BLACK SLAVONIAN PIG

Gordana Kralik, A. Petričević, Sonja Jovanovac, Đ. Senčić

Summary

Black Slavonian breed formation started in 1860 on husbandry of Karlo Pfeiffere in the vicinity of Osijek by crossing of Lasasta Mangulica and Berkshire boars and inserting Poland Chine pig blood from time to time a domestic autochtonous breed has been made. It was of better fattening and meat quality from the former used pig breed. It is possible to differ more types (depending on Berkshire blood share) within the breed. It is nature, for reproduction in the age of 12 months. It can achieve average daily gain over 600 g by intensive fattening. According to our own reserches a fattened pig of 100 kg has a carcass weight at 81.05 kg, carcass length from tuberculum ossis pubis to the chranical edge of the first rib 67 cm, participation of muscie tissue 32,6%, fat tissue 48,2% and less valuable parts 9,2%. Indicator of qualitative meat characteristics are: pH_1, 6,5, pH_2 5,6 W.b.c. (cm^2) 5,1 colour 68 (Göffo). The Slavonian pigs contain in their meat 2,15 - 3,01% less water and aprox. 2,78 - 2,84% less protein compared to meaty types. This breed is disappearing (dying), but its scarce samples could stil be found in some Slavonian villages. From the economic, cultural, and historical point of view, our opinion is that this breed should be saved and protected.

Origin of the breed

Black Slavonian pig was created by planed mating of Lasasta Mangulica sows with Berkshire boars with occasional usage of Poland China pig blood. The breed was named after the black color of the skin and hairs, and after the place of origin - Slavonia. Considering the fact that this breed was created on the farm owned by Karl and Leopold Pfeiffer near Osijek the pig was often called Pfeiffer's pig, in the literature. Breeding goal of the Pfeiffer family was to create the pig which will be early matured, but resistant enough and convenient for letting out on pasture. Big interest and achievement of high price on Wiena market were proofs that created pig had enhanced productive characteristic comparing other breeds used at that time.

The creation of that breed started Karl Pfeiffer in the year of 1860. He chose 10 Lasasta Mangulica sows, which were mated with Berkshire boars, intending to improve the quality of the body. In the year of 1870 Leopold Pfeiffer imported from united States male Poland China pigs for reproduction. Only the best boar from the imported group he used for insemination of 10 sows from newly created herd. Produced female

---

Prof. dr. Gordana Kralik, Prof. dr. Antun Petričević, Prof. dr. Sonja Jovanovac, dr. Đuro Senčić, Agricultural Faculty of University of J.J. Strossmayer, Šetalište kardinala F. Šepera 6, 54 000

progeny he eliminated from further selection, and from the male reproduction animals he chose only one boar of remarkable quality. This boar was used for insemination of selected sows. From their progeny, the boras for the further breeding have been selected again. Described procedure of applying the blood of Poland China was performed every 10 year, all until 1910. By these planed crossings, Black Slavonian pig was created. This pig was characterized by bigger fertility and better quality of body from Mangulica. At the same time new created pig was exceptionally adjusted for extensive production. Because of these characteristics this breed was early awarded at the exhibition of agriculture and forestry in Wiena, in 1873. In the year of 1905. This breed won the highest prize of the Kingdom of Croatia and Slavonia (cited: Belić, 1972).

Production characteristics of black slavonian pig

Ilančić (1958) states that different production types could be distinguished within the breed considering the bigger or smaller share of the Berkshire blood. This pig is medium sized, flat back with very good shaped hams. Thorax is tight, legs are short and correctly built. Female individuals are capable for reproduction at the age of 10-12 months, when they reach body weight of 100 kg. Sows have 10 nipples, although individuals with 12 and even more are not rare. Black Slavonian pig is good for fattening, so this was the most important breed in Croatia until the import of the white meaty breeds. In extensive keeping this breed reaches in 1 year body weight of 70-80 kg and than goes in fattening procedure. If the fattening is intensive, body weights of 180-200 kg could be achieved for 14-16 months.

Fig. 1 - BLACK SLAVONIAN SOW

In the year of 1952, in former Yugoslavia, 300 000 units of this breed was grown, which made over 8% of the total pig population. During the early period of our

pigbreeding production development, sows of Black Slavonian breed were crossed with imported meaty breeds boars in the aim of getting the progeny with better fattening and slaughtering characteristics.

According to the production type Black Slavonian pig belongs in the meaty-fat combined breeds, between meaty and fat breeds. Considering this, data given by Ilančić et al. which show relations of weight, length, and the volume of digestive system under identical conditions of keeping, are interesting. Authors concluded that pig improvement degree affects enlargement of length and digestive system volume. This helped explaining the differences in gains ang food conversions of specific breed-production types. Production characteristics of Black Slavonian pig are:

Reproductive characteristics

Sexual maturing at 1st mating	10 - 12 months
Weight of sexual mature gilts	90 - 100 kg
Litter size	7 - 8 piglets
Weight at birth	1,1, - 1,3 kg
Litter size after weaning	6 - 8 piglets
Weight at the age of 8 weeks	10 - 12 kg

Fattening characteristics:

Average daily gains in extensive keeping	300 - 400 g
Average daily gains in intensive keeping	500 - 600 g
Food intake (kg) / gain of fattened weight (kg)	4,5 - 5,0 g

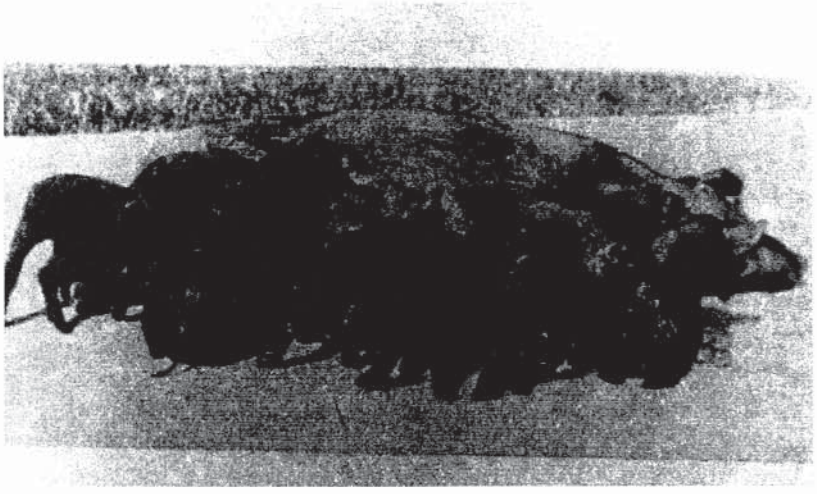

Fig 2. - BLACK SLAVONIAN SOW WITH PIGLETS

On the farms in Croatia, particularly in Slavonia, Black Slavonian pigs could still be found.

Recent literature data about physiological and productive characteristics of this breed are infrequent. Comparative display of the carcass quality and meat of the different production groups of pigs was given by Kralik et al. (1988) and Petričević et al. (1988). Researches included Mangulica (MA breed), Black Slavonian pig (BSP fatty-meaty breed), crosses of meaty breeds (SL x LW x GL - Swedish Landrace x Large White x German Landrace) and Hypor (HY extremely meaty pig). Table 1. and 2.

It is obvious from the data, that shape of the pig's body was changing together with the degree of nobility: parts with more muscles were developed, and backfat thickness was reduced.

Changes of the body dimensions were followed by the changes in the chemical composition of the muscle tissue (Table 2).

Table 1. - CARCASS QUALITY OF DIFFERENT PRODUCTION TYPES OF PIGS (KRALIK ET AL. 1988, PETRIČEVIĆ ET AL. 1988)

Indicators	Groups of Pigs			
	MA	BSP	SL. x LW x GL	HY
Live Weight	101.63	101.45	100.82	100.82
Carcass Weight, kg	81.32	81.05	78.82	79.77
Randement, %	77.4* - 80.11	79.80	77.27	78.27
Carcass Length, cm	65.11	67.00	80.77	80.45
Bacon Thickness, mm:				
- back	61.84	51.35	25.05	16.73
- sacrum	63.63	48.75	24.27	15.91
- total	125.47	100.10	49.32	32.64
Surface of the Cut, cm^2				
- MLD	22.6* - 24.23	27.14 - 28.30*	35.04	41.14
- fatty tissue	43.64	40.40	27.70	17.40
Shares of the Tissues, %				
- muscle	28.75	32.59	49.62	57.57
- fat	51.89	48.16	32.79	24.18
- bones	9.55	9.94	9.55	10.14

* Rahelič et al. (1987)

Table 2. - INDICATORS OF MUSCLE TISSUE QUALITY (PETRIČEVIĆ ET AL. 1988)

Indicators	Groups of Pigs			
	MA	BSP	SL. x LW x GL	HY
pH 1	6.75-6.86*	6.48-6.73*	6.18	6.12
pH 2	5.52	5.62	5.57	5.61
w..c. cm^2	3.30-3.85*	5.07	6.94	6.95
color	69.58	68.00	60.77	63.32
water, %	70.14-71.93*	70.36-71.43%	72.51	73.37
proteins, %	20.65-22.08*	20.70-22.28*	23.48	23.54
fat, %	7.91*-8.21	5.93*-7.86	2.86	2.23
minerals, %	1.00-1.21*	1.08-1.20*	1.15	1.12

* Rahelič et al. (1987)

Conclusion

Black Slavonian pig appeared as the result of economical occasions at he end of 19 th and beginning of 20 th century in Slavonia. According to meat share in carcasses this pig belongs in the group of fattier breeds. The physical and chemical characteristics of the meat are very good, with a bit lower content of proteins and more fat compared to meaty type of pigs. This breed is resistant and also convenient for half-intensive and extensive keeping.

Black Slavonian pig is economical and historical inheritance of our country. In the sense of the possible gene resource, saving this pig from extinction has remarkable ethical and zootechnical meaning.

REFERENCES

1. Belić J. (1972): Savremeno svinjarstvo, Privredni pregled, Beograd.
2. Ilančić, D., Pavuna H. (1958): Paminski odnosno produkcioni tipovi svinja i glandula Thyreoidea. Veterinaria, 2-3, 1-20.
3. Ilančić D., Bevandić M., Arnautović I., Koričić Paula (1965): Komparativna istraživanja težine, dužine i obujma probavnog trakta različitih pasminsko-produkcionih tipova svinja. Naučno društvo Bosne i Hercegovine, Radovi XXVIII, Knjiga 8, 51-60.
4. Kralik Gordana, Petričević A., Levaković F. (1988): Slaughter value of pigs of different productinal types. 34th International Congress of Meat Science and Technology, Proceedings, 88-90.
5 Petričević A., Kralik Gordana, Petrović D. (1988): Participation and quality of some tissues in pig carcasses of different production types. 34 th International Congress of Meat Science and Technology, Proceedings, 68-70.
6. Petričević A., Kralik Gordana, Vesna Komendanović, Senčić Đ., Maltar Zlata (1988): Kvaliteta svinja i njihovog mesa od masnih i mesnatih pasmina. Zbornik radova Poljoprivrednog fakulteta u Novom Sadu, 16, 133 - 143.
7. Rahelić S. (1987): Kvaliteta mesa plemenitih svinja. Tehnološki fakultet, Novi Sad.
8. Senčić Đ., Gutzmirtl Draženka (1992): Zaštita ugroženih autohtonih genetičkih izvora u svinjogojstvu Hrvatske. Veterinarska stanica, 23(2), 91-93.

CRNA SLAVONSKA SVINJA

Sažetak

Stvaranje crne slavonske pasmine započelo je 1860. godine na imanjima Karla Pfeiffera u okolini Osijeka. Križanjem lasaste mangulice i berkšir nerastova i povremenim ubacivanjem krvi Poland Chine stvorena je domaća autohtona pasmina. Ona je bila bolje tovnosti i bolje kvalitete mesa od do tada upotrebljavanih pasmina svinja. Unutar pasmine može se razlikovati više tipova (ovisno u udjelu krvi berkšira). Za rasplod je zrela u dobi 12 mjeseci, a u intenzivnom tovu može postići prosječne dnevne priraste preko 600 g. Prema našim istraživanjima utovljena svinja od 100 kg ima masu polovica 81,05 kg, dužinu polovice od tubercutum ossis pubis do kranijalnog ruba prvog rebra 67 cm, udjel mišićnog tkiva 32,6%, masnog tkiva 48,2% i manje vrijednih dijelova 9,2%. Pokazatelj kvalitetnih svojstava mesa su pH_1, 6,5, pH_2 5,6, Sp. v.v. (cm^2) 5,1, boja 68 (Göffo). Crna slavonska svinja sadrži u mesu manje vode za 2,15 - 3,01% i bjelančevina također manje za 2,78 - 2,84% u usporedbi s mesnatim tipovima. Ova pasmina nestaje (izumire), ali se mogu naći još rijetki primjerci u nekim selima Slavonije. Mišljenja smo da je potrebno ovu pasminu zaštititi i sačuvati s gospodarskog, kulturnog i povijesnog aspekta.