

PRESENT STATE AND PROSPECTS FOR ANIMAL HUSBANDRY DEVELOPMENT IN THE REPUBLIC OF BULGARIA**

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**Plenary invited paper

Abstract: The report contains analysis on the present state, and perspectives for the development of Bulgarian animal husbandry on the eve of the integration with European union.

During the period 1990-2000 the animal husbandry in Bulgaria fell into a deep crisis. After this period Bulgarian animal husbandry showed a stable trend for survival.

The integration of Bulgaria with EU outlines good perspectives for the development of sheep, goat and beef cattle breeding.

Another promising direction is the production of ecologically clean animal products.

The development of Bulgarian animal husbandry will depend to a great extent on the reinstatement of the lost Bulgarian markets in Russia, in the countries from the former USSR (Union of the soviet socialistic republics) and in the Arab countries by offering specific Bulgarian animal products.

Key words: animal husbandry, development, Bulgaria.

Bulgarian agriculture has been in a deep depression during the last 16 years. The depression affected seriously the state of our animal husbandry which is demonstrated by the current number of farm animals (table 1).

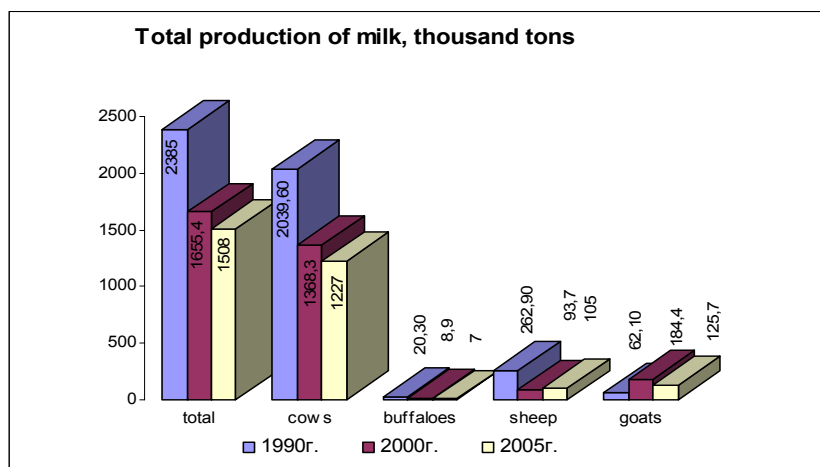
This table shows a drastic reduction of number of animals through the period 1990-2000. The reduction is more emphasized in number of pigs and sheep. Similar trend is observed also in number of cattle and buffaloes.

The number of goats unlike that of the other animal species shows a steady trend towards enhancement during the observed period due to the fact that they are not fastidious to the conditions of feeding and breeding which makes them the most preferred animal kind for many poor families.

Table 1. Number of farm animals and poultry (thousand)

№	Animal species and categories	Years			Change 2005- %	
		1990	2000	2005	1990	2000
1.	Cattle-total	1575,1	681,7	633,2	-249	-7,6
	including dairy cows	605,9	431	345,5	-175	-24,5
2.	Buffaloes-total	23	9,3	9,1	-253	-2,1
	including buffalo cows	11,2	5,9	4,8	-233	-2,9
3.	Sheep-total	8130,3	2549	2073,6	-392	-22,9
	including ewes	5007	1947,3	1336,2	-376	-46,4
4.	Goats-total	432,9	1046,3	1079,8	+60	+3,1
	including She goats	366,5	846,8	507,5	+27,8	-66,7
5.	Pigs-total	4331,6	1512,3	816,3	-53,6	-85,3
	including sows	380,5	171,4	79,4	-479	-115,9
6.	Poultry-total	36338,8	15007	19500	-186	+23,0
	including laying hens.	24250	8304	9,549	-253	+13,0

Following the year 2000 the decline of number of animals goes at a slower rate. During this period poultry is the only animal species that shows around 23% increase. The observed decline of number of animals is accompanied by a decrease of the animal products output.

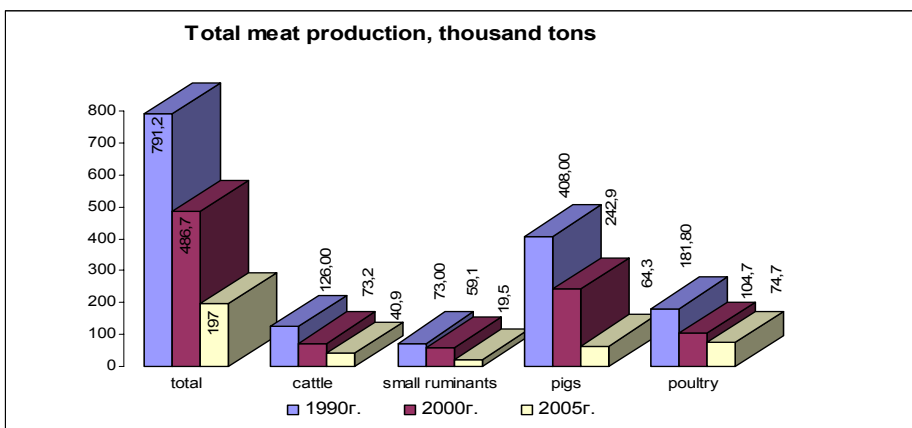


The quantity of cow's milk in 1990 was 2039.6 thousand tons and in 2000 it fell off to 1368.3 thousand tons, which represents around 56.2%. Similar trends have been observed in the production of sheep and buffalo milk, where the rates of decline is 56.2% and 70.4%, respectively. Goat milk production unlike the milk of the other species doubles during this period.

Following the year 2000 the reduction of milk production is not so sharp as it is in the previous years. The rate of cow's milk reduction is 4.8%, whereas sheep milk production shows clear signs of enhancement by 18.2%. Goat milk production during this period decreases due to decreased number of the goats.

Meat production after 1990 declines sharply (Figure 2). Meat production in 2000 goes down by 75.1% relative to 1990.

Figure 2. Meat production 1990.-2000.-2005.



The most pronounced decline (by 84.2%) is observed in the production of pig meat. Following the year 2000 meat production tends towards further decline. The decline of meat yield in pigs and small ruminants is more than 2-3 times.

Being an exporter of meat and meat products before 1990, Bulgaria has been transformed into an importer of these products after 1990. According to Bulgarian Customs Agency in 2005 Bulgaria has imported 105 thousand tons of meat, often of poor quality and doubtful origin. Besides, the mean productivity declined along with the reduction of the total output of animal products.

The mean productivity of different farm animal species is shown in table 2. The data in this table reveal that the mean productivity through the period 1990-2000 declines in almost all animals, except for the goats productivity, which is increased by 37.8%. There is a trend towards a slight elevation of the mean productivity of the different farm animal species after the year 2000. The mean productivity in the EU countries increases appreciably throughout the same period.

Table 2. Average productivity

Indices	Years			Change 2004- %	
	1990	2000	2004	1990	2000
Average milk yield, L					
Cows	3367	3154	3541	4,9	10,9
Under control	4311	4330	4360	1,1	0,7
Buffalo cows	1725	1518	1557	-10,8	2,5
Under control	1930	1720	1976	-2,3	12,9
Ewes	51	48			
Under control	185	160	197	6,1	18,8
She goats	158	218	217	27,2	
Under control	280	430	451	37,8	4,6
Average laying capacity	170	184	186	8,6	7,5

* The share of the monitored cows in 1990 is 23% and in 2004 is 8.5%.

The data in table 3 show the average milk yield of dairy cows in 2000 and 2004.

The data in the table reveal that the average milk yield in the EU countries is 5710 liters in 2000 and 6078 liters in 2004, whereas in Bulgaria these values are 3154 and 3541 liters respectively or by 43.2% lower.

Similar differences in the average milk yield exist between Bulgaria and the former socialist countries (Czech Republic, Hungary and Slovakia) in spite of the fact that in the early nineties of the last century the average milk yield in Bulgaria is comparable with those in these countries.

The main factors are as follows:

- Incorrect fulfillment of the agrarian reform after 1990.
- Low productivity and competitiveness of the Bulgarian animal husbandry at that time.
- Limited foreign markets, reduced purchasing capacity of the Bulgarian population.
- Low quality of the animal products.
- Withdrawal of the state as a main supporter of the animal husbandry.

Table3. Average milk yield of dairy cows in the EU countries

Country	Years	
	2000	2004
Austria	5215	5632
England	6066	6665
Bulgaria	3154	3541
Germany	6213	6583
Greece	4725	4529
Denmark	7610	8442
Estonia	4658	5528
Italy	5200	5735
Ireland	4119	4759
Spain	4964	5640
Latvia	4003	4261
Luxembourg	5991	6380
Poland	3680	4071
Portuguese	5787	6452
Slovakia	4627	5236
France	5496	5948
Finland	6900	7600
Netherlands	7296	7415
Czech republic	5413	6200
Sweden	7829	8107
Total for EU-15	5865	6350
Total for EU-25	5710	6087

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What are the reasons for the unenviable state of the Bulgarian animal husbandry?

The main factors are as follows:

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- Low productivity and competitiveness of the Bulgarian animal husbandry at that time.
- Limited foreign markets, reduced purchasing capacity of the Bulgarian population.
- Low quality of the animal products.
- Withdrawal of the state as a main supporter of the animal husbandry.

Before 1990 up to 90 % of the land was within the cooperative farms and was managed by agro-industrial complexes. According to a law, passed in 1990, the land had to be restored to the former land owners within real borders. The implementation of this law was accompanied with establishment of liquidation counsels. The main purpose of these counsels was to destroy the production structures of the agro-industrial complexes.

Land was returned back to its owners within real borders regardless of the owners desire and their capacity to cultivate it. Based on data, presented by the Ministry of Agriculture and Forests, the total number of land owners in 2005 amounts to 7.6 million. Around 73.3% of the land holders own small tracts of land (up to 1 hectare) and only 0.1% of the land holders own more than 1000 hectares of land. The total number of the farmers in Bulgaria amounts to 665500 in 2003 and 534600 in 2005 with average arable land 4.4 and 5.2 hectares respectively, whereas in Austria, Netherlands and Denmark the average arable land per farm is around 20 hectares.

This fragmentation of the Bulgarian agriculture diminished its effectiveness because of the transition towards extensive agricultural production. As a result of that the average yield of all agricultural crops declined. It is enough to mention that the grain production declined from 8.2 million tons in 1990 to 7.4 million tons in 2004. The average grain yield

declines from 4200kg per hectare in 1990 to 3200 kg per hectare in 2004.

Besides, due to lots of reasons, many land owners refused to cultivate the land. Around 40% of the arable land became deserted in spite of the excellent climatic conditions for development of agriculture and animal husbandry in Bulgaria.

The agricultural reform had a serious repercussion on the development of the Bulgarian animal husbandry as well. All animals within the agro-industrial complexes were distributed among the owners as a joint stock capital. Most of them had neither desire nor conditions to set about farming. As a result of these circumstances most of the animals were slaughtered. The rest of the animals were raised in small, primitive and inefficient farms. Table 4 shows the distribution of dairy cows according to the dairy farms size.

Table 4. Distribution of the dairy cows according to the size of dairy farms

Animals number per farm	Dairy farms number, years				Change ,%
	2000	%	2005	%	
1-2	211 778	95,77	125733	83,1	-68,4
3-9	8 979	4,06	21363	14,1	+42,0
10-19	269	0,12	2695	1,8	+10
over 20	115	0,05	1,539	1,0	+8,5
total	221 142	100	151330	100	

The data in the table reveal that in 2000 95.8% of the dairy farms comprise one or two cows per farm, whereas the dairy farms comprising more than 20 cows per farm is barely 0.05%. A trend towards dairy farms enlargement is observed in 2005. During this period the number of dairy farms comprising more than 20 cows increases appreciably.

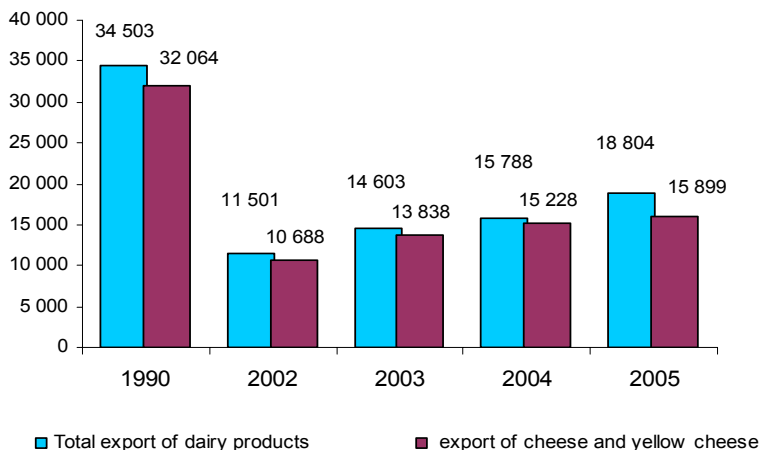
Similar trend exists in the field of sheep breeding (table 5) where approximately 88.1% of the sheep farms in the year 2000 comprise 1 to 9 ewes and only 0.11% of the farms comprise more than 100 sheep. The number of sheep farms comprising more than 50 ewes increases in the year 2000.

Table 5. Sheep distribution according to the number of animals per farm

Animals per farm	Dairy farms number, years				Change ,%
	2000	%	2005	%	
1-9	428 789	88,11	155779	85,9	-27,5
10-19	43 236	8,89	14062	3,7	-307
20-49	12 231	2,51	7342	4,1	-166
50-99	1 831	0,38	2711	1,5	+66
over 100	540	0,11	1348	0,8	+40
total	486 627	100	181242	100	

The processes of privatization took place in the field of poultry and pig breeding as well, but the production structures in these fields were preserved.

The small size of the animal farms inflicted serious technological disturbances in the process of animal breeding. The level of feeding of all kinds and categories of animals has worsened .

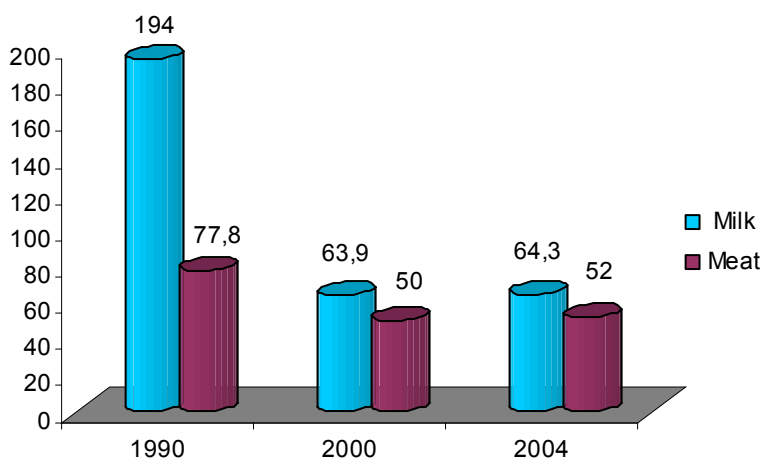
Figure 3. Export of dairy products, including cheese and yellow cheese during the period 1990-2005.

The veterinary services and animal selection were badly affected as well. As a result of the aggravated hygienic conditions around 80% of the produced milk does not meet the European quality standards.

Besides most of the milk manufacturing factories do not meet the EU requirements either. Only 22 out of 345 milk manufacturing factories are licensed to export their milk products to EU countries, and 41 factories are allowed to export their products to third countries. The rest 271 milk manufacturing factories sell their products on the home market. Due to the above mentioned reasons the export of milk and dairy products declined significantly between 1990 and 2002, followed by a slow elevation from that point on. The dynamics of the export of dairy products is illustrated in figure 3.

The level of export in 2002 has declined almost 3 times as compared to that in 1990. Similar trends have been observed in the export of meat and meat products. The standard of living of the Bulgarian citizens fell sharply after 1990 because of the deteriorated economic conditions. Furthermore, the lower standard of living affected the level of animal products consumption (figure 4).

Figure 4. Milk and meat consumption per capita of the population



The data in figure 4 demonstrate that in 2000 the level of milk consumption in Bulgaria per capita of the population has declined

approximately 3 times and the meat consumption is reduced by 55% as compared to 1990. The levels of milk and meat consumption from that time on shows a trend towards gradual increase. The consumption of animal products is far beyond the nutritional requirements for rational feeding.

The lowered purchasing capacity had a negative effect on the animal husbandry development, and the last but not least negative factor was the withdrawal of the Bulgarian state from its financial support for the animal husbandry development.

During the period 1990-2000 the Bulgarian animal husbandry has been left to itself, without any subsidy.

Table 6. Purposeful subsidies allotted for the animal husbandry in 2005

Animal species	Subsidies,€/head
1. For animal feeding	
cows	35-50
bulls	50-75
buffaloes	45
ewes and rams	15-18
goats	15
mares	75
stallions	85
bee families	9
rabbits	5
poultry	5
2 For import	
heifers	400
two teeth hoggets	100
3. For milk quality, euro/ton	35-50
4. For export, euro/ton	
cheese and yellow cheese	125-175
lamb meat	400
poultry meat	200
egg	200

The first stimuli for the animal husbandry development have appeared after this period through the state funds Agriculture and SAPARD. State fund Agriculture grants interest free loans mainly to farmers who raise animals for breeding. Besides, subsidies have been provided for export of animal products, establishment of farms and etc.

The data in table 6 illustrate that the rate of the subsidies for meat amounts to 15-18 euro per head for sheep and goat breeding and 35-50 EUR per head for breeding of cows.

The subsidies for import of sheep and heifers from the EU countries amount to 100 and 400 euro per head respectively. Subsidies have also been envisaged for export of cheese, yellow cheese, lamb meat, poultry meat and eggs, within the range of 125-400 EUR per ton.

The SAPARD program covers 50% of the expenses made by the farmers for building of animal farms and processing factories. However the requirements of this program are very high and the big farmers only are able to make use of it.

According to a concluded agreement between Bulgaria and the European union, Bulgaria expects to receive 1.552 milliard EUR during the period 2007-2009, meant for boosting of the Bulgarian agriculture. This agreement provides for the following distribution of the subsidies:

- direct payments-431 million EUR
- market support-388 million EUR
- development of the rural areas –388 million EUR

Bulgaria will have a right for extra payment through the national budget which amounts to 55% in 2007; 60% in 2008 and 65 in 2009 from the direct payments in the European community.

The direct payments will be distributed according to the workable land. The smallest size of the land that is liable to subsidy ranges between 0.5 and 1.0 hectares for perennial plants, vegetables and tobacco respectively. For the rest of the crops the land liable to subsidies must not be less than 1 hectare. The foreseen subsidy is 75 EUR per hectare, and it will be increased gradually starting from 25% in 2006 and reaching to the highest level in 2016, when the subsidy is expected to be equal to that in the EU countries.

The shortcomings of this system is that many of the farmers who raise animals do not have any land and will not get financial support. Probably many of them will either go bankrupt or will not be able to compete on the European market. Another flaw of this system of assistance is that it does not allow stimulation of those branches that have a niche at the European

market. This refers to sheep and goat products. Presently there exist 60% shortage of these products in the European countries. Similar market niche have a bearing on the raising of meat breeds.

This assistance should be conducted through the National budget, but presently its capacity is limited. The adoption of subsidies will depend on the fulfillment of the high criteria laid down by the European community concerning such matters like food safety, ecology and humane treatment of the animals. Many of the farmers will not be able to meet these requirements. Besides, the farmers find it difficult to elaborate a proper project.

Because of the of the lower efficiency of animal husbandry during the last 6 years, Bulgaria was granted smaller quotas as compared to the rest countries (Czech Republic, Slovakia, Hungary). Bulgarian milk quota is 999 thousand tons of which 722 thousand tons for processing and 257 thousand tons for direct selling. Sheep and goat breeding quota amounts to 2.100 million heads. It is obvious that the obtained quotas do not correspond to the productive possibilities of the Bulgarian animal husbandry.

We should look for alternative perspectives concerning the development of Bulgarian agriculture like export of specific animal products to Russia and the former member countries of the USSR and Arab countries.

Bulgaria has lost its market positions in these countries due to the conjuncture at the beginning of the transition period to market economy. The restoration of the lost market positions requires urgent interference on the part of the Bulgarian state.

Conclusions

- During the period 1990-2000 Bulgarian animal husbandry fell in to a deep crisis, followed by a trend towards revival. The animal husbandry needs an urgent assistance on the part of the Bulgarian state.
- The Bulgarian animal husbandry development within the EU promises to be perspective in the field of sheep breeding, goats breeding, buffaloes breeding, breeding of meat producing cattle and production of high quality animal products through expansion of the organic farming.
- The restoration of the lost foreign market especially in Russia, the former countries of USSR and the Arab countries, by export of

specific Bulgarian animal products can not be realized without the urgent interference of the Bulgarian state.

STANJE I MOGUĆNOSTI RAZVOJA STOČARSTVA U REPUBLICI BUGARSKOJ

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Rezime

U radu je analizirano postojeće stanje i mogućnosti razvoja stočarstva u Bugarskoj uoči integracije sa Evropskom Unijom.

Tokom perioda od 1990-2000. godine, stočarstvo u Bugarskoj je upalo je duboku krizu. Nakon ovog perioda stočarstvo u Bugarskoj pokazuje stabilan trend oporavka.

Integracija Bugarske u EU daje dobre perspective za razvoj ovčarstva, kozarstva i govedarstva.

Još jedan obećavajući pravac je proizvodnja ekološki čistih životinjskih proizvoda.

Razvoj stočarstva u Bugarskoj će u velikoj meri zavistiti od ponovnog uspostavljanja izgubljenih tržišta za bugarske animalne proizvode u Rusiji, zemljama bivšeg SSSR-a i arapskim zemljama.

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