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Short communication

BULGARIAN STOCK BREEDING – STATUS AND PROBLEMS

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The paper presents analysis and evaluation of basic problems of Bulgarian stockbreeding and shows an opportunity for future development. During the last 20 years in the Republic of Bulgaria large changes were noticed in terms of the number of animals and productivity level as well. The current production structure in stockbreeding is highly dualistic with a few large individual producers and cooperatives on the one hand and a very large number of very small farms on the other**.** At present the small farms are the basic producers of animal products, although their production is not efficient, not competitive and is connected with large labor costs. This is confirmed by the data on the average number of animals in one farm. Special attention will be paid to the organizational problems of the milk stockbreeding in the family sector particularly of the small, medium and family farms which at this stage are the main milk producer in the country.

Key words: stockbreeding farms; production structures

БУГАРСКО СТОЧАРСТВО – СТАТУС И ПРОБЛЕМИ

Овој труд прикажува анализа и евалуација на основните проблеми во бугарското сточарство, како и можностите за иден развој. Во последните 20 години во Република Бугарија се забележани големи промени во однос на бројот на животните и нивото на продуктивност. Моменталната производна структура во сточарството е високо дуалистична, со неколку големи индивидуални производители и кооперанти, од една страна, и голем број многу мали фарми, од друга страна. Моментално малите фарми се основни производители на анимални производи, но нивното производство не е доволно и конкурентно и е поврзано со големи трошоци за трудот. Ова е потврдено од податоците за просечниот број животни на фарма. Особено внимание е посветено на организационите проблеми во млекопроизводството и сточарството во семејниот сектор, особено во малите, средните и семејните фарми, кои во оваа фаза се главни млекопроизводители во земјата.

Клучни зборови: сточарски фарми; производна структура

INTRODUCTION

The ongoing for more than 18 years changes in Bulgarian stockbreeding did not decrease the differences in the indicators compared to the EU countries. Moreover, compared to the end of 80-ies they are far behind this period.

The paper presents analysis and evaluation of basic problems of Bulgarian private stock-breeding in terms of quality requirements in EU and shows opportunity for future development.

Bulgarian stockbreeding after eighteen years reform

Agriculture in Bulgaria is a relatively more important branch in the national economy than in the other countries of Central and Eastern Europe. During the last twenty years the share of agriculture in the gross domestic product is between 9.3 % (2007) and 25.9% (1997). Data of Figure 1 show some of changes in General Domestic Product, employment and investment in the sector.

Employment in the branch constantly increases before 2000. If in 1990 in agriculture worked 17.9 % of the total active labor force, in 2000 this index was 26.2 % and in 2007 is 19.6 %. The share of employment in the private sector was 82%. The agriculture has played a buffer role in a generally deteriorating economic situation.

Regardless of the fact that privatization of the assets in agriculture completed in the period of 1995–1996, the size of the investments in the sec-

tor did not increase substantially. Their relative share in the structure of all investments was kept on a very low level.

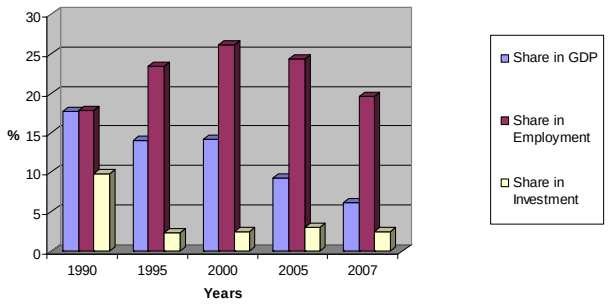

Fig. 1. Share of agriculture in nationl economy

In the structure of the produced agricultural production, the relative share of the animal husbandry is between 35% and 40% (Fig, 2). Even in un-favorable for crop production years its relative share is higher than the share of stock-breeding.

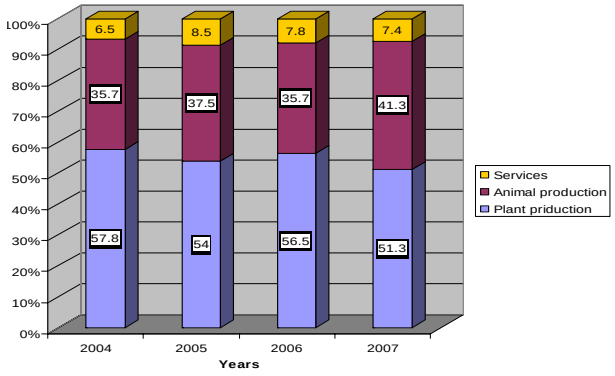

Fig. 2, Structure of agricultural production

During the last 20 years in the Republic of Bulgaria large changes were noticed in terms of number of animals and productivity level as well. During 2008 compared to 1990 the stock of cattle declined by 279 %, the stock of sheep – by 541 %, the stock of pig declined by 555 % and the stock of poultry – 207 % (Table 1).

The production of animal products such as milk, meat, wool and eggs, all declined. In 2007 meat was 23.5 % of the production in 1990, milk – 53.5 % and eggs – 61.3 %.

Despite the small increase of several indicators, the average productivity remains low. Data shows that it is 3527 per cow, 77.2 l per sheep and 184 eggs per hen.

These indicators convinced that if at the beginning of 90-ies Bulgarian agriculture lagged behind in terms of productivity in the milk cattle breeding by 70–80%, at the beginning of 21 century this lag behind the EU level is two times.

Table 1

Changes of stock of animals and production in Bulgarian stockbreeding

Number of stock and quantity of production	1990	1995	2000	2005	2008
Cattle	1577	638	682	601	565
Cows	617	371	484	364	330
Sheep	7988	3398	2549	1449	1475
Goats	433	833	1046	500	430
Pigs	4352	3398	1512	931	783
Poultry	36338	19126	14963	19669	17549
Meat (Th.tone)	901	535	572	227	212
Milk (Th.ton)	2385	1404	1656	1508	1277
Eggs(mln.)	2460	1955	1490	1543	1508

Fifteen years after the start of the reform, the private form of organization and structure has become of prime importance to the agronomy. Statistical data shows that the share of private farms in agricultural production increases.

There is a decrease in a number of all kinds of animals in our country. In 2008 there is a decreased with 20.7 % in the total number of cattle in comparison with 2000. The number of cows is decreased with 46.7 %.For the sheep the decrease is in the range of 72 % and for the goats – 2.4 times. The pigs decrease with about 93 %. Last years the number of poultry in the country is relatively constant. In comparison with 2003 only the number of poultry has increased.

In 2005 in our country 1 508 069 tons of milk are produced and two years later – 1 277 384 tons of milk. The cow milk covers 86.9 %, goat milk 5.8 % and sheep milk 6.7 %.

The current agricultural, production structure is highly dualistic with a few large individual producers on the one hand and a very large number of very small farms on the other**.**

Bulgaria faces difficulties in defining the exact number and the size of the agricultural farms which breed animals.

In 2008 the highest number of agricultural holdings is for breeding poultry, pigs and sheep,

and the lowest is the number of holdings for breeding buffalos (Table 2).

Table 2

Number of holdings breeding animals

Year	2003	2005	2008	Changes,%
Cattle	211.9	167.2	121.5	57.34
Cows	194. 7	153.6	107.6	55.26
Buffalos	2.4	1.8	1.1	45.83
Equidae	254.2	150.3	127.7	50.24
Goats	269.0	163.1	138.6	51.52
Sheeps	237.7	176.2	133.9	56.33
Pigs	278.8	190.8	127.7	45.8
Poultry	494.3	380.7	304.5	61.6

There is a trend in decrease of number of holdings and in 2008 mostly half of them ceased the breeding of animals in comparison to 2003. There is a significant decrease in the number of holdings, breeding goats, equidae, cattle, cows, buffalos and poultry.

Animals are grown in 19% of the agricultural cooperatives which at the same time produce different crops as well. The largest part of cooperatives – 260 (13.05%) develop cattle breeding, followed by sheep-breeding (4.97%). In the cooperatives only 4.56% of cows, 5.1 % of buffalos, 1.45 % of sheep, 1.38 % of pigs and others are bred.

Moreover, the size of the bred herds is small for collective organizational structures. The average number of animals in one cooperative is 134 for buffalos, 70 for milking cows, 240 for sheep, 248 for pigs. These numbers are comparable with the animal number in the family holdings in several EU countries. Only in the cooperatives crop production and animal breeding are combined which is a traditional decision in the sector for improvement of the financial management and economic results of animal production.

Only 1% of agricultural cooperatives are narrow specialized in animal breeding and do not produce their own fodder.

At present the small farms are the basic producers of animal products, although their production is not efficient, not competitive and is connected with large labor costs. This is confirmed by the data on the average number of animals in one farm.

The stockbreeding in the small private farms is without clearly defined specialization. They produce together milk and fattened calves, sheep for milk, meat and wool.

There is increase of the average number in grazing livestock, breeding in holdings, which have better produce and quality indexes of production.

In comparison with data from the Census of agricultural holdings (2003) the average size of the herd of milk cows increased with more 63 %, of sheep – 35.3 %, of cattle – 43.75 %. There is a decreased of the average size of herd in buffalos and goats.

Table 3

Average number stocks and their change in comparison with 2003

Kind of stock	Average number in one holding			Change in 2008 in comparison with 2003 (%)
	2003	2005	2008	
Cattle	3.2	3.6	4.6	43.75
Milk cows	1.9	2.3	3.1	63.15
Buffalos	3.6	4.4	2.2	– 39
Sheep	6.8	8.2	9.2	35.3
Goats	3.2	3.1	3.1	– 3.2
Pigs	4.6	4.9	6.1	32.6
Poultry	44	52	–	–

Despite this a considerable part of animals is bred in small agricultural holdings yet. In 2008 – 57 % of the cows were bred in farms with up to 9 cows. A positive change is that only for one year the decrease in the number of small size farms and with a small number of animals diminished with 13–15 % (Table 4). At the same time there is an increase in the number of animals bred in large farms. In farms with more than 20 cows 31.5 % of animals are bred.

From 107 thousands of holdings which breed cows, only 2200 meet the requirements to be included in the first category and have the opportunity to receive subsidies for high quality milk (Table 5).

Substantial differences are noticed in the number of cows and the agricultural holdings which breed them per regions of the country. In practice milk production is concentrated in two of

the regions for planning – South Central and North East. Data from Table 5 for the registered producers from the first category farms allows to draw the conclusion that there are great differences in the number of bred animals in the farms. They are more significant regarding the maximum number of animals. The largest producers breed over 800 cows. Such holdings are located in the Plovdiv area from the South Central region.

Table 4

Distribution of bred cows per size of agricultural holdings

Number of animals and agricultural holdings	Number of agricultural holdings	Change in comparison with 2007	Number of cows	Change in comparison with 2007
1–2	84.1	– 13.8	105.4	– 13.1
3–9	16.7	– 14.8	73.2	– 13.5
10–19	2.8	– 8.5	37.1	– 6.8
20	2.1	9.4	99.0	9.8
All	105.7	– 13.4	314.7	– 6.3

Table 5

Distribution and limits of size of agricultural producers from the first category of milk farms

Regions of planning	Number of agric holdings	Min. number of stock per farm	Max. number of stock per farm	Number of coope-ratives
North Western region	121	7	502	3
North Central region	336	6	237	20
North Eastern region	619	5	301	21
South Eastern region	304	7	591	10
South Central region	793	8	868	15
South Western region	102	7	254	0
Bulgaria	2275	5	868	69

The number of cooperatives whose animal farms received a registration of meeting the hygienic conditions for the first category of farms is considerably small. In the whole country there were only 69 holdings of the above mentioned type for 2009.

The problems of functioning of Bulgarian stockbreeding farms

The main factor defining the development of animal husbandry sub-sectors is the level of producers' price. For the monitored period their increase does not reach a level which is enough to motivate producers. This is particularly obvious for pig-breeding and poultry-breeding. Moreover, the retail prices of the meat are more than two times higher and decrease the demand which influences negatively on the increase of the number of animals in main herds.

Another limiting factor on the stock-breeding development is the market realization of the produced production which is low and makes clear the semi-subsistence character of production. Among the factors which influence highly the development of pig-breeding and poultry-breeding is the price of combined fodders used by them (which take up to 80% of the cost price of end-production). Despite the negative influence of these factors on the development of animal's husbandry sub-sectors, the short-term expectations are for stabilization of the pig-breeding sub-sector.

In the milk sector the cow milk quotas limit the increase in the number of animals. The expectations are that with improvement of the technologies and the increase of the farm size the average productivity will increase. The implemented measures for improving the product quality will help to increase the competitiveness of the sector. In the sheep cheese production, the increase in production will come from the increase in the sheep productivity and enhancement of the bred type and feeding animals.

The reasons for this status are:

– Liquidation of the agricultural structures, when parts of the animals were sold and the rest were given in the form of share capital to the owners of the agricultural land.

– The small size of farms is a reason for serious infringement of the technological requirements of feeding and breeding animals.

– Differentiated feeding and breeding during the productive and reproductive periods according to animal's productivity are not applied.

– Deteriorated quality of animal products due to lack of suitable conditions for storing the production. The lower quality led to decrease in com-

petitiveness and loss of markets for milk-processors.

– Decrease in the internal consumptions of animals products.

– Problems aroused during the preparatory stage of Bulgarian agriculture for the EU accession particularly serious for milk farms. The envisaged help of animal farms under CAP is linked with meeting certain standards, preservation of environment, food safety, healthy status of animals and human care of them. The EC defined 18 standards as criteria for receiving direct payments. Meeting these requirements is linked with several problems for harmonization of Bulgarian legislation with those of the EU. Mainly the problems are linked with meeting the quality criteria of purchased cow milk and the hygienic conditions of the breeding farms. Another problem is to build stable and sustainable organization of agricultural structures, the implementation of organization of producers. The purpose is during the initial period after our EU accession to support the semi-subsistence farms in their restructuring and orientation towards market requirements. Small farms which now breed 1–2 cows (90 % of the holdings in the country) should continue to strengthen their market positions and meet the technological and hygienic requirements. In this direction they are relied heavily on their participation in organizations of producers, which in practice are an element of the common organization of animal production markets and according to their character they are marketing organizations.

The development of milk stock-breeding is influenced by the endorsed milk quotas which control the quantity of the produced and sold milk in the EU. The implementation of the quota principle is based on information about produced and purchased milk during the previous year. On the basis of this information the milk quotas are distributed per farms which meet the hygienic and other requirements.

From the implementation of this practice the producers are forced to implement mainly simple reproduction of herds and to have difficulties to meet the requirements for farm modernization and restructuring of business activity. This fact makes clear the necessity farms to be united in organizations of producers and to cooperate for doing joint activities.

The organizational strengthening of the milk producers will be supported by the aids, which farmers receive under the form of payment for a single area, although they are implemented only for milk producers who have agricultural land – own or leased.

The small farm size does not give an opportunity for introduction of new and high technologies, for producing quality milk, for secure feeding. In the small farms prevails the individual work or work in small groups. The big farms apply technological division of workers by functions and professions. This makes difficulties for owners of small agricultural holdings, who produce milk. They can not secure a lot of production, because of missing milk installations and refrigeratory tubs. In this way they can not cover the criteria for admissible content of microorganisms in the milk. Insurance of necessary technologies helps them to guarantee the milk quality when the production is transported to dairy. At the present moment European requirements for milk are too hard for a significant part from Bulgarian milk producers. The veto for milk's buy up, which doesn't reply to the European requirements, will have serious influence on many people's life standard in the villages.

The NGO and the big companies play a significant role in the propaganda and provision of help to the producers to improve the hygienic conditions of production. For instance, DANON stimulates the agricultural producers with a higher number of animals to be equipped with refrigerating tanks by giving them a credit paid off by the produced milk. Other companies (such as Alfa Laval Agri, Westfalis0Bulgaria Ltd.) publish leaflets for hygiene and quality requirements to the technologies and products (Essential Milk Book, new concept in the milk technology, and others).

MAIN CONCLUSIONS AND SUGGESTIONS

The number of stocks and the quantity of milk were slightly decreased during the surveyed period. This fact is due mainly to the improvement of animal productivity and to enhanced breeding and feeding.

The analysis of the conditions of different sub-sectors shows that they should rapidly adapt to CAP common requirements mainly regarding production quality, environmental preservation and meeting the human attitude towards animals.

A full technological modernization of productive base, implementation of large scope selection activity and securing good health to animals are necessary for solving the existing problems.

It is necessary to support the family farms and to restructure them in order to increase the extent of their market degree. A guarantee for this is the implementation of a policy for supporting the sector mainly via the second pillar of CAP which will increase the competitiveness (measures for modernization of semi-subsistence farms and of young farmers) and environmental preservation, as well as the entry of our country in the Common Market with the trend for equalizing the price and conquering new market niches.

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