GROWTH PROSPECTS OF MANGALITA AND BAZNA PIG BREEDS IN THE NORTH-WEST OF ROMANIA

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OVERVIEW

Referring to pork and fat related as results from slaughter of Bazna and Mangalita breeds, we can make a systematization on growth of these breeds in the North-West of Romania, regarding the quality and technology of growing and fattening. Thus, we propose to follow a few insights such as:

• What does the breeders – consumers - state institutions need to know?
• What do the farmers need to know about Mangalitsa and Bazna?

Fig. 1. Mangalita, var. blonde and red    Fig. 2. Mangalita, var. dove belly

Fig. 3. Bazna adult                                   Fig. 4. Bazna pigs

• What do the consumers need to know about the meat from those two breeds?

Fig. 5. Mangalita meat                              Fig. 6. Sibiu salami

• What the state institutions need to know and support by specialized legislation (Government of Romania and the Ministry of Agriculture and Rural Development, Ministry of Environment and Climate Change, etc.) on the development of the zootechnic sector - swine growth in Romania.

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HISTORY OF BREEDS – PRESENTATION

I. According to the first perspective, Bazna and Mangalita farmers should know that:

- The growth of these two breeds of swine can harness all resources: green fodder such as clover, pasture, potatoes, fodder beet, beechnuts, acorns, products from sheepfold as whey, buttermilk, sharps valuable bran, corn cobs, etc.
- These two breeds can be grown in freedom (forests, pastures) feeding and breeding natural.
- Good performances are reached at the age of 1.5 to 2.5 years and maturity at the age of 3.5 - 4 years.
- In terms of zoo veterinary treatments, these breeds are highly resistant to the environment and less demanding to feed, so genetic strengthened.
- Production costs at these two breeds are about 50% of the costs industrialized (Duroc, Large White, Landrace, etc.)
- During the fattening process these breeds store a significant amount of fat tissue, reaching an increase of almost 500 grams / day at a ratio meat / fat of 1.2 / 1 at the age of one year.
- It is very important to know that these animals have a biological quality as valued as it is believed to have a luxury meat equivalent of salmon meat.

II. A second perspective is very important for consumers of animal products. Consumers must know any time which is the daily ration regarding vital functions and the ability to work.

- Animal raw materials are the base of a good nutrition because of its high content of protein, carbohydrates, lipids, minerals and vitamins. By traditional process these can be converted into a wide variety of consumer food products.
- Swine meat stimulates nerve activity and improves work capacity. Meat generally serves to boost metabolism and fight obesity, increases resistance to infections and various toxic substances, as a protective food for human consumption.
- In terms of content of unsaturated fatty acids, Mangalita pork is equivalent to salmon or olive oil.
- Mangalita and Bazna pork by traditional processing can get special products such as the Serrano ham or prosciutto.
- Another important aspect is that the meat tastes really good, is juicy, marbled, used to obtain quality dried sausages such as Sibiu, etc.
- All these qualities of meat and fat from mentioned breeds determine both consumers and farmers to be more interested than other breeds.
- Economically, growth of both breeds by small farmers in households could bring significant revenues from export in Europe or even China.

Enumerating the advantages of the two breeds of swine growth for farmers and consumers of meat, I remembered my grandparents' way of life from Săpânța in which like their ancestors from Transylvania "ate bacon, grease, and in holydays sausage and hip and never knew of cholesterol and diabetes, putting out occasionally with brandy to these dishes".
Agricultura – Ştiinţă şi practică

III. A third perspective is itself stated very important: political and technical support to state institutions on zootechnic development plan in Romania.

- I would start with the Association of Producers of Traditional Romanian Products as farmers support which legal and judicial can obtain from state institutions some promises and solutions on the growth of these animals.
- Romanian Government through the Ministry of Agriculture, should show interest in the growth and conservation of pure breeds as Bazna and Mangalita in the North-West of Romania and not only.
- An important support would grant subsidies that would lead to maintaining the "pure breed" of Mangalita and Bazna.
- Through a national program should be proposed that by the end of 2020 to double the numbers of these pigs; during this period will not exports these breeds, which would lead to a doubling or tripling the number of specimens.
- Another measure would strengthen the legislation on the conservation of traditional breeds of pigs in Romania.
- Ministry of Agriculture together with other ministries should make a joint strategy on growth and development of these breeds, and other supportive measures from the farmers.

IV. Mangalita and Bazna history

- Mangalita and Bazna pigs are endangered in the country, but are goldmine for foreigners.
- These two Romanian breeds are wanted for exports after Europeans discovered that they have meat as healthy as the salmon, toxin-free and low cholesterol.
- Hungarian neighbours export meat worth millions of euro in Europe and even in Romania, while for us these breeds are in danger of extinction.

A. Mangalita pig breed was formed in the Balkans, being considered a breed of domestic pig as it grows in our country for over 130 years. In this breed can be distinguished by color, four varieties: blond (most common), red, black and dove abdomen (black with white belly). This breed was formed by Jozef Hungarian Archduke in Hungary in 1833. The blond variety was formed by crossing old Hungarian breeds (Bakonyi and Szalontai) with pig breed original from Sumadia, Serbia, and later original breed from Syrmien, Croatia. Following these crosses resulted a breed of pig grease skilled, very early at that time, which did not need special treatments and which capitalized very well green fodder and food plant found in the field. With these quality traits, Mangalita breed became very popular at that time in Hungary, and in 1927, the Association of Pig Breeders of fat aimed to enhance and improve the breed. Until 1950 it was the most predominant pig breed in the Balkans, particularly Hungary, where in 1943 it recorded a population of 30,000 pigs. With the advancement of technology in the food sector and the possibility of ever better food storage, the population of Mangalita declined in favor to production of pig breeds for meat. At present, the growth of this breed is more like a hobby, and in Hungary there are just over 7000 Mangalita female with about 60,000 piglets annually. The variety of charcoal and dove abdomen was formed by crossing the variety blond and black variety. In our country, Mangalita, occupies about 1% of the pig herd structure and can be seen in the remote area of Carpathian and Danube marshes.

Exterior features. Mangalita is a breed of medium size and body conformation characteristic to morpho type of fat which is represented by the short body, deep and wide. Due to the development trunk in depth and breadth, the animal looks barrel. The head is
suitable large, with good depth due to the development of fat deposits, with a slightly concave profile with medium size ears worn bent. The neck is short, thick and deep. The trunk is deep and wide, with convex top line, and its short, but wide. The chest is well developed with arched ribs. Barrel-shaped chest perimeter is given longer than the body, which is seen very well in animals that are in an advanced state of fattening. Hams are narrow, with poorly developed muscles towards specialized mixed breeds or meat production. The limbs are thin, short, with underdeveloped bones. Kish is long and soft, less frequently resistant leading often to defects of aplomb. Unlike other improved breeds, Mangalita has the body covered with thick hair, long and curly, color-specific varieties. In cold weather, there is a second called fuzz or undercoat hair also showing undulations, which sheds the warm season. In countries like USA is recognized as the "woolly Pig" because of abundant hair like sheep wool. The skin is thick, slightly pigmented, the pigment color depending on the variety. Productive traits: As far as that goes to productive characteristics, breed Mangalita falls within primitive pig breeds from feral pigs. From here it can be observed the reduced prolificacy, which is on average 5-6 pigs obtained at birth, to modern breeds that reach up to 12 pigs. Sows cannot be considered good mothers with a lower maternal instinct. Newborn pigs weigh approx. 1 kg that rise and reach up to 12 kg in over 2 months when they are weaned. This breed concludes its growth at the age of four years, which makes it a semi early breed and in good feeding and maintenance carried a weight of 90-100 kg at 1 year.

B. **Bazna** breed - Romanian pig breed. It was formed as a result of unguided crossbreeding Mangalita female and Berk male, since 1872 in Bazna, Transylvania, using the inbreeding. The results having superior productive than Mangalita breed, were appreciated by breeders so that hybrid population has spread quickly around cities Medias, Sighisoara, Sibiu and Fagaras, because precocity and prolificacy breed superior to native local. In 1885 and again after 1900 were made Berk breeding imports from England, which were used to improve and homogenize Bazna breed in training and consolidation. In the last 30 years has improved by using Wessex breed. Bazna breed was officially recognized as independent breed in 1948, after which were established several core selection.

Range - shortly after Bazna pigs have spread around cities Medias, Sibiu and Fagaras, with more high quality than Stocli and Mangalitsa breeds; after the Second World War Bazna breed has spread, like Black pig breed and Strei, also in other areas of Transylvania (Cluj, Alba, Hunedoara, Mures, Harghita and others), especially in hilly and mountain, in Banat, once with some movements of population in this area. Morpho-productive characteristics: Bazna breed pigs are medium-sized and feature type conformation morpho-productive mixed. The head is suitable for large, slightly concave profile. The ears are medium-worn forward and lateral or horizontal. The neck is short, wide and deep, tight head and torso. The trunk is medium length, wide, quite deep and almost cylindrical. Line upper body is slightly convex. Withers is full and well conformed; spine and its proper long and wide.

Croup: Moderately long, broad, slightly oblique and well dressed in muscles. Ham are well developed but less descended. The legs are medium in length, strong enough, the animals have good mobility. The abdomen is slightly larger than the other breeds, running food and feed containing succulents (beets, potatoes, turnips, etc.), and shows the bottom 12 nipples arranged symmetrically. Color characteristic of the breed is black with white belt that surrounds the trunk in right shoulders, containing both forelegs. White waist width varies from a few cm to 30-40 cm. The transition from white to black belt is through a smoky area due pigmented skin and unpigmented hair, area feature all races black white
belt. In some specimens, white meets at the hind extremities, snout and tail, color features taken from Berk breed. The hair is sufficiently rich, smooth or slightly arched, with an average length of 4 cm and color feature area that grows. White belt is dominant to black and red, and is recessive to white. A limited number of individs are completely black in color or black and the rest white head; they are excluded from reproduction. Prolificacy of the breed is good with an average of 9.5 pigs at farrowing, of which weaning approx. 8 pigs. Ability of lactation sows is good, approx. 38-42 kg. Productive is remarkable: 8/12 births/life. Pigs are 14 to 15 kg at weaning, which is the age of 2 months. Precocity is mediocre. Youth porcine reproductive enter the age of approx. 10 to 11 months, reaching full adult development by age 3 years. Average daily gain weight achieved during the fattening period is 550-600 g, with a high specific consumption of 5-5.5 U.N. Youth are suitable and early fattening for meat, with a slaughter weight of 90-110 kg, but being a mixed breed the best results are obtained from fattening to the weight of 140-160 kg when meat : fat in the carcass is 1.3-1.4:1. Bazna breed is adapted to the natural conditions of growth of its range. It is less demanding in terms of maintenance and better exploits the different food sources: pasture, root, potatoes, corn, garbage, etc. The animals are hardy and can be grown in semi-intensive and extensive systems.

CONCLUSIONS

1. The growth of these two breeds of swine can harness all resources: green fodder such as clover, pasture, potatoes, fodder beet, beechnuts, acorns, products from sheepfold as whey, buttermilk, sharps valuable bran, corn cobs and so on.
2. Quality of meat and fat from related breeds mentioned determines both consumers and farmers to be more interested than other breeds.
3. Ministry of Agriculture together with other ministries should issue a joint strategy on growth and development of these breeds, and other measures to support livestock farmers that will increase the national economy by increasing incomes of small farmers.
4. Currently breeds mentioned desired rehabilitation and training a genetic background due to meat quality and high adaptability.
5. Revaluation race reveals new aspects of economic, mentioning only real demand for quality of this meat market in the European Community countries.
6. Bazna breed is adapted to the natural conditions of growth of its range. It is less demanding in terms of maintenance and better exploit the different food sources: pasture, root, potatoes, corn, garbage, etc. The animals are hardy and can be grown in semi-intensive and extensive systems.

REFERENCES