannot be implemented, nor can the Office function effectively.

##### **3.1.1. Problems**

- inefficiency and fragmentation of administrative and inspection services,
- unresolved issue of quality control and certification of goods in production and in sales,
- oversized administrative structures in the FBiH,
- lack of experts in key sectors,
- lack of competencies and influence of both entity ministries on:
  - a. import regimes,
  - b. certification,
  - c. processing industries (Ministry of Industry),
  - d. development (credit) policies.

##### **3.1.2. Priorities**

- creation of efficient professional and competent administrative institutions, with professional staff, capable of facing the challenges of the transition period and of accepting and implementing the European and world standards,
- rationalization of entire administrative structure with the objective of decreasing costs and increasing authority,
- reduction of excessive bureaucracy in administrative structures

### **3.2. Professional institutions**

#### **3.2.1. Problems**

World practices exemplify the need of the existence of professional institutions, which, according to their terms of reference, conduct certain professional (scientific, research and applicative) activities in order to support implementation of development strategies in the sector. In less-developed countries, those institutions have the status of public institutions. The status and funding of professional institutions in BiH have not been resolved, which poses a major problem, since for a long period of time, farmers in BiH will lack economic power to be able to participate in the funding of these institutions. All countries in our region have one or more scientific institutions (e. g. Croatia has five, with a couple of hundreds of employees).

The difference in the level of administrative centralization in the entities results in different organizational solutions. Since 2002, the Agricultural Advisory Service has existed in the RS, financed from the budget of the RS Ministry of Agriculture. Agricultural advisory services in the FBiH have not been organized as a single service and exist only in some of the cantons. In both entities, the advisory services, as well as other professional institutions, are facing the problem of funding their future operations.

### **3.2.2. Priorities**

- Establish and strengthen specialized public professional institutions, which would implement policy reform projects, conduct knowledge and technology transfers and provide certification.

## **4. Funding of Agriculture**

### **4.1. Credit policy in the sector**

#### **4.1.1. Problems**

Potential farmers, entrepreneurs and other investors do not have access to adequate credit sources. Credit conditions currently are ill-adapted for comparison with the conditions in the region surroundings. For this reason, the technical and technological transformation of agriculture into a sector capable of competing with imports has not occurred.

Some efforts to ensure availability of favorable credits were made on the entity level, but without results (e. g. FBiH Foundation for Agricultural Development). Only minimal budgetary financing was allocated occasionally, on the basis of decrees, mostly for urgent interventions and not on the basis of law. There was no continuity, so the effects were missing. In 2003, RS began subsidizing interest rates (at the level of 6%) for agricultural credits.

Increase in availability of credits, through measures for subsidizing interest rates, remains difficult to achieve due to the lack of resources for implementation of such a policy, and due to the opposition of the international financial institutions, which believe that such policies would create limitations for the functioning of the open market.

Micro-crediting organizations have so far directed 13 percent of their credits in agriculture, with the rate of repayment of about 99 percent, although under unfavorable conditions.

#### **4.1.2. Priorities**

- support existing producers in achieving competitiveness,
- provide assistance to potential farmers - entrepreneurs to initiate production,
- strengthen the revenue capacity of the sector,
- increase the level of meeting the domestic demand for food from own production,
- prevent the depopulation of the sector,
- strengthen necessary public professional institutions
- pass laws and adopt instruments of financial policy to stimulate banks to increase credits for agriculture,
- create conditions to attract foreign capital to the sector

### **4.2. Reconstruction Projects**

Within the framework of the reconstruction program for BiH, a number of projects focused on reviving agriculture. Significant donor and credit resources were channelled into the renewal and strengthening of agriculture, but the results failed to meet expectations, in most part because the projects were conceived and managed with a "top-down" approach. Poor credit repayment rates are another reason for the current unfavorable credit policy.

## **5. External Trade Regime**

No European agriculture could be efficient without state subsidies, i.e. without agricultural protectionism. Due to many years of neglecting agriculture and many years of badly managed agricultural policy, the lack of a large number of agricultural products is evident in BiH. In the absence of financial resources for incentives, protection from foreign competition is the main instrument available to the state, with the objective of renewal after the destructions of war, technical and technological transformation and the increase of competitive powers.

BiH entered the transition period with a decrepit and devastated agricultural sector. There is a danger of the deterioration of this situation if the existing foreign trade regime continues. This problem has significant repercussions for the use of domestic resources and for preventing the rural population from migration. No country in such a critical phase of transition can forsake active protection of domestic production. This is also permitted under the rules of the WTO.

BiH imports about three-quarters of its total demand for milk and milk related processed products. The situation regarding beef and veal is similar. Exporting countries provide large subsidies to their producers and stimulate exports. On the other hand, BiH lacks resources for more extensive subsidies for this production, to the extent which would match the foreign goods. The production of milk

in the BiH conditions is an "engine" for the development of all agriculture, and the treatment of milk production has, so far, presented a barrier for the development of the sector. Similar arguments can be presented for other types of production which are proposed as areas in which customs protection should be increased. In general, one can state that BiH lacks resources to match foreign competition through subsidies alone.

To date, bilateral free trade agreements have been signed with Croatia, Slovenia, Serbia and Montenegro, Macedonia and Turkey. Those agreements cover all agricultural and industrial products without so-called positive and negative lists of products. According to those agreements, BiH signed for an immediate elimination of customs duties levied on its own products, and a gradual decrease of customs (through 3 to 5 years) levied on the import of products from those countries. BiH did not increase exports, mostly due to additional, non-customs related measures of those countries, due to the lack of institutional organization and due to the lack of goods for export. Through the signing of the memorandum of understanding between the Stability Pact for Southeastern Europe, BiH is obligated to sign agreements with the other countries in the region by 2002 (Albania, Romania, Bulgaria and Moldavia).

On the basis of unilateral measures of the European Union, a unilateral preferential trade regime is in place between BiH and EU, which extends to our country the status of a favored nation, which implies exemptions for paying customs duties and the elimination of quantity related constraints for all agricultural and industrial products (except for goods which are subject to customs quotas: wine, certain types of fish, veal). On the other side, BiH has taken over an obligation not to increase customs duties. The preferential trade regime is, at this moment, more detrimental for BiH, as, to benefit from it the certificates of origin and of meeting quality standards in line with the EU requirements, must be provided. In the run-up to the WTO accession, BiH has a very low protective basis for key products, which shall have to be further decreased upon accession to the WTO.

Mainly due to non-functioning institutions, the quality control of imported goods is barely enforced at all, nor is the re-declaration of goods executed, which prevents efficient protection of producers' and consumers' interests.

### **5.1. Problems**

- the recent external trade policy have brought BiH into a position to depend on imports of many agricultural products and created an enormous foreign trade deficit,
- the lack of adequate protection policy for domestic agricultural production, harmonized with the conditions and rules listed in the Agreement on Agriculture and the Agreement on Veterinary and Phyto -sanitary measures of the WTO.

### **5.2. Priorities**

- Adopt an adequate policy of protection of domestic agricultural production and develop instruments for its implementation,
- Find ways to counter agrarian protectionism implemented by the surrounding countries,
- Stabilize the BiH market.
- Improve import-related protection of agro -industrial products (import regimes, customs, non-customs and other measures) and devise instruments for implementation.
- Develop a system of support to exports of agricultural and food products.
- Review the options for changing the customs policy, in order to protect the productions and products of strategic importance .
- Pay special attention to expanding the set of available measures of non-customs protection.

## **6. Incentives in Agriculture**

In 2001, budgetary allocations for incentives to agricultural production amounted to about 20 million KM (about 0.7% of consolidated budgets). Although small, such earmarked resources have for years been channelled to certain products on the basis of ad hoc decisions of entity governments, as there were no laws and no programs which would treat this set of problems from a multi-year perspective. The system of incentives was created from one year to the next, which did not allow producers to have a long-term orientation in their production plans. Such an approach opened up possibilities for lobbying and resulted in inefficient solutions, the best example of which were the incentives given to poultry production, and not to sheep and mutton production in BiH.

In 2002, the RS adopted the Law on Procurement and Allocation of Resources for the Development of Agriculture and Rural Areas, which stipulates that, in the future, at least 4 percent of RS budgetary revenues will be allocated for these purposes. However, in the 2003 budget, already, it was possible to plan only 2,35 percent of resources for these purposes.

In BiH, 1.5 to 2 percent of gross product of agriculture is allocated to incentives, which is many times less than in the neighboring countries. In the EU, state subsidies represent 30 percent of farmers' revenues. Clearly, under such conditions there can be no mention of competitiveness of BiH agriculture, which is a key prerequisite for conceiving a development strategy for the sector.

#### **6.1. Problems**

- lack of systematic long term solutions for the system of incentives,
- need to re-distribute national income for the benefit of the sector,
- insufficient competitive power of domestic producers,
- end of *ad hoc* decision making about incentives,
- more accelerated development of production modes for which there are both resources and a market in BiH.

#### **6.2. Priorities**

- support development of competitiveness in chosen production areas, in parallel with their technical and technological transformation,
- increase the rate of usage of natural resources (land, water) and labor force,
- achieve self-sufficiency in chosen products,
- lower the foreign trade deficit,

#### **6.3. Estimate of resources necessary for incentives**

In order for the reform objectives to be realized in the course of the 2003-2007 period, it is necessary to allocate at least 3 percent of budgets (of BiH, entities, cantons, the District).

Table 1. Growth trends and structure of incentives by budget (2003-2007)

BUDGETS	2003 ( KM million)	2004 ( KM million)	2005 (KM million)	2006 (KM million)	2007 (KM million)
Entities	35	52.5	70	87.5	105
Cantons	3	4.5	6	7.5	9
Brcko District	2	3	4	5	6
<b>TOTAL:</b>	<b>40</b>	<b>60</b>	<b>80</b>	<b>100</b>	<b>120</b>

### **7. Science and Education in Agriculture**

#### **7.1. Science**

In BiH, effectively, there are no organized scientific and research activities, nor are more significant resources allocated to the financing of such activities. In that regard, too, our country is an exception in the region. The current law regulating this field was inherited from the legislation of the former SFRY.

The model of education in the sector also originated in the previous social system. To date, it was not changed, nor adjusted to the development needs of the sector. The main shortcomings of the system are didacticism, lack of links with the practice of agriculture, shortage of facilities for practical learning, poor equipment and the lack of continuous education of the teaching staff. That there are six tertiary education institutions in the field of agriculture, and hundreds of unemployed agronomists, points out to the lack of coordination of the capacities and the needs of the society in this sector.

#### **7.2. Priorities**

- Improve the relevance of education for work in agriculture on all levels,
- Create conditions for greater, systematic investments in scientific and research activities.

## **8. Land Management**

### **8.1. Problems**

On the basis of the world standards, BiH is sliding towards the minimum of arable land area per capita (This limit is 0.17 hectares). This minimum has already been exceeded in the Tuzla Canton, where average arable land per capita is around 0.10 – to 0.08 hectares. Various forms of permanent or partial damage to the land occur continuously. The most endangered is the land in the high quality categories (I, II and III category), which comprise only 15 percent of the overall land area. Almost all infrastructure is concentrated on the highest quality land. It is estimated that 3,000 – 5,000 hectares are lost annually, in various ways. There are about 200,000 hectares of mine-infested land in BiH, and at the present time, it is estimated that it will take 40 years to clear them all. There are 10,000 hectares of areas damaged by ore mining, and only 1,000 hectares, or 10 percent, has been rehabilitated.

The fundamental problem in the sector concerns uncultivated arable land, of which there are 400,000 hectares in BiH. In addition, the trend of further decline of the area under cultivation is evident. The second problem concerns the small size of farms. Available data point out that the average sized farm is only 3.5 hectares and that it is, on average, divided to 7 to 8 separate lots. The arable land surface per capita is 0.26 hectares, which places BiH near the bottom of the European scale. The fragmentation trend has been present for the last 50 years, while the increase in farm size was the dominant process in Europe. The causes of this negative trend are nationalization and agrarian reform, as well as the results of the implementation of the existing inheritance legislation. The current law on property inheritance (from the former SFRY) allow the owner to designate the inheritor in his/her will.

Land registries (cadastre and former Austro Hungarian Empire land registry - gruntovnica) are not updated and do not reflect the actual situation on the ground. There are no official data on the number of landowners or the number of agricultural and mixed households. The number of owners is growing continuously and the size of the holdings is reduced. Small, fragmented and dissipated holdings are a limiting factor for any serious production and management schemes in modern agriculture. On the other hand, it is unrealistic to consider regrouping of holdings or commassation in the next five years.

About 100,000 hectares of very good quality arable land is in state ownership. This problem needs to be resolved in order for the quality land to get in the hands of those who are cultivating it. One of the barriers for that is the unresolved problem of restitution. There are regulations for changing the purpose of agricultural land, but there is no control of the process of changing the purpose, nor is the compensation channelled back to the sector.

### **8.2. Priorities**

- Promote widest possible use of the available agricultural land for production, based on the system of sustainable management,
- Conduct activities on land development and protection, to prevent losses to arable land,
- Conduct inventories of land and establish land or geographic information management systems,
- Resolve the status of high-quality state-owned land,
- Revise the existing laws on land inheritance.

## **9. Cooperatives and Non-governmental Institutions in the Sector**

### **9.1. Cooperatives**

Cooperatives are organizing production and distribution on the local level and they are the factor of organization without which a farmer cannot survive. There are 210 cooperatives in BiH, which are, for the most part, outdated in type and unadjusted to new conditions of business, and there are no incentives to their members, as is the case in European countries. There are three cooperatives' associations and one business cooperatives' association functioning in BiH.

### **9.2. Problems**

At present, most cooperatives are not able to organize purchase and sales of the produce. This set of problems is regulated by the Law on Cooperatives (FBiH) and the Law on Agricultural Cooperatives (RS). The Framework Law on Cooperatives at BiH level is in the procedure. The laws in FBiH and RS regulate this area in totally different ways.

The return of cooperatives' property which had been expropriated is still difficult, and the existing cooperative property is still misappropriated, both from the inside and from the outside (by the management and the local authorities). The important role of cooperatives, evident from the

experiences of countries with developed market economies, is not appreciated. All this results in the lack of trust, as well as in the absence of support for cooperatives in BiH.

#### **9.1.2. Priorities**

- Pass adequate legislation (taking into consideration the specific issues of cooperatives)
- Create a favorable environment for the development and establishment of autonomous, economically viable and democratically run cooperatives,
- Strengthen associations of cooperatives,
- Accelerate the process of return of cooperative property,
- Provide education on activities of cooperatives.

#### **9.2. Non-governmental Institutions**

In the developed world, citizens associations are a form of organization in those segments which cannot be reached by the government (the local level). They are also counterparts of the government in designing development concepts, strategies and policies. The associations of farmers and agricultural experts are the mainstay of qualitative changes in the sector.

The following nongovernmental organizations are currently active in BiH:

- Association of agricultural workers' organization of FBiH,
- Association of agricultural workers' of RS,
- Farmers' Association of RS,
- Numerous domestic and international organizations which are directing a part of their activities to the support of agriculture and rural areas.

Activities on the establishment of the organization of farmers of BiH are underway.

#### **9.2.1 Priorities**

- Ensure the participation of farmers' associations in defining agricultural policies.

### **10. Ecological Aspects of Sector Development**

In regards to this, two aspects need to be differentiated between:

- a) the influence of conventional production on the environment and on human health
- b) ecologic (organic) production.

#### **10.1. Influence of Conventional Production on Environment and on Human Health**

##### **10.1.1. Priorities**

The monitoring of this aspect is not conducted at all, so that the situation can only be analyzed partially, on the basis of estimates. In the main productive areas and in the river valleys there are real dangers of incorrect and excessive use of mineral fertilizers and pesticides (excessive chemisation). The nitrates from the fertilizers are dissolvable, and directly pollute rivers or subterraneous aquifers. The testing of products for the presence of such substances is not performed at all.

The situation is similar when it comes to chemical agents which are used in agricultural production – **pesticides**. The education on the application of pesticides and other protective agents (quantity, dosage, time of application, frequency etc.) is inadequate and not systematically grounded, so that there is a grave danger of their excessive use and acute poisoning of consumers.

##### **10.2.1. Priorities**

- Establish a system of land and water pollution monitoring,
- Register and examine pesticides and other protective agents on the level of BiH.

#### **10.2. Ecologic (Organic) Production**

In the developed world, especially in recent years, the trend of growth in ecological (organic) production is quite pronounced. The reasons for that are the following:

- increased demand for so-called healthy food, mostly in urban areas, and
- increasing awareness of the necessity to abandon the intensive, traditional production which negatively affects the environment (pollution and degradation of land, pollution of waters, disturbing

biocenteses etc.). These processes permanently deteriorate the quality of the ecological environment for future generations.

#### **10.2.1. Problems**

- lagging behind global trends,
- damage to environment caused by the conventional type of agriculture,
- threat to potable water sources.

#### **10.2.2. Priorities**

- preserve environment
- expand the range of agricultural products offered on the domestic and foreign markets, and increase the revenue of the producers,
- protect catchment areas nad subterraneous aquifers,
- protect consumers' interests.

### **12. Strategic priorities**

The strategic priorities were selected on the basis of the following criteria:

- possibility of finding a market for the products – demand,
- natural resources,
- needs of the population and the level of the achieved fulfillment of needs
- decrease of the foreign trade deficit,
- possibility of exports,
- competitiveness in comparison with foreign commodities.

On the basis of the aforementioned criteria, a limited number of products can be defined, and their production would then be supported by the aforementioned Law on Incentives and other legal and financial measures. Other types of production will be developed through various entrepreneurship activities, the risk of which would be taken over by the entrepreneurs – farmers, and with the understanding and support of the state, which will provide incentives thorough non-financial measures.

The sub-sectors reviewed in this analysis have been grouped in the following way:

- i. Livestock production,
- ii. Plant production,
- iii. Ecologic production.

#### **12.1. Livestock Production**

From the point of view of legal and institutional support, in this sub-sector it is necessary to emphasize that the existing Law on Livestock Keeping of FBiH does not define the basic issues from the area of livestock keeping, such as cultivating and selective activities (institutions, incumbents of cultivation programs, identification of animals, control of animal productivity etc.). In RS, that is regulated by the Law on Measures for the Improvement of Livestock Keeping.

On the basis of the aforementioned criteria, individual livestock keeping branches are classified into those which have an organic connection with BiH natural resources (**bovine cattle, sheep, pork, fish and bee keeping**), and those branches which depend on foreign inputs and do not activate domestic land resources (**poultry**). Regardless of the engagement of natural resources through the development of bovine and sheep keeping, there is a large deficit of their products (milk and milk related products, veal), but there are also significant possibilities for the export of sheep related products.

##### **12.1.1. Production of Milk and Related Products**

It is estimated that three quarters of milk and related products which are on offer originate from imports. Some key products among those (fresh and condensed milk, powder milk) are being imported according to the 10-15 percent customs regime, without any *prelevmani*, which has created an enormous niche in the BiH market for highly subsidized and export motivated foreign commodities. In our set of conditions, the production of milk is the "motor" for the development of the entire agricultural

sector, and a condition for labor engagement of a large number of agricultural households and production facilities. This production needs to be treated as a strategic choice.

### 12.1.2. Meat Production

Even at the current, very low level of consumption, the deficit of meat is enormous, and the demand for meat will get even higher, due to the high level of revenue elasticity. Meat consumption is going to show growth trends, following the growth of the purchase power of the population. It is projected that in 2007 consumption will amount to about 48 kilograms per inhabitant, but, even after that period, consumption will keep growing, unlike some other food related products, which have already faced saturation or are getting very close to it (sugar, oil, potatoes, vegetables etc.). Because of the war related destruction, but also due to badly managed agricultural policy (inadequate customs protection, lack of favorable credits, incentives etc.), this type of production has been stagnating, except for the production of poultry and pork. Meat processing industry has found its base of raw materials in the external offer of cheap meat and livestock, so that the post war development of meat processing industry is not in proportion with primary production. Keeping in mind the high level of existing and future needs, as well as the aforementioned criteria, the following are strategic choices:

- **Beef and veal production:** The deficit in BiH industries is the highest when it comes to this type of meat. The reasons for such a deficit are multiple: the lack of incentive measures for fattening cattle for meat production, lack of cultivation programs which would have the improvement of bovine cattle population as its objective, in order for biological capacities for meat production to be created, the lack of interest in meat processing industries for the development of their own base of raw materials etc. The production of veal implies both phasing and territorial distribution in which the so-called final fattening would be organized in regions with high levels of corn production (a possibility of implementing cheap technologies, on the basis of fodder produced within the facility). Such an approach implies the design of **macro** projects for the improvement of cattle keeping on the state or entity level.
- **Production of mutton:** The development of sheep keeping is not constrained by demand, nor can imported mutton be competitive with the domestic meat. Sheep keeping is the most important form of utilizing natural resources – **pasture grounds**, in higher mountain regions and, as such, it is a condition for the demographic coverage of a significant part of BiH. However, the consumption of mutton is lagging behind the consumption of other types of meat, significantly.
- **Production of pork:** Intensive production can be organized in the lower plains parts of BiH, i.e. where corn is produced. In recent years, this type of production has developed thanks to cheap concentrated fodder, but it needs better protection from foreign competitors. Pork is a very significant raw material for processing industries, too.
- **Fish production:** Fish rearing has significant potential for development, thanks to natural resources (water accumulations and mountain streams), and significant export potential. Although it is dependant on the import of fish fodder, this branch is engaging far less labor force than the classical forms of livestock keeping. Fish production lacks modern facilities for production and rearing of fish roe, as well as domestically produced fish fodder.
- **Beekeeping** is an agricultural branch in which the reconstruction of production after the war was the fastest. An increasing number of people is choosing beekeeping as their basic occupation. The most significant problems are related to marketing – standardization of the quality of honey and ensuring quantities which can be exported.

\* **Poultry** has some biological advantages (fast reproduction and superior efficiency of fodder usage) and options for the industrialization of the technological process are also present. This production has been developing successfully, thanks to those inherent advantages, and it is meeting the needs of the population quite easily. This branch needs to be provided with a certain level of customs protection, taking into account its significance in meeting the needs of the population.

\* **Egg production** is meeting the needs of the population, at the level of 180-200 eggs per inhabitant, so that additional growth of consumption would be impossible. Biological, economic and developmental preconditions for this production are similar to those in poultry production. It also needs to be provided with a favorable economic environment, i. e. protection from external competition.

### 12.2. Plant Production

BiH is highly dependant on the import of key plant products. This primarily concerns all types of cereal, spring vegetables and fruit. The production of industrial plants (oil production and sugar beets) is

virtually non-existent. There are multiple reasons for the import dependency, starting with the overall unfavorable agricultural and economic environment, low level of technological equipment etc.

#### **12.2.1. Grain Production**

In the production of cereal used for bread, it is evident that there are certain comparative shortcomings, such as fragmented land ownership, unarranged land, foreign competition, low prices on the world market, to which the domestic mill and bakery production is directed in its entirety. In the coming five-year period, the option chosen is to activate land resources, to increase the level of production and to meet about 50 percent of domestic needs.

The situation is similar in the corn production, but one has to take into account that the corn production is more profitable, due to higher yields and its usage in livestock fattening. In the structure of agricultural cultures sown, cereal participates with about 60 percent, of which about three-quarters represents the production of corn. Objectively speaking, there is no type of production which could take over the role of cereal / wheat. In the post war period, from the perspective of foreign competition and domestic support, no attention was paid to this type of production.

#### **12.2.2. Vegetable Production**

Production of vegetables is highly labor intensive, it is carried out on smaller lots of land and it does not suffer from the aforementioned constraints. The diversity of geographic and climatic characteristics of BiH enables the production of almost all types of vegetables and meeting domestic needs in full. Until now, a high level of domestic production has been achieved, and the preconditions for processing and exports have been created. The further development of processing capacities and their connectiveness with primary production will be the main directive for the development of this branch.

#### **12.2.3. Fruit and Wine Production**

Similar to the production of vegetables, the production of fruit and wine can be organized on smaller lots, with a high revenue yield per unit of area. In the production of continental fruit, the objective for 2007 is to increase the level of covering domestic needs to about 90 percent.

The production of berries is highly profitable and labor intensive, with export potential. The objective for the future is to enter the European market.

The basic problems in wine production are the unresolved issue of protection from foreign competition and the lack of incentives for raising new vineyards. The countries who are our competitors implement additional, non-customs related measures in order to make the sale of our wines even more difficult, while, at the same time, BiH does not respond with the introduction of similar measures. Domestic producers must fulfill relevant international standards and they need to have a joint market strategy.

#### **12.2.4. Forage**

About 10 percent of arable land is used for the production of fodder /plants used as animal food/, of which different types of clover represent 75 percent. In order to utilize the resources and to rationalize the production of milk and meat of grazing cattle, and to decrease the dependency on imported concentrated fodder, it is necessary to increase the amount of fodder plants sown on arable land. This objective needs to be motivated with direct incentives for sawing fodder plants .

#### **12.2.5. Industrial Crops**

- **Tobacco.** 4,800 hectares are under this industrial crop. The production of tobacco is highly labor intensive and it engages a couple of thousand agricultural producers. The issue of the support to the production of this culture could, instead of using incentives, be resolved with the re-distribution of income within the integrated production and processing chain, which is highly profitable.
- **Oil Production (soy, beetroot, sunflower).** 80 percent less oil production plants are sown today than before the war. This decline was caused by the discontinuation of production in the only BiH oil production plant, in Brcko. In the plain region of northern Bosnia the conditions for the production of these crops are favorable. Their introduction would engage a significant part of arable land, the sequence of cultures would be extended, a part of the import of oil would be substituted and labor resources would be engaged.
- **Production of Seed and Plant Material.** The share of domestic seed production is only 5-10 percent of the overall consumption of certified seed, noting that the consumption of certified seed is significantly lower than the actual needs for quality seed. This is one of the basic reasons for low yields and the spreading of plant diseases and parasites over uncontrolled material. Unfortunately,

even in this, surely the most important, production, numerous issues have not been resolved systematically (incentives, protection from foreign competition, lack of commitment of inspection bodies, lack of monitoring over the production and sale of seed etc.). The situation concerning the plant material is even more drastic, as it concerns multi-annual plants.

### **12.3. Ecologic (Organic) Production**

BiH is taking the first steps in ecological production. In the developed world, the demand for such products is high. Our country has certain natural advantages for collection and cultivation of ecologic products ("virgin areas"). Until now, those advantages were not utilized. The implementation of the Project of Initiation of Ecologic Production in BiH is ongoing, and it is being implemented by an international organization called Groling. The focus of this project is to establish and capacitate a certification body in BiH, for the advisors to be trained, for the standards in this area to be adjusted, for the adoption of the necessary legislation to be facilitated, for the promotion of products to be supported and for free of charge certification of ecologic products to be carried out in the initial phase.