

MULTIFUNCTIONAL ASPECTS OF MANGALICA BREEDING

Jozsef Ratky¹ – Peter Toth² – Istvan Egerszegi¹ – Peter Sarlos¹ – Noboru Manabe³ – Klaus-Peter Brussow⁴

¹Research Institute for Animal Breeding and Nutrition, Hungary

²Olmos Toth Ltd, Hungary

³Faculty of Agriculture, University of Tokyo, Japan

⁴Research Institute for the Biology of Farm Animals, Germany

jozsef.ratky@atk.hu

Introduction

More than 6 billion people are living on our planet, already. The tremendous increase of human population is extremely important in the Eastern region of Asia. It means that responsibility of agriculture including animal breeding increased extremely, as well. Reducing lack of food – it is the main duty of animal production.

Two markedly distinguished trends could be identified in animal production. The first one is representing the role of food supplementation in huge quantity, in other words it is the mass production undoubtedly with the purpose to give as much food for as many people as possible. We can argue the tools i.e. biotechnology, genetic modification (GMO) to satisfy this demand but the results usually overcome any argumentation. Nevertheless many countries do not allow the application of certain procedures far more countries do not influence this kind of methodology. Otherwise responsible governments generally agree that mass production should not undermine biological resources and the perspectives of sustainable agriculture.

However the second tendency has almost no impact on mass production. Its role recently became or will become stepwise more important even in the Asian countries. It is the field of quality production. It would be a wrong approach to declare any antagonism between the big quantity and quality production but we must also know well the differences at the same time. The target of quality production is the definite segment of each society having a special need for delicious, healthy food. It must be emphasized this part of the society means not only the richest people but the so called middle class, as well getting stronger and stronger in South East Asia, too.

The growing need for quality food is connected many times to the need for local food and it is the point where native domestic animal breeds can arouse interest. In Europe Hungary has an outstanding biodiversity with large number of old domestic breeds. The Research Institute for Animal Breeding and Nutrition is covering the studies of all Hungarian native domestic breeds in close cooperation with other research units and agricultural university faculties in Hungary as well as abroad.

Actual role of native poultry breeds is described in other presentations of this conference, in the present paper we would like to demonstrate the possibilities of mammals and mainly in pigs. The Hungarian Grey cattle, Racka sheep and Mangalica pig are the well known old breeds of agriculture in our country. While Racka sheep has nowadays a nearly negligible market importance and the Grey cattle stock is increasing fortunately, the breeding of Mangalica has already a significant role in pig production.

Mangalica breeding

History

The Mangalica breed appeared in the first half of the 19th century. The ancient small Hungarian pigs were crossed by the Serbian Sumadia pigs and actually it has three subraces, i.e. the Blond, the Red and the Swallow Belly. Following the thorough work of our predecessors the genetic construction became stabilized and the population increased quickly. After the 1st world war it was reduced very much but recovered from this situation and it was the most typical race till the 1950s. The consumption habits changed after the war and the industrial systems began to dominate the swine breeding. From that time it was written and told everywhere that fatty meat is unhealthy and it should be replaced by plant oils. Frankly no reproductive characteristic of the Mangalica could respond the demand of large scale farms. The aim to produce much food in a short time and the ability of Mangalica did not come together. Till the beginning of 1990's less than 200 registered sows remained in national parks, zoos and at some farms.

Thanks to dedicated breeders, merchants and scientists the Mangalica escaped and actually almost 10,000 sows are in our country.

Present situation

What was the background of the successful propagation? The consumption habits slightly and fortunately changed again. In Europe beside the usual porcine products a significant need emerged for extremely delicious items. However these items more or less can be produced of old, selected, overweight sows, it is clear that the ancient fatty type pig breeds are the best for it. Since the number and the reproductive ability of them are limited, the price level of these products is high thus the market motivated everything again.

Old knowledge of Mangalica breeding had to be upgraded, new physiological data had to be collected and new technologies for feeding and housing had to be established with special regard to keeping the old values of this pig breed and to increase the profit rate of breeders. Without finding the balance either the genetic value can disappear or the breeders have no financial motivation to work with Mangalica.

The first pillar, the **market** has two feet i.e. the mixed extensive and semi intensive housing system adapted for Mangalica or the small scale farming based on the traditional methods. While in semi intensive, large scale farming we can attain fattening period of cc. 12 months, by traditional housing it is minimally 4 to 5 months longer. In each case one must previously create the market for the fattened pigs. In large scale farming it could be only the meat industry, in small scale farms it should be a direct regional selling from farms. Processed products usually ensure the domestic and international market improving the image of the country or region.

The second pillar is connected to the **environment protection**. Mangalica can be kept on territories not useful for plant production or pasture. We must underline that in this case population should not achieve 1 sow per hectare. If we want to preserve the offspring farrowing sheds should be used. Sometimes breeders suppose that Mangalica sows farrow on the muddy earth or in the snow. They can do it but the outcome is miserable. So called minimum conditions should exist.

The third pillar is a kind of mixture of environmental friendly traditional system and **tourism**. People living in cities want to spend holiday in the countryside and want to get acquaintance with village life and native domestic animals.

The three pillars are strengthening each other and all of them are necessary to increase the population and the market impact of the breed.

Conclusion

The example above hopefully demonstrates what an important role can play native domestic animal breeds if authorities, scientists and farmers are working together for the exploitation of such biological resources. Since South East Asian countries have domestic mammal species of high value it would be a future priority to involve them in quality production with predicted economic results.