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5. konferenca DAES

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# Sodobni izzivi menedžmenta v agroživilstvu

Pivola

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## IV. Strukturne spremembe v agroživilstvu

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## **ACTUAL CHANGES IN ECONOMIC STRUCTURE OF AGRICULTURAL PRODUCTION IN RURAL SETTLEMENTS OF BOSNIA AND HERZEGOVINA, IN EUROPE, TODAY**

Rahman NURKOVIĆ<sup>a</sup>

### **ABSTRACT**

In the paper, actual changes of agricultural structure of Bosnia and Herzegovina, tradition of agricultural economy, transformation of socially-owned agricultural estates and changes in agricultural settlements are analysed. Agricultural areas of Bosnia and Herzegovina have changed more significantly: they have lost many classical agricultural features, they have lost a big part of population, a number of villages have disappeared and individual farming has been marginalized. A gradual and comprehensive reconstruction of agriculture in Bosnia and Herzegovina is needed.

*Key words: agriculture, agrarian space, changes in agrarian space, privatization, family farm, rural settlements*

## **AKTUALNE SPREMEMBE EKONOMSKE STRUKTURE KMETIJSKE PROIZVODNJE NA PODEŽELJU V BOSNI IN HERCEGOVINI V EVROPI DANES**

### **IZVLEČEK**

V prispevku so analizirane aktualne spremembe kmetijske strukture v Bosni in Hercegovini, tradicije kmečkega gospodarstva, preoblikovanja podjetij v družbeni lasti in spremembe v poselitvi podeželja. Kmetijska območja Bosne in Hercegovine so se občutno spremenila: izgubila so številne značilnosti tradicionalnega kmetijskega prostora, velik delež prebivalstva, veliko vasi je povsem izginilo in kmetovanje na družinskih kmetijah je postalo obrobnegega pomena. Zato je potrebna postopna in vsestranska obnova kmetijstva v Bosni in Hercegovini.

*Ključne besede: kmetijstvo, podeželje, spremembe na podeželju, privatizacija, družinska kmetija, poselitev*

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## 1 Introduction

In 1991, Bosnia and Herzegovina had 6.754 of settlements, of which 6.542 of rural and mixed settlements with 48% of the population of Bosnia and Herzegovina. Four-fifths of the rural and mixed settlements had less than 500 inhabitants. In 35.2% of settlements with less than 100 inhabitants lived 4.6% of the population of Bosnia and Herzegovina, whereas in 47.1% of the rural and mixed settlements with 100 to 500 inhabitants lived 35.7% of population of Bosnia and Herzegovina.

Economic and general development of the area with such small and dispersed settlements requires a developed infrastructure, primarily the traffic one, which still doesn't exist in Bosnia and Herzegovina. As in other commensurately developed countries, agrarian space in Bosnia and Herzegovina is not only the field of agricultural and forest production, but also the field where a larger and larger number of other functions is gathered and performed.

There are attempts towards larger spatial separation of the functions in development of agricultural regions, respectively toward creation of functionally purer areas. However, despite the efforts towards creating the monofunctional areas, functionally mixed areas are still prevailing in the agricultural regions of Bosnia and Herzegovina. Changes in significance of agricultural region within a particular country and some functional areas within a specific agrarian space can be noticed by comparing the number of inhabitants of towns and agricultural areas or by analysing the population structure.

In Bosnia and Herzegovina, in period from 1991 to 2008, number and participation of urban inhabitants in overall population of Bosnia and Herzegovina increased from 35.2% (1.458.500 persons) to 46.4% (2.497.302 persons), and a number and participation of inhabitants of rural areas decreased from 75.3% (2.754.432 persons) to 44.2% (2.146.051 persons). Changes in relation to number of inhabitants in towns and in rural areas of Bosnia and Herzegovina are mostly the consequence of industrialisation process and deagrarization that was caused by it, respectively cessation of farming by significant number of agricultural population, and their conversion to other occupations. Number of mixed settlements increased in 2008, when 31% of inhabitants of the agricultural regions were recorded. Participation of agricultural population in overall population of the agrarian areas of Bosnia and Herzegovina decreased to 20.4%, which means that only every fifth or sixth inhabitant dealt with agriculture. Today, most inhabitants of the agrarian areas of Bosnia and Herzegovina are engaged in non-agricultural activities, many of whom are commuters. Agriculture lost its prevailing function in the agrarian regions of Bosnia and Herzegovina as a main source of income for majority of its population. It is not prevalent even with most of statistically determined agricultural holdings. Of total number of statistically determined agricultural households (635.345 in 2008), respectively the households that use agricultural land, only 16.5% of them had income exclusively from agriculture, and only such holdings can be deemed entirely agricultural. Most of other statistically determined agricultural holdings earn income exclusively from agriculture (non-agricultural 65.4) or partially from agriculture and partially beyond it (mixed 18.4%).

The cause of such condition needs to be searched, first of all, in prevalence of small and fragmented holdings with polycultural variety production. Number of small holdings that have an interest and opportunity to keep dealing with agriculture is

relatively small. However, organizational measures and financial resources should enable such holdings to increase their property unlimitedly and to manage them in accordance with market requirements, i.e. supply and demand. Earlier, in the socialistic period of ex Yugoslavia, the state actually obstructed development of private agriculture, by legal limitations of cultivable soil of a single individual agricultural holding to maximum surface of 10 ha, as well as development of large socially-owned property. Socially-owned estates had pre-emption in repurchasing the private land. Only if socially-owned estates had not shown an interest in repurchase, the land could have been sold to private sector.

## **2 Agricultural production of Bosnia and Herzegovina**

Bosnia and Herzegovina is still a bigger consumer than a producer of food, which certainly affects negatively the adjustment of the food balance, particularly in regard to overall opportunities of Bosnia and Herzegovina in exports, so the orientation towards necessity of agricultural development in all settlements is even more understandable. Development of agribusiness in Bosnia and Herzegovina in period from 1995 to 2008 was ongoing under more favourable conditions than it was earlier. Basic conditions for considerably faster development of the agricultural production were created. Significant results in transformation of a village by higher investments of the social resources and more organized efforts of rural inhabitants in construction of infrastructure were achieved (electrification, construction of new roads and modernization of existing ones, construction of health, water supply and school buildings). By introducing health and pension insurance for agricultural producers, connecting the rural settlements with towns, living standards of rural population were increased and working conditions in agriculture were improved. In past years a noticeable progress in further integration and organizational strengthening of the work units was achieved aiming at stronger and more stable connecting the production, processing and turnover of agricultural products into agribusiness totalities as bearers of development, capable of using more fully the production capacities, increasing labour productivity, broader application of the results of scientific, technological and technical achievements and influencing the faster development in agriculture and in a village as well.

Since 2001, a policy of tighter associating the industry and a village within agricultural production has been introduced, particularly with fruit and vegetable producers, which accelerated differentiation of agricultural production in Bosnia and Herzegovina. Thanks to modern scientific farming methods that are applied in agricultural production, a new, improved occupational structure of the employed people and the market, more than 150 different foodstuffs that sell successfully on domestic and foreign market were produced until 2009. However, opportunities for agricultural production in Bosnia and Herzegovina show that considerably larger quantities of food could be produced against the current production. Actual transformation of our agricultural areas is primarily determined by specific socio-economic development of our country, respectively by intensified industrialisation and more and more expressed tertiary activities in rural settlements.

The mentioned socio-economic development primarily reflects on change of the spatial distribution and occupational structure of the population, but also on change

of the agricultural structures and agricultural landscapes, respectively the transformation of the forms and functions of the settlements (*Vrišer, 1995*).

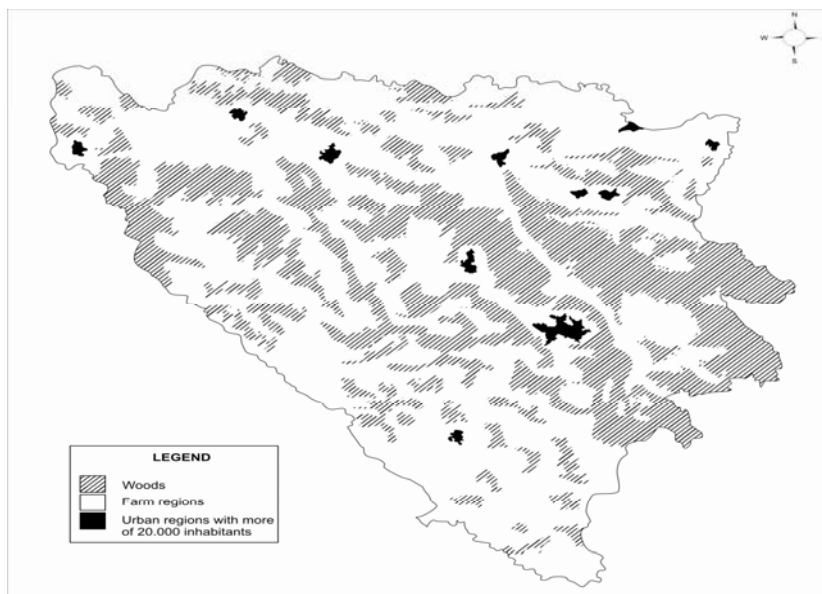
Structure of agricultural land is relatively favourable as cultivable land occupy 1.570.647 ha, plowed fields and gardens 1.030.447 ha, orchards 95.982 ha, vineyards 3.373 ha and meadows 444.845 ha. (*Table 1 and Map 1*).

Agriculture and cattle breeding have always been a major occupation for population of Bosnia and Herzegovina until development of industry and other non-agricultural activities, which followed successfully after World War II.

Table 1: Average size of agricultural land in Bosnia and Herzegovina in 2009

Category of used land	Hectares
Plowed fields and gardens	1.030.447
Orchards	95.982
Vineyards	3.373
Meadows	440.845
Cultivable land	1.570.647
Pastures	606.739
Ground covered with reeds and swamps	2.488
Grand total of agricultural land	2.179.879

Source: Agency for Statistics of Bosnia and Herzegovina, 2009



Map 1: Agricultural land of Bosnia and Herzegovina, 2009



In agricultural production of Bosnia and Herzegovina growing cereal, industrial and gardening cultures growing and cattle breeding, as well as fruit and wine growing are included. Farming is the most important branch of agriculture in Bosnia and Herzegovina. On cultivated land that makes 42% of total agricultural land, corn, industrial crops and vegetables, fodder and roughage are grown. The largest part of cultivated land in Bosnia and Herzegovina is covered by cereal (around 2/3). Out of all cereal, corn is most grown and occupies around 1/2 of agricultural land under cereal.

The average annual production of corn is around 700.000 tons. Corn is most grown in plain areas of Northern Bosnia, in valleys, river basins and karst fields. Bosnian Posavina river basin has the highest yield of corn. On the second place according to volume of production is wheat, which is grown on around 1/4 of land under cereal production. The average annual production of wheat is around 450.000 tons. Wheat is mostly grown in plain areas of Northern Bosnia and valleys and river basin of Central Bosnia.

Apart from corn and wheat, barley, oats and rye are also grown in Bosnia and Herzegovina, but these cereals do not occupy larger surfaces and their production is, according to volume, commensurately low. Wheat production in 2009 was around 2.90 t/ha, barley around 2.63 t/ha, oats around 3.59 t/ha, corn around 3.59 t/ha (Table 2).

Table 2: The average yield of single cultures in farming and gardening in B&H in 2009

Culture	t/ha
Wheat	2.90
Rye	2.32
Barley	2.63
Oats	2.04
Corn	3.59
Soybean	1.51
Potato	8.14
Beans	1.32
Clover	3.02
Alfa-alfa	3.53
Grass-clover mixtures	2.59

Source: Agency for Statistics of Bosnia and Herzegovina, 2009

Industrial crops occupy only around 2% of cultivated land in Bosnia and Herzegovina. The major industrial crop in Bosnia and Herzegovina is tobacco, which covers around 1/2 of total agricultural land under industrial cultures. The annual production of tobacco is around 10.000 tons. Tobacco is mostly grown in

Herzegovina. The brand name Herzegovinian tobacco is well-known. Apart from tobacco, the most important industrial crops that are grown in Bosnia and Herzegovina are: sugar beet, sunflower, rapeseed, hemp, and other. Industrial cultures, with an exemption of tobacco, are mostly grown in plain areas of the Northern Bosnia. (Maltić, 1996).

In Bosnia and Herzegovina, conditions for growing the various kinds of vegetables are very favourable. Because of significant climatic differences between single regions of Bosnia and Herzegovina, vegetables have almost continuous course of growth from early vegetables in the South Herzegovina up to the late autumn vegetables in plain and mountain areas inside the country. Vegetables occupy around 12.5% of total cultivated land in Bosnia and Herzegovina. Around 1/2 of surfaces under vegetables was sown by potato whose annual production is around 350.000 tons. The rest of land was shown by other vegetables: cabbage, kale, cauliflower, tomato, sweet pepper, borecole, onions and garlic, peas, beans and various sorts of lettuces.

Vegetable growing is influenced by natural-geographic factors, especially the climate, altitude and exposition of relief. Thus, potato, cabbage and onions are mostly grown in mountain areas. In valleys and plain areas late vegetables are mostly grown, and in South Herzegovina, apart from early vegetables, vegetables are grown during winter (cabbage, lettuce, spinach).

Bosnia and Herzegovina has favourable conditions for development of cattle breeding. Basically, two types of cattle breeding in Bosnia and Herzegovina are differentiated: free-range farming and indoor livestock farming. On spacious mountain pastures and meadows mountain cattle breeding, which has a seasonal character, is present. In mountain and Mediterranean areas of Bosnia and Herzegovina there are areas where cattle breeding have a long tradition and represents the main source of income for population. Such areas are: Humine, Kupreška visoravan, Bjelašnica, Vranica and Vlašić. Livestock number of Bosnia and Herzegovina is around 1.100.000 cows, around 1.700.000 sheep and around 210.000 horses. On agricultural surfaces from 1 to 3 ha agricultural production cannot be economically justified and commercial livestock production cannot be based on it.

Transition, respectively the processes of restructuring the economy and society in Bosnia and Herzegovina, as a whole, are developing very intensely, but also under significantly deteriorated and special conditions. By transition from the post-communist into a market economy, Bosnia and Herzegovina uses its significant natural-geographic and traffic advantages, as well as demographic ones. However, these processes are largely slowed down and deteriorated by the Balkans war crises. Due to economic and war crisis, as well as gradual restructuring from the planned into a market economy, the economy of Bosnia and Herzegovina has been suffering from anticipated problems in the recent years: decrease in volume of production, deteriorated export routes, increase in unemployment, low standard of living of citizens, and still insufficiently determined and rapid processes of privatisation (Butorac, 1999).

### 3 Conclusion

Decrease in absolute number of active agricultural population must reflect on change of agrarian economy, which has to adjust by its structure to conditions of increasingly lower application of labour force, increased introduction of mechanization and bigger, respectively more complex nutrition needs of the growing number of consumers of nonprimary sector. The changes reflect here on changes of type of agrarian economy and agrarian landscape and also in change of the forms and functions of settlements, primarily due to stronger penetration of the houses of more or less expressed urban type. Influence of urbanisation of the agrarian areas is even stronger expressed in cases when non-agricultural occupations are concentrated in agrarian areas. Today, it is quite frequent in Bosnia and Herzegovina, primarily due to accentuated tendency of decentralisation of industry into overpopulated and underdeveloped agrarian areas, mostly for improvement of their economic development. In such areas there is no separation of the place of living and work place; respectively there is no commuting, so that services necessary to non-agricultural population must be also established in them. These are, though, the additional factors of urbanisation of the agricultural regions. Herein are mentioned only some basic aspects of essentially much more complex transformation of agrarian areas. However, all of them are very different regionally, depending on differences of natural features and conditions of socio-economic development of single areas. The opportunities for agricultural production in Bosnia and Herzegovina, though, show that considerably larger quantities of food could be produced against the current production.

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