

ASPECTS OF WORLD HORSE BREEDING DEVELOPMENT AND USE OF HORSEFLESH MEAT AS BIOLOGICALLY VALUABLE NUTRITIOUS PRODUCT

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Abstract – Prospects of development of the meat are caused by horse breeding forage capacity of huge natural pastures that are not available for use by other species of farm animals. Horse meat is traditionally developed in dry steppes, semi-deserts and the south-east, and in the mountain taiga regions of Kazakhstan, where the local population mostly uses horse meat as food. In these areas, the wide assortment of horse products that are in high demand. Horse meat exported to France, Italy, frozen horse meat - in Japan. Kazakhstan is booming as dairy and beef breeding.

This article presents the results of their own research and analysis on problematic aspects of global development and the use of horse meat and koumiss for food purposes.

Based on the presented results it is concluded that the horse breeding industry in the global perspective, including in Kazakhstan is doing well and this is very important, as in the present conditions in many parts of the world and Kazakhstan meat and their products are widely used as valuable sources vital proteins, cells and as diabetic and medical products.

Key Words: horse, horse meat, koumiss, processing.

I. INTRODUCTION

Horse breeding is the branch of animal industries which engaged in cultivation and use of horses. It arose in the countries of Europe and Asia in the 4th millenium BC. In Africa, horses penetrated from Asia Minor in the 2nd millennium BC, were brought to America in the 16th century DC, to Australia - in the 17th century. After taming and domestication the horse was a constant assistant to the person in performance of agricultural and transport works, played the major role in army. Horse breeding was the major branch of economy, supplying the population with meat, milk, and leather and riding horses. Man since the most ancient times improved qualities of a horse, created breeds

which to the greatest degree, would meet his requirements. In horse breeding development, three basic types of horses were created: riding, draught and shire horses. Within these types were created more than 200 breeds and breed groups of horses. Especially intensive race formation occurred in the 18th and 19th centuries. For this period, were created horse breeds, many of which have not lost the value in 70th of the 20th centurie.: in Russia and in the CIS countries - riding Don, Orlov trotter, etc.; abroad - Thoroughbred Horse, Shire Horse, Suffolk and Clydesdale(Great Britain); trotters: Norfolk (Great Britain), Anglo-Horman(France), the fastest in the world the American trotter (USA), etc. [1].

II. RESULTS AND DISCUSSION

Till 30s of the 20 centuries the horse livestock continuously increased, as works in agriculture and on local transport were carried out on horses. By 1930 the world horse livestock made about 120 million heads. In 30-50s due to the rapid growth of mechanization of agriculture and development of motor transport in many countries, number of horses in the world decreased almost by half. Horse had been almost everywhere ceased to use in army. The sharpest reduction of a horse livestock occurred in advanced capitalist and socialist countries (Great Britain, France, Sweden, CMEA countries, etc.). In Afghanistan, Mexico, Brazil, Ethiopia and other countries, the livestock of horses not only wasn't reduced, but continues to increase [2].

According to the Republic of Kazakhstan Agency for Statistics, by November 1, 2010, in the farms of the country were 1599.2 thousand horses, and by November 1, 2011 - 1666.1 thousand horses, or more than 4.1%. The quantity of horses in Kazakhstan in a year increased by 66, 9 thousand goals by November, 2010 and by 172,5 thousand goals to the beginning of 2011. The maximum indicators of

number of horses in Kazakhstan in 2011 were achieved by July, 1st - 1818,1 thousand heads, that is more than in 2010 for the same period by 110, 4 thousand heads. Thus the number of horses herds in Kazakhstan remains and makes about 20 % of all horse livestock [3].

Prospects of meat horse breeding development are caused by fodder capacity of huge amounts of the natural pastures inaccessible to use by other kinds of agricultural animals. Meat horse breeding is traditionally developed in areas of dry steppe, semi-deserts and deserts of the south-east and in the mountain taiga of Kazakhstan, where the local population mostly uses horse meat as food. In these areas there is a wide assortment of products from a horse-flesh, which are in great demand. Meat horses are exported to France, Italy, a frozen horseflesh - to Japan.

In Kazakhstan roughly develops both dairy, and meat horse breeding. Horse meat is a famous deserved as a biologically valuable nutritious product. Reserves of increase in production of horseflesh consist both in increases in a livestock of horses, and in improvement of technology of maintaining branch. Together with a number of scientific institutions of Kazakhstan, Kyrgyzstan, Yakutia, Bashkiria the complex of researches on the biochemical characteristic of horse meat as a high-valuable food, studying of meat efficiency of horses of various breeds, ways of improvement of quality of horse meat at feeding and fattening meat horses was carried out. Thus the great attention was also paid to the selection of meat horse breeding. A considerable amount of researches that contribute to more efficient development of the industry were executed. Biological value of proteins and fats of horse meat were studied. Standards of an exit of meat production of horse breeding were defined. With a view of rational use of meat production of horse breeding the specifications and technical documentation on manufacturing of high-quality delicious production from horse meat and an offal is developed: sausages, a goulash from horse meat, meat delicious horse, roll from horse meat, meat of foals in jelly, a steak from horse meat, a horse-flesh fragrant, language in jelly, etc. Horseflesh — easily digested food, and in addition it has less calories than beef: 94 kcal per 100 g versus 156 calories from lean beef [4]. The meat of farm animals, including horse, valued for its content of proteins, fats and vitamins. In a horse-flesh, depending on age, sex and fatness of animals, the content of protein varies from 18 to 23 %; fat - from 1-2 (at non-

standard fatness) to 18-20 % (in carcasses of horses of 1 category of fatness). The chemical composition of meat of horses of the stables on the average makes: water - 74.2%, protein - 21.6%, fat 2.5% and 1% ash, meat of Kazakh horses (herd keeping) average fatness: water 70%, protein - 24.6%, fat - 4.7% and -0.93% ash. In the horse-meat content of vitamin A is 20 mg % (in fat), thiamine - 0.07, riboflavin -0.1, nicotinamide - 4.2 mg % [5].

It should be noted that in France, Belgium, Sweden and Japan, raw horse meat is valued: thinly sliced lean flank, served with hot sauce (horseradish is not forbidden), or in the form of tartar with onion, herbs, spices and Worcestershire sauce. In Japan a wide popularity enjoys horse sashimi. In the south of France they eat sausages, which are based on chopped horse meat, and can be cooked in a grill and a frying pan, and an open fire. In Italy a horse-flesh is included into the spaghetti recipe with Bolognese sauce; in Switzerland it is fried in deep fat; in North and South America it is dried. Meat of horses, having a specific composition and properties offers a special interest for the production of special foods. From ancient times the most exquisite dish was considered meat of a foal. It is still an excellent dietary product in our time.

In Kazakhstan in 1990 was developed an industry standard "Horse meat for development of products of a infant and dietetic foods. Main requirements". The main purpose of the technical environment was to increase the organizational, technical and specific requirements for breeding horses in specialized horse breeding farms and for horse-flesh, derived from their processing for the production of baby food, of food for preschool and school-age children, also of dietary food. The statement of this standard was preceded by big long-term work on inspection and identification of non-polluting areas of production of horse-flesh for baby food. Areas of herd horse breeding were surveyed; analyses of forages and meat of foals are carried out for ecological purity. As a result of the carried-out researches, were designed "General requirements for companies that produce raw meat for manufacture of baby and dietary foods" and "Initial data on the establishment of a system of rearing horses for production of baby food". In terms of processing requirements of the meat industry, the important fact is that horse-flesh at slaughter youngsters aged 6-18 months at rates that characterize its biological value has acceptable technological parameters: moisture content no more than 70-

75 %, the content of fat within 5-11 %, quantity of meat pulp within 76-81 %.

Economic value of production of a young horse, the possibility of its use as a high-value product, confirmed by special works on condition of meat of horses bred by herd way. As a result of generalization of research work of productive horse breeding, it was proposed to use for baby food meat of young horses at a young age - 6-9 months and 16-18 months. Economic efficiency of realization of a horse-flesh at this age is highest. This should be implemented strict control of the content of nitrates and nitrites, heavy metals, pesticides and herbicides in food plants and meat raw.

III. CONCLUSION

On the basis of noted it can be concluded that the horse industry on a global perspective, including in Kazakhstan has been successful and it is very important, as in modern conditions in many countries and Kazakhstan, meat and products of their processing are widely used as the most valuable sources of vital proteins, elements and as diabetic and medical production.

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