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TENDENCIES IN MEAT PRODUCTION IN THE REPUBLIC OF BELARUS

Abstract. Stockbreeding is a fast growing branch of agriculture. But in modern economic conditions Republic of Belarus has many problems with it. On the contrary the countries of Europe achieved big results in meat production. In most of them branch is export oriented. The authors analyze situation in meat production in the Republic of Belarus and give their opinion thereupon. The present conditions are unfavourable and the volume of meat production is falling. It is necessary for the government to assist meat producers.

Key words: meat, production, meat products, stockbreeding, efficiency, pig breeding, pork, farms, Belarus

Introduction

Stockbreeding is the basic branch of agriculture in Belarus. But from 1990 to 2004 there were significant changes. The production of meat falls from 1181 to 630 thousand tons. The current tendency is that pork production is growing while beef and poultry production is falling. That is why it is very important to analyze modern trends of meat production in Belarus [Rudenko 2004, Shpak & Pestis 2004].

Material and methods

We studied all kinds of meat production in different agricultural enterprises. We have analyzed statistical information about meat production and stockbreeding in Belarus and compared it with different countries.

Results of research

In the years of astounding growth of the meat market in 1990 domestic production of meat and meat products in the Republic of Belarus amounted to 1181 thousand tons and import only 15 thousand tons. At the same time individual consumption amounted to 773 thousand tons and export was 348 thousand tons. Subsequently, there was a small increase in output, and then

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decline to 598 thousand tons in 2000. At present (2004) meat production amounts to 630 thousand tons or half the level of 1990 [Rudenko 2005].

The same negative situation can be seen in foreign trade. As it was mentioned above, in 1990 year net export was 333 thousand tons. Subsequently meat export had a sharp decline and import began to grow. Minimum export was 15 thousand tons in 1996. That year import exceeded 4 thousand tons for the first time. In 2004 meat export amounted to 120 thousand tons.

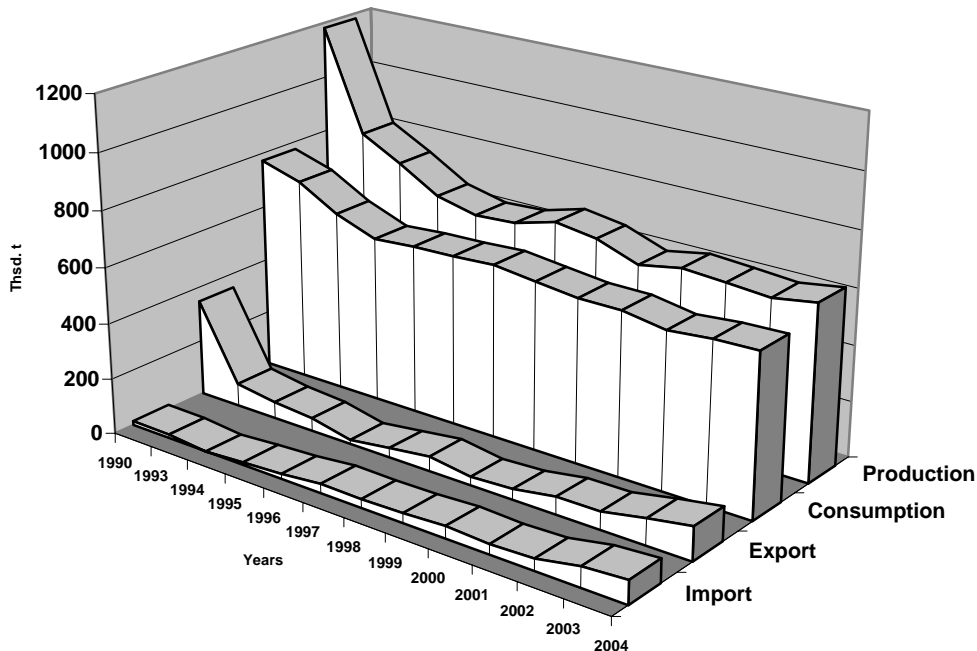


Fig. 1. Changes in the volume of the meat market in the Republic of Belarus, 1990-2004

Source: [Rudenko 2005]

The main reason for decline in meat production is the decrease in the livestock head number. From 1990 to 2002 the number of cattle head decreased from 6975 thousand to 4005 thousand or by 42%; number of pigs head from 5051 thousand to 3329 thousand or by 34%; poultry from 50.6 million to 25.1 million or by 50.4%; sheep from 404 thousand to 73 thousand or by 81.9%. It can be seen that the greatest stock decline was in sheep and cattle breeding. Only in 2003 and 2004 the stock decline in pig and poultry breeding was stopped. The same situation can be seen in the cattle stock density per 100 hectares of farmlands. During this period the cattle stock density decreased from 71 to 46 pig stock density from 63 to 48. The number of cattle head per 100 hectares decreased in all agricultural enterprises from 72 to 49, which is 68% of the 1990 level.

The main meat producers in the republic are state agricultural enterprises. But nowadays their share is decreasing. In 1990 they produced 1011 thousand tons in slaughter weight which amounted to 85.6% of the total, in 1995 only 73.9%. Subsequently their share remained on the same level. In 2004 they produced 455 thousand tons of meat which amounted to 73.7% of the total.

At the same time there was a decline in meat production per capita. In 1990 it amounted to 116 kg, in 2004 to 64 kg (table 1).

Table 1. Production of meat per capita (slaughter weight, kg/year)

| Country | Year | | | | | | |
|-----------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 1990 | 1995 | 2000 | 2001 | 2002 | 2003 | 2004 |
| Former USSR countries | | | | | | | |
| Belarus | 116 | 64 | 60 | 63 | 62 | 61 | 64 |
| Estonia | 116 | 47 | 39 | 42 | 50 | 50 | 52 |
| Kazakhstan | 93 | 62 | 42 | 44 | 45 | 47 | 49 |
| Lithuania | 143 | 57 | 53 | 43 | 50 | 57 | 64 |
| Russia | 68 | 39 | 30 | 31 | 33 | 34 | 35 |
| Ukraine | 84 | 45 | 34 | 31 | 34 | 36 | 34 |
| Rest of the world | | | | | | | |
| Belgium | 129 | 166 | 169 | 173 | 177 | 169 | 169 |
| Czech Republic | 103 | 90 | 76 | 78 | 77 | 75 | 73 |
| Denmark | 301 | 355 | 373 | 392 | 399 | 394 | 395 |
| France | 101 | 109 | 110 | 110 | 109 | 107 | 104 |
| Germany | 91 | 71 | 76 | 79 | 79 | 80 | 82 |
| Hungary | 155 | 102 | 117 | 111 | 123 | 122 | 114 |
| Poland | 77 | 71 | 75 | 75 | 81 | 89 | 85 |
| Spain | 88 | 100 | 120 | 124 | 126 | 133 | 135 |
| Whole World | 34 | 36 | 39 | 39 | 40 | 40 | 41 |

Source: [Belarus 2005, p. 192-193]

Different situation prevails in the countries of Europe. In Europe meat is a traditional foodstuff. The leader among the countries of EU is Denmark. It produces 395 kg of meat per capita (table 1). First of all it proves that the branch is export oriented. The high level of manufacture and consumption of meat in Denmark is achieved mainly due to the intensification of the branch which is connected with the proceeding concentration of production.

The first place in gross output of meat among the countries of EU is taken by Germany (6798 thousand tons annually), the second place by France (6313 thousand tons) and the third by Spain (5564 thousand tons). All these countries are characterized by an intensive production of meat of 91-135 kg per capita.

The East European countries are on the contrary characterized by a recession in meat production. So the meat production in Russia from 1990 to 2004 was half cut, in Ukraine by more than 64%. The level of meat production per capita is low. So there is a need to import meat.

Poland is the unique country that managed to keep the potential of the branch and to become the leader in the production of meat among the East European countries. From 1990 to 2004 it could increase production by 10.7%, from 2965 thousand up to 3283 thousand tons per annum, with constantly growing intensity of production.

In connection with the above mentioned tendencies the contribution of some branches of livestock breeding to the gross production of meat has changed (Fig. 2).

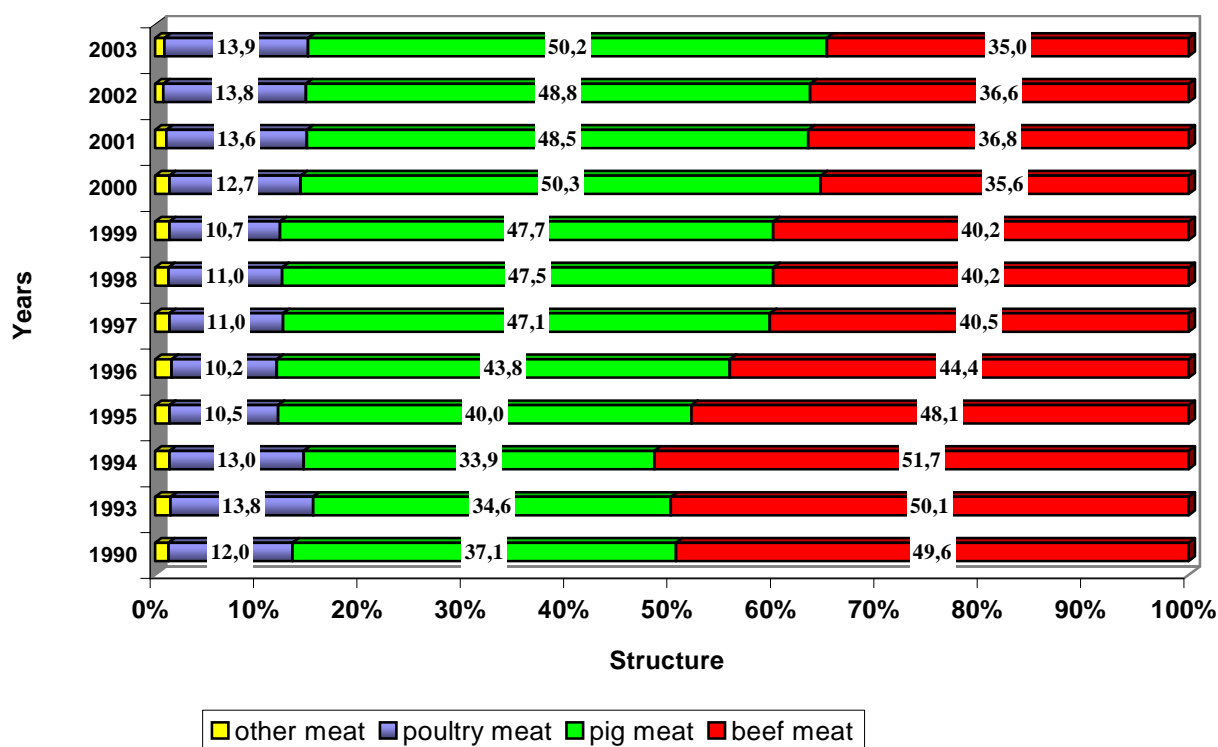


Fig 2. Changes in meat production structure in the Republic of Belarus 1990-2003
Source: [Selskoe... 2005].

Today in Belarus the basic share of meat and meat products comes from pig breeding. Its contribution has increased from 37.1% in 1990 up to 50.2% in 2003. The share of poultry meat has increased from 12% up to 13.9%. The share of beef meat has decreased from 49.6% down to 35.0%. It was a result of price increase for beef meat and an increase of cattle diseases.

As a whole pig breeding is developing very intensively in the countries of the EU and takes a significant place in the total meat production. Slaughter weight increase is predicted by

the leading producers (Germany, Spain, France, Denmark) and also Italy, Finland and Sweden. On the whole the prices for pork in 2003 went down under the influence of a high level of production and a decrease of demand [Rudenko & Rudenko 2005].

In this connection it is important to analyze modern conditions and prospects of pig breeding in Byelorussia.

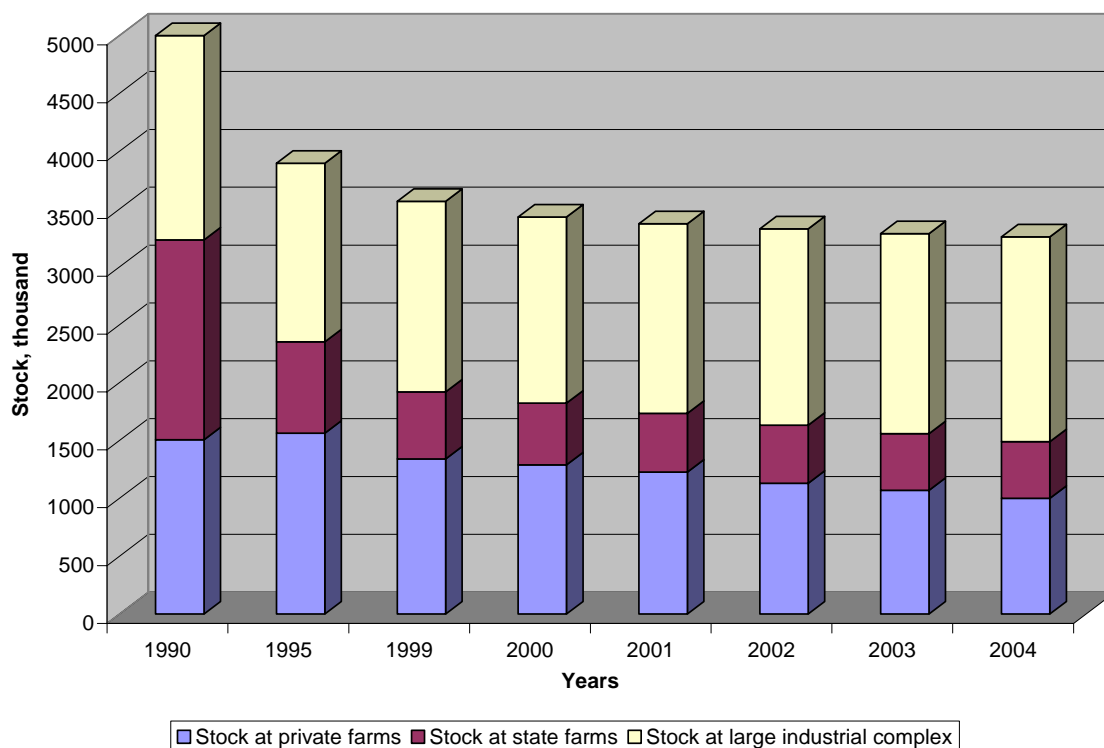


Fig. 3. Number of heads in the pig stock in the Republic of Belarus 1990-2004
 Source: [Selskoe... 2005].

From 1990 to 2004, the stock of pigs was constantly decreasing from 5051 thousand heads to 3407 thousand heads or by 32.5% [Shpak & Pestis 2005]. Rates of reduction were higher during the period from 1991 to 1996 (7-9% per year) and slowed down from 1997 to 2003 (2-3% per year). In 2004 pig stock increased by 3.6% for the first time.

The greatest reduction of stock was observed at the agricultural enterprises. During the examined period the number of heads decreased from 3545 thousand to 2146 thousand or by 39.5%. Subsequently the recession had stopped, for the next two years it grew a little and by the beginning of 2005 it accounted for 2345 thousand heads that equals 66.1% of the level of 1990.

For the same period the reduction of stock numbers in private farms was less significant. By the beginning of 2005 this number hit 1042 thousand heads or 69.2% of the stock in 1990. The positive tendency is the increase of stock numbers in farms.

The basic stock of pigs in the agricultural organizations now is concentrated in the specialized state pig-breeding complexes. Industrial complex is a large farm (12-104 thousand heads) with full automatic processes. All of them belong to the state. They keep 1727 thousand heads (95% of the level of 1990) which is 77.9% of the stock in agricultural organizations or 52.5% of the republican quantity. Current capacity of large industrial complex is 94% in comparison with the planned capacity.

The total production of pork in 1990 in Byelorussia made up 438 thousand tons. Then, because of the reduction of livestock, production began to fall sharply and in 1995 it made up 263 thousand tons, i.e. reduction of 1.7 times. Further production gradually began to grow and, despite of the continuing reduction of stock during the past years, it stabilized at the level of a little more than 300 thousand tons.

As the basic stock of pigs is concentrated in the specialized complexes their share in total production of pork is significant. So in 1990 large industrial complexes produced 238.6 thousand tons of pork in live weight that made up 62.9 % of the output in all agricultural enterprises or 85% of the planned capacity. Lately this ratio, due to the above described reasons, began to increase and in 2003 it reached 86.9% or 82% of the planned capacity.

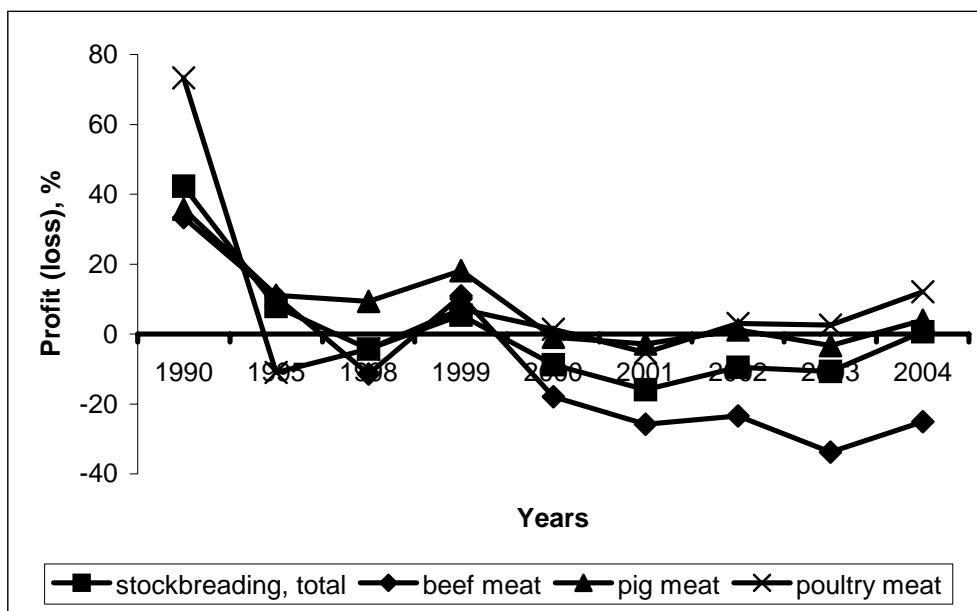


Fig. 4. Profitable and loss dynamic of different branch of stockbreeding in the Republic of Belarus. Source: [Selskoe... 2005].

Production of pork is stable mainly due to the increase of the daily average weight gain and reductions of the food conversion rate per unit of production. It is one of few parameters which level now is higher than in 1990. At the same time mortality of animals has increased and litter production has decreased.

There are still many unsolved problems in meat production in Belarus. It influences the basic economic parameter which is the profitability of production. So there is a negative situation about profitability of stockbreeding.

In 1990 profitability of the branch made up 35.7%. It was due to the establishment of high purchase prices for meat and subsidies for mixed fodders (Fig. 4).

However, the subsequent negative tendencies in agriculture and animal breeding have resulted in the decrease of profitability of stockbreeding. In 2000 its loss made up to 8.8%, and 15.9% in 2001. In 2003 the loss made up to 10.7%. In 2004 the profit is 0.6%. Next year the loss of beef meat producers made up to 25.1%, the profit of pig meat producers was 3,9%. The most profitable branch of stockbreeding today is poultry meat. The profit is 12.1%.

Such situation in stock breeding is first of all connected with inefficient feeding. Low gains in weight of animals make manufacturers either sell animals in low weight conditions or increase the period of animals fattening, thus increasing feed expenditure.

At the same the profitability of some other branches of republic's agriculture remains positive. So in 1990 plant cultivating as whole was profitable by 58.5% that is 16.2 points more than the stock breeding. Plant production remains more profitable even in modern conditions, by 47.3% in 2000, 9.9% in 2003; and 19.4% in 2004.

Almost each item of plant-growing production is rather profitable to rise. For example the profitability of cereal grains constituted 82.4% in 1990 and in 2004 it was still 25.4%. As a result the agricultural enterprises prefer plant growing to livestock breeding. It should be noticed here that the dynamics of prices is favorable for manufacturers of agricultural production. But the prices of realization of plant production grow faster. For example the price of realization of one ton of grain during the last 4 years have grown 3.7 times and that of livestock and poultry only 2.7 times.

Conclusion

On the basis of the above stated data it is possible to draw a conclusion that the basic meat manufacturers in Belarus are large specialized complexes of agricultural enterprises. Despite of

heavy economic conditions the stock of animals is growing a little and the total production of meat is increasing too.

But in such economic conditions the prospects of stockbreeding are rather pessimistic. The deterioration of the fixed assets is going on, and the majority of enterprises do not have enough means not only for modernization of the branch, but also even for the elementary repair and replacement of old equipment. Further intensification of the branch remains undecided. The majority of farms and complexes were constructed in 70s and 80s of the last century. Such conditions do not allow to have efficient competitive production and a stimulus to be engaged in pig breeding. To the majority of pig-breeding facilities of the area the technologies used on highly productive farms of Germany, USA, Great Britain, France, Spain and other countries are inaccessible.

In modern economic conditions to solve the problem of the branch without a financial help is practically impossible. The leading role in that case should belong to the state. It is necessary to study the experience of the advanced farms of the republic and neighboring states. It will allow to increase the efficiency of meat production.

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