

INDIGENOUS BREEDS OF DOMESTIC POULTRY IN SERBIA

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ABSTRACT

Poultry farming in Serbia has a long tradition, the first written data refers to the 13th century, to the ruler Stefan Nemanja, founder of the Serbian State.

Between 2010 and 2020, the number of domestic poultry in Serbia decreased significantly from 20,156,000 to 15,249,000.

Serbia is rich in indigenous (old) poultry species, which are also declining and threatened with extinction. Some varieties are already endangered.

The Ministry of Agriculture of the Republic of Serbia has adopted a legal act (decree) on the conservation and promotion of indigenous breeds, including poultry breeds. Some poultry species are not subject to the Regulations; therefore it is necessary to introduce them, that is, to add them to the European list of indigenous poultry breeds.

The article describes the indigenous poultry breeds and gives the disappearing status for each species.

These are indigenous breeds of chicken: Banatski gološijan (*Banat Naked Neck*), Somborska kaporka (*Sombor Crested*), Svrljiška kokoška (*Svrljig Hen*), Kosovski pevač (*Kosovo Singer*), Vojvođanska patuljasta kokoška-Kredlika (*Vojvodina Toy Hen - Kredilka*), Sandžački pevač (*Sandzak singer*) and Grudaš (*Grudash*). These are indigenous breeds of goose: Sremska guska (*Srem goose*), Podunavska tršava guska (*Danube tufted goose*), Šumadijska guska (*Shumadia goose*) and Novopazarska guska (*Novi Pazar goose*).

The indigenous breed of domestic turkey is: Dobrička ćurka (*Dobric turkey*).

These are indigenous duck breeds: Domaća patka (*Domestic Duck*) and Novopazarska borbena patka (*Novi Pazar Fighting Duck*). The indigenous breed of fowl is: Domaća morka (*Guinea Fowl*).

Introduction

Poultry meat, eggs, fat and feathers are the goal products of the poultry farming. Meat and eggs are highly appreciated for their nutrition value. The poultry farming today is an important industry in Serbia as well as in the world. Vučićević and Resanović, (2019) write in their work that the first information about poultry in

Serbia is related to Stefan Nemanja in the 13th century, who presented to Byzantine Emperor Comnenos (Komnenos) the gees “befitting the Emperors gardens”.

According to the information from the Chamber of Commerce and Industry of Serbia the tendency of the steady decline in poultry livestock is quite noticeable in the years 2010-2020. It is from 20 156 000 in 2010 to 15 249 000 in 2020, that makes decline of 25%.

Serbia is rich in aboriginal poultry, this breeding is subsidised according to the Serbian Government Decree and that is one of the way to save the aboriginal poultry breeds and to increase the poultry production in Serbia.

Materials and Methods

The published information on the poultry study was presented in the monographs as well as in the reports issued in the domestic and foreign magazines. There were data from the Serbian Agriculture Ministry and also the data on Serbia from FAO Stat. A number of data were issued by the Association of Small Animal Breeders of Serbia "AOS", responsible for standard-setting for the certain breed and for including them in the European list of the poultry breeds. Some data were received by the direct survey of the breeders around Serbia, and also from the archives provided by some breeders.

Results and discussion

Serbian Ministry of Agriculture adopted The Regulation on the list of genetic reserves of domestic animals, the way of conserving genetic reserves of domestic animals, as well as the list of autochthonous breeds of domestic animals and endangered autochthonous breeds (Official Gazette of the Republic of Serbia, № 33/17), the subsidised poultry breeds.

The Regulation was adopted in 2017 but since then more poultry breeds turned out to exist. Therefore, it became necessary to update the document in order to provide the animal-housing conditions for all autochthonous poultry breeds and to protect the breeders' subsidy rights.

Chicken

There are several autochthonous poultry breeds in Serbia:

Banat Naked Neck, Sombor Crested, Svrljig Hen, Kosovo Singer, Vojvodina Toy Hen – Kredilka, Sandzak singer and Grudash. Regulation on the list of genetic reserves of domestic animals includes the following breeds: Banat Naked Neck, Sombor Crested, Svrljig Hen, Kosovo Singer. It is necessary to add to this list the rest of chicken breeds. There is no information on Pogrmuša, it is considered as extinct, though it must be practically proved.

Sombor Crested

This breed was created in the period from 1900 to 1922. This extraordinary hen is known for laying 200-300 eggs per year. The cock weighs 4 kg and the hen up to 3 kg. Sombor Crested was made by breed crossing of Houdan, Sulmtaler with domestic chicken living near Sombor, Vojvodina, the northern Serbia.

Energetic, elegant, harmonious lines of the body; characteristic of the breed is tuft on the head. It is of medium size and mustn't drop into eyes; the bird is permanently in seek of food. The breed is very resistant to diseases, with early age of maturity, light on its legs, a good laying hen, produces meat of good quality, yellow skin. The body is long and broad, of the trapeze form with a slight sagging backwards. The neck is long and slightly curved forwards, strong and well feathered. The back is long and broad (flattened as seen from above), with a slight slope towards the tail. Shoulders are broad and rounded. The wings are of the average length, close to the body, keep horizontal position. The saddle is broad and well developed.

The tail is of the average length, lowered at an obtuse angle to the back, opened, with the thin sickle-shaped feathers of an average length. The chest is broad and raised, slightly convex and nicely rounded. The abdomen is big and broad.

Grittner et al (2021) writes that the number of birds in the breed is 273, and according to FAO stat (2020) it was between 500 and 1000.

Detailed local risk status (according to FAO): Endangered maintained.

Banat Naked Neck

Cirkl, (1980) writes that Banat Naked Neck breed was raised in Banat. He considers that this breed was created, if not directly but indirectly, by Erne Kiš, executed in 1849, the military commander under the Hungarian Premier Kossuth Lajos. Erne Kiš owned many birds of that breed so they quite possibly spread out in the whole Banat.

Strong bird of a medium size, good temperament, with a peculiar type of neck. Animal of this breed is very resistant to diseases, can tolerate bad environmental conditions and poor feeding. The birds mature early. The body is of an average length, oval. Neck is without feathers. The older type's neck is naked to the crop; the new type carries some feathers around the crop.

The back is of an average length, straight and broad. Shoulders are rounded and well developed. The wings keep horizontal position, close to the body.

The saddle is broad and well developed. The tail is of the average length, at an angle of 45 degrees to the back, with the sickle-shaped feathers of an average length and breadth. Chest is round and wide. The abdomen is big and broad. Head is medium sized, oval, with some feathers on the nape. Weight: cock = 3, 2 kg to 3, 7 kg; hen = 2, 2 to 2, 7 kg.

Grittner et al. (2021) write that the bird's number of this breed is 522, whereas by the FAO stat (2020) data the bird's number makes from 1000 to 2000.

Detailed local risk status (according to FAO): Vulnerable.

Svrljig Hen

Lukanov (2012) (<http://www.avculture-europe.nl/nummers/12E06A07.pdf>) writes that Svrljig Hen is an old Serbian breed originated around Svrljig on the south-west of Serbia at the beginning of the 20th century.

This bird is of medium size, strong, with good temperament. The body is of an average length, horizontal position. Neck is thin, long with slight slope towards beak. Back is medium long, with distinct saddle. Shoulders are broad and rounded.

Wings are close to the body, strong and with enough feathers and enabling bird to fly. Tail is high and in shape of fan. Breasts stick out, of a rounded form. Abdomen is big and broad. Head is of medium size. Weight: cock = 2 – 2,5 kg, hen = 1,2 – 2 kg.

Grittner et al. (2021) says that population number of Svrljig Hen is 82, whereas by FAO stat (2020) data is: 300 - 500 birds.

Detailed local risk status (according to FAO): Critically endangered.

Kosovo Singer

Bajkov, (1930) writes that birds of a breed named “Musical” occur in the South of Serbia. These birds are able to sing very nice and quite long. Bajkov writes that he met this breed in Russia, it was named “Giljanskaya”, and as there is a place named «Gnjilane» near Vranja in the South of Serbia, he thinks that these birds were brought into Russia from Serbia. This breed actually is non-existent. The breed was very old, originated from Kosovo in Serbia and spread over central and southern parts of Serbia and Macedonia. Main characteristic of breed is song of roosters lasting 10 to 40 seconds. Song starts very loud and towards the end it becomes not so loud, equal tone sounding like ship siren. The bird is a little above average size. Its characteristic is straight crest slightly bent towards the beak in the front. Crest is of bright red color. Tail is harmonious, well closed. The body is of cylindrical shape. Back is short and wide and almost horizontal with slight slope towards the tail. Neck is extremely long, strong and covered with feathers. Ear lobes are red and of medium size. Double chins are medium size and of bright red color. Weight: cock = 2,5 – 3,3 kg, hen = 1,8 – 2,2 kg. In 2015 the breed Kosovo Singer was put into European List of domestic birds under #754 as a Kosovo breed due to the political reason. (<http://www.entente-ee.com/wp-content/uploads/Seltene-Rassen - EN .pdf>).

Grittner et al (2021) write that there is no population data. FAO stat (2020) - no information on local risk status

Vojvodina Toy Hen – Kredilka

This very old breed of poultry was brought to the territory of today's Vojvodina in the 16th century when Turk people came to Pannonia valley. The standard for the breed was written and adopted by Yugoslavian Association of stockbreeders in 1979 (Šomođi, 2021). Rudolf Cirkl published the book "Decorative birds" in 1980 with the standard for dwarf chicken) in Vojvodina. Breeders also use the name "kredlika".

It is small, temperamental and harmonic, with proud posture. The head is decorated with tuft. The bird has a lush tail, protruding chest and multi-coloured plumage. Due to its dwarfish size it is bred as decorative bird.

There is no population data, no information on local risk status.

Sandzak singer

Lukanov (2017) writes that in 2014-2015 there appeared a new breed similar to Kosovo Singer - Sandzak singer or Rogash. These birds are bigger than Kosovo Singer: rooster = 3,5 – 5 kg, hen = 2,5 – 3 kg. They have long legs with broad feet, and a vertically posed tail. Long and strong neck with nice feathers. They can be in various colours: white, blue, black etc. It is considered that breeds Kosovo Singer and Berat (the last one is from Bosnia and Hercegovina) were used for breeding Sandzak Singer.

There is no population data, no information on local risk status.

Grudash

This breed appeared in 2013 – 2014 in the South of Serbia in the village Grudash of Zitoradja municipality in Toplica region. The main breed features: five fingers (Polydactilia) and a small tuft on the head (Portić, 2021).

There is no population data, no information on local risk status.

Goose

The regulation on the list of genetic reserves of domestic animals of Ministry of Agriculture has only one variety of goose: Goose domestic.

Grujić (1928) mentioned 3 breeds of geese for Serbia: Danube tufted goose, Novi Pazar goose, Srem goose.

There are four breeds of geese in Serbia today: Shumadia goose, Danube tufted goose, Novi Pazar goose and Srem goose (Association of Small Animal Breeders of Serbia, 2021).

Shumadia goose

This breed was considered to be extinct in the middle of the 20th century until in the years 2018 and 2019 a flock of geese was found in Šumadija (central Serbia) (Portić, 2021). The birds were found in Šumadija, Kragujevac, Batočina, Lapovo and in the Lepenice river basin. The birds are of average size, with strong body, good temperament and feebly marked muscles.

The body is of a medium size, horizontal by females and with slight slope towards the tail by males. Neck is of the medium length, straight and a bit slanted.

The back is broad, horizontal by females and with a slight slope towards the tail by males. Shoulders are broad and rounded. The wings are strong, of medium size, close to the body, well feathered. The tail is broad and straight. The chest is rounded, sits high and raised.

The abdomen is big and broad, roundish with small bulges on the lower part.

The head is not big, oblong and roundish.

Weight: male = 5 – 6 kg, female = 3 – 5 kg. Lay 18 – 25 eggs per one laying.

There is no population data, no information on local risk status.

Danube tufty goose

Light type of low weight, has a characteristic curly plumage that goes almost all the way to the ground. Plumage on the back, wings, and tail root is long and curly.

The body is relatively short, sits low and maximally horizontal. The neck is of a medium size, slightly slanted. The back is quite broad, well rounded, slightly sloping. The shoulders are slightly curved. The wings are strong, of a medium size, close to the body. The tail is short, closed, sits horizontal. The chest is roundish, big, raised a bit up. The abdomen is fatty and broad, with small bulges on the low part. The head is not big, oblong and roundish, with tuft.

Weight: male = 5 – 6 kg, female = 3 – 5 kg. Lay up to 25 eggs.

There is no population data, no information on local risk status.

Novi Pazar goose

It is the largest domestic goose in Serbia. Its characteristic is grey plumage on wings, back and neck, and white in other parts. Many geese have white neck plumage, and grey head plumage. They have all the signs of the primitive breed. It lays up to 15 eggs, hatching instinct is well developed, and goose takes a good care of gosling. Some of them can get the weight up to 9 kg for males and 7 kg for females.

They are bred near Novi Pazar, Kraljevo and Kragujevac villages.

There is no population data, no information on local risk status.

Srem goose

This type is heavier and looks more massive, has fluffy feathers. The body is very strong, slightly slanted.

The neck is of a medium length, straight, slightly sloping. The shoulders are slightly curved. The wings are strong, long, tightly close to the body, go up to the tail. The tail is short and narrow, closed, and keeps

horizontal position. The chest is roundish, plump, raised up. The abdomen is fatty, broad, roundish with small bulges on the on the low part. The head is big, oval and oblong with the bulge of moderate size. This breed is farmed in Vojvodina и Srem villages.

Weight: male = up to 9 kg, female = up to 7 kg. Lay up to 25 eggs.

There is no population data, no information on local risk status.

Duck

Regulation on the list of genetic reserves of domestic animals of Ministry of Agriculture has only one breed of Domestic Duck. There are two duck breeds in Serbia today: Domestic Duck and Novi Pazar Fighting Duck (Association of Small Animal Breeders of Serbia, 2021).

Domestic Duck

This duck is rather small (a bit bigger and more compact then the wild duck), with perky temper.

The body has a boat form with rounded low part and slightly curved upper part. The neck is of medium length, slightly curved. The shoulders are rounded. The wings are long. The tail is closed, in horizontal position. The chest is slightly raised up and well rounded. The abdomen is slightly curved, smooth. The head is oblong, the forehead line is feebly marked, and there is a small ball cap on the nape. These birds are bred all around Serbia.

Weight: male = 2 – 2,5 kg, female = 1,5 – 2 kg. Lays round 600 eggs, white colour of eggshell. There is no population data, no information on local risk status.

Novi Pazar Fighting Duck

This breed has so called portico with its peak under the beak root and the side lines going down till the lower line of the body, sometimes can reach the tail. Duck colours: grey, white, black, brown and wild. Both male and female heads are large enough and males are slightly coarser. The eyes colour brown, often dark brown, the eyes colour of the white duck can be lighter. The beak colour is from dark-green to yellow, the beak of the lighter colour ducks is almost orange. These birds are bred in the western part of Serbia, near Novi Pazar village. They have a long tradition of breeding.

Weight: males = 2 – 3,5 kg, females = 1,8 – 3 kg.

There is no population data, no information on local risk status.

Turkey

The Regulation on the list of genetic reserves of domestic animals of Ministry of Agriculture has only one breed: Domestic Turkey. Nowadays there is a breed Dobric Turkey in Serbia.

Dobric Turkey

This breed was presented at the 6th LIPSIA World Pure-bred Poultry Exhibition in 1936. It is believed that this breed appeared two hundred years ago in Vojvodina (Northern Serbia) in Dobrica town near Panchevo to the South from Banat.

Strong body, harmonic lines and robust look. This turkey has good temperament, especially at mating season, when they are producing loud sounds. The head is medium-sized, the males have slightly larger head. The skin is covered with small pimples. The eyes are light brown, with double eyelids. The beak is strong, slightly curved, yellow-grey. There is a growth above the beak, which by males can increase in size several times during the mating season, whereas by females it increases much less. The face is red. The colour changes by males before mating from blue to white. The neck is long, strong, from the head till the middle of the neck is featherless, the skin is covered with pimples. The breast is wide, well developed, bulging. Turkeys have on breast well developed tassel. The back is broad, well filled, keeps horizontal position, has good plumage. The wings are well developed, covered with firm feathers, closed and tightly pressed to the body. During mating the bird is flapping the wings and hitting with them the ground. The tail is well developed, with the strong feathers; it is quite big by males and during the mating takes the form of a big fan. Thighs are very big, strong, covered with thick plumage. The legs are long, strong, of pink-blue colour, the fingers are strong, and there are four fingers on each leg. There are also ash-grey and yellow colour Turkeys. The endings of feather and tail are white, and their edges are black. The skin is white.

Weight: male = 5 – 8 kg, female = 3 – 5 kg. Lays 40 eggs.

There is no population data, no information on local risk status.

Guinea fowl

The Regulation on the list of genetic reserves of domestic animals of Ministry of Agriculture has only one breed that is Domestic Guinea fowl.

Domestic Guinea fowl.

Relatively small head is peculiar feature for Guinea fowl. It has a small horny-like outgrowth of grey-black colour on the head instead of the comb. This outgrowth is more pronounced by males than by females. Head and upper part of the neck are bare. Face is blue-white, double chins are small, round and red. The beak is dark-pink with the reddish ending. Males have larger chins than females. Body is elongate, of round shape; wings are firmly stuck to the body, moderate size, strong and roundish. The tail is relaxed and short. Legs are of medium length, strong and do not have spurs. The body is covered with thick and abundant plumage. Most popular plumage colours are ash-grey, sometime white, blue and violet. Average weight for males = 1,8 – 2 kg, for females = 1,7 – 1,8 kg. Average egg production per year is 100 – 150. They breed this kind of bird all around Serbia.

There is no population data, no information on local risk status.

Conclusion

Serbia is rich in indigenous breeds of poultry. There are 16 breeds named in this article. The Regulation on the list of genetic reserves of domestic animals adopted by Ministry of Agriculture of Serbia should be extended with the breeds listed in this article for their protection and in order to increase subsidies for indigenous breeds.

Only Kosovo Singer is listed on the European list of the poultry breeds, so other indigenous poultry from Serbia will need to be registered in the near future.

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