

Estonian Grey

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English translation by the Author

The Estonian Grey (*Eesti Hall lehm*) is a native bovine population with limited diffusion, not officially recognized, but known by the farmers as a good milk producer and long since described in popular traditions, literature and paintings. The land of origin of the breed is Estonia, a republic on the Baltic Sea, once a part of the Soviet Union, independent since 1991 and a member of the European Union since 2004, having a population of about 1.3 million inhabitants and covering an area of about 45,000 km², equal to the joint area of Tuscany and Emilia-Romagna.

Three native dairy breeds are reported in Estonia by the FAO database, Domestic Animal Diversity Information System (DAD-IS), the Estonian Native (*Eesti maatõug*), with about 700 heads in 164 herds, the Estonian Red (*Eesti punane*), derived from the Native with Angeln and Danish Red influence, counting 13,000 heads in 300 herds, and the local selection of Holstein (*Eesti holstein*), with 62,000 heads in 474 herds. According to Eurostat, Estonia's total cattle population was 251,300 heads in December 2017, with a more or less stable trend since 2001, and in 2017 35,230 cattle were slaughtered in the country.

Historical facts

The thirteenth century Chronicles of Henry of Livonia (*Heinrici Chronicon Livoniae*), about the wars among Livonia, Estonia and Russia, report of grey cattle stolen during the war-trips from each other. Other historical evidence on grey cattle in Estonia comes from ancient images, such as a painting by Helena von Wrangel (1835-1906), a member of St. Peterburg Art Academy, representing a group of typical native looking cattle at pasture, one of which is grey, and a 1919 coloured postcard showing a dark grey cattle. Even folk songs talk of grey cattle and in the terminology used by the Swedish-speaking community, in west Estonia and on the islands, adjectives referring to grey cattle can be found.

Can we define it a breed?

The Estonian grey is not officially defined as a breed; actually it is not mentioned by DAD-IS, nor by the FAO books by French and Dmitriev on farm animals breeds, nor by Mason's dictionary of livestock breeds. There is no breeders' association, no herd-book nor anagraphic registry, and no biometric measurements are recorded. On animal registers, grey cattle are usually described as "crossbred" or "dairy breed", or even as "Limousine".

On the other hand, Annika Michelson, teacher of environmental and agricultural eLearning at the Häme University of Applied Sciences, in Mustiala, Finland, began, in the summer of 2005, a methodical research of cattle reared in the Estonian farms, counting a few dozens of animals, within the framework of her academic teaching, focused on traditional breeds and plant varieties. The Estonian NGO Maadjas, which deals with the protection of plant varieties and local animal breeds, also took care of Estonian grey cattle.

In search of the Grey

Annika Michelson placed classified ads on the media asking for information on grey cattle, also related to the past, and looked up the ads on cattle for sale. The memories, usually from elderly farmers or their relatives, have allowed to go back to the twenties of the twentieth century. A first survey made it possible to identify fifty animals and the first herd was that of Alavere, in Harju county, in the north of the country, some more than 50 km away from Tallinn. The herd is well-known in the area because it can be seen from the road while grazing and passing drivers use to take pictures of the animals. In summer 2006 the search was speeded up, allowing to retrieve a further herd in Väike-Maarja municipality, in Lääne-Virumaa county. The event raised a big media interest in newspapers and radios, generating a further increase in reports of grey livestock. In 2010, twenty herds had been found in six different counties, scattered throughout the country, with 60 cows, inseminated in the last twenty years by non-grey bulls, in some cases with Blue Belgians. The animals were referable to twelve lines. The farms were all small, with a maximum of 18 heads per herd, and often the milk produced was only for own consumption, due to the low number of animals or to the lack of the hygienic-sanitary requirements imposed by European standards, both in the stable, both in the milking room.

Current situation

In June 2018, after much time has passed from Michelson's research, the existence of only one herd is reported, reared in Alavere, consisting of 27 adult heads, of which two bulls, plus an unknown number of calves. Three of the cows showed a black spotted coat, although they were born of grey dams, and they were slightly larger than the others. All the grey cattle in the herd showed black mucosae, hooves, tips of the horns and tassel of the tail. The withers height was small and seems to range between 110 and 120 cm, and in any case it did not exceed 130 cm.

Productions

Cows calve easily, without assistance, and are good milk producers, the udder is well shaped, white or pigmented, usually with black teats. Milking is easy, the milk has yellowish nuances, due to the high fat content, and the flavor does not change on the progress of lactation. Calves are often the result of crossing with meat breeds, but no data are available on their traits.

Morphology

According to breeders there are two types of grey cattle, one with a light grey coat and long limbs, and one dark grey with short limbs; the female of this last type would be better milk producers. The coat is blue grey or ash grey and becomes lighter with age. Often the head and the hind limbs show a lighter colour. The calves at birth are dark grey or black and in the second month of life they become grey. Just above the foot there is a ring of white hair, considered an index of good quality of the hoof, which allows to see from birth if the newborn calf is grey. Many specimens have a dark stripe on the backline, and the rather long hair forms, especially in winter, a mane on the back, both typical traits of native livestock. The grey cattle have a long trunk, strong limbs, large bones, thin skin, horns bent like in a half circle, directed forward, but some animals have horns similar to those of the rams, turning around and then pointing out to the side. Hooves grow slowly and it is not necessary to trim them. The grey cattle have a calm, non-scary temperament, even if they can become nervous. They move in a very silent way and perhaps this

characteristic has generated the name of *merilehmad* (sea cow) and *merehärg* or *merihärg* (sea bulls) attributed to them. These cattle would be a gift from the elves, supernatural creatures. The Estonian poet Marie Under (1883-1980), repeatedly nominated for the Nobel Prize for Literature, dedicated them a poem called *Merilehmad*, published in the "*Õnnevarjutus - Ballaade ja legendid*" collection (1924-1929). According to local legends, widespread in a country with a strong presence of animist worships, they would be able to make themselves invisible.

Genetic comparison

In 2011 Li *et al.* compared 17 DNA microsatellite loci of 11 Grey Estonian cows with 40 heads each of Estonian Native, Estonian Red, Latvian Blue, Latvian Danish Red and Latvian Brown and with 43 Finnish Holstein-Friesian heads. Ten of the grey cows were genetically very similar to the Holstein-Friesian breed and one to the Estonian Red breed. The grey coat and some morphological similarities lead to wonder if the Estonian grey belongs to the Podolian strain, which is widespread in Italy and in the Balkans. Lacking a direct comparisons, some factors pro and against the "Podolian" hypothesis can be examined.

Pro the "Podolian" hypothesis

The traits supporting the "Podolian" hypothesis are: grey coat, black pigmentation of the skin and mucosae, in particular of the muzzle (which in Alavere animals was always slate black), periocular mucosae and eyelashes, hooves, tassel of the tail and the tips of the horns. In many specimens the general appearance, especially of the head, seems to look alike that of Podolian cattle. A possible explanation of the closeness to the Grey Steppe strain comes from what was reported by the Estonian Veterinary and Food Board (*Veterinaer ja Toiduamet*), according to which, in the 50s and 60s, Ukrainian Grey (*Seroukrainskaya*) cattle, of Podolian strain were introduced into the Baltic country. In addition, even in neighboring countries there are grey breeds, such as the Latvian Blue breed and the Lithuanian Grey native, counting about 3,000 heads. The native Icelandic breed can also show a grey coat, as well as black, red, brown and white, while also in Sweden native grey livestock can be found.

Against the "Podolian" hypothesis

The facts that contrast with the "Podolian" hypothesis are the prevalent dairy purpose of the cattle, not found in any of the Podolian or Steppe breeds, who have an estimated milk yield between 1,000 and 2,000 liters per lactation, with a very short duration (4 or 5 months) of lactations. The milk is for feeding the calves, although in some situations the cows are traditionally also milked, to contribute to the farm economy, as in the case of Italian Podolica, which provides milk for the production of Caciocavallo Podolico cheese, often with the addition of milk from specialized dairy breeds.

It must say that the animals reared in Alavere do not have marked dairy traits, and in any case in the Baltic and Scandinavian countries the precarious economic conditions in the past could have driven the selection towards the triple purpose, even in this case to contribute to the family economy of small marginal farms that reared them. In the photos taken in the past, the Estonian Grey cattle show traits that are sometimes very different from those of Podolian cattle: a low morphological similarity, a frequent light pigmentation of the hooves and occasionally of the muzzle. Another point of divergence is the reduced size, which anyway is also found in some

breeds of the southern Balkans, such as the Greek Steppes (*Sykià* and *Katerini*) and Romanian Grey Steppe (*Sura de stepă*). Even the size of the horns, about 10 cm long and pointing forward, are much lower than those of the Steppe breeds, not only the *Maremmana* and the *Hungarian Grey*, endowed with particularly wide horns, but also of the breeds with smaller horns (*Marchigiana*). In addition, the Podolian breeds calves have at birth a fawn coat, which turns grey around the age of weaning, while Estonian calves at birth are black or dark grey. The grey colour of the coat may not be the characteristic of an ancient cattle breed, but the result of a mixture of colours, which could be confirmed by the fact that grey cows sometimes give birth to grey and black-and-white calves in the same birth (Li *et al.*). The grey coat seems to be dominant over that of Estonian Holstein and partly over that of Estonian Red.

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