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“Chicken and Egg” Problem in the Meat Sector of Buryatia

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Abstract

During centuries animal husbandry was the most traditional agricultural activity of Buryats. Under the command economy the region was specialised in the meat sector, with the largest meat processing factory in Russia. Due to imports from Mongolia the factory benefited from economies of scale.

During the transition period Mongolia found new markets for its products. Also in Buryatia the transition period hardships caused a substantial decrease in meat production. The decrease in meat production caused an immediate decrease in livestock production.

The main problem in development of regional agriculture in Russia is to reveal the regional comparative advantages taking into consideration local agro-climatic conditions and resource endowments.

Buryatia has a risky agriculture, with grain yields of 1.1 t per ha, the yield of milk of 2400 kg per year, and daily average weight growth of cattle by 300 grams. Nevertheless compared with other regions, where the sector of agriculture experiences steady negative growth, the last years witnessed a growth of cattle (4%-8%) in Buryatia.

Also the large share (43% compared with 27% in Russia) of rural population; 35% unused agricultural land; foreign investments (in 2007, 140% that of 2005).

The above mentioned arguments encourage the hypothesis, that Buryatia has a comparative advantage for animal husbandry.

The methodology of spatial equilibrium analysis using the GAMS programming techniques was applied to test the hypothesis. The results of the empirical model and the sensitivity analysis prove that among all the analysed meat products the development of sheep breeding industry has the highest comparative advantage in Buryatia. The model provides the optimal production and consumption quantities and prices, as well as recommends the optimal trade flows of the three selected products to other regions presented in the model.

The favourable position of mutton production can be explained with the keeping of native breeds of sheep and with the availability of pastures. Yet the chicken and egg problem remains: should the development of meat processing enterprises in Buryatia stimulate the development of animal husbandry or vice versa? Here is an adequate state intervention necessary.

Keywords: meat production, spatial equilibrium