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Arctic Sheep Breeding in Russia: History and Prospects

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Abstract. The article analyzes the phenomenon of Arctic sheep breeding in Russia. In pre-Soviet times, sheep farming spread across the vast territory of the Arkhangelsk province, up to the coasts of the Barents and White Seas. Interest in sheep breeding in the North was shown not only by the immigrant population, but also by the indigenous Sami people. New information about the use of sheep in the farms of the Kola Peninsula in the early 20th century, obtained from the State Archives of the Murmansk Oblast, is being introduced into scientific circulation. Local features of animal husbandry and feeding, as well as market prices for sheep products, are presented. For a long time, this branch of animal husbandry was tied to the needs of the household. During the Soviet era, this experience was rethought, as a result of which sheep breeding became one of the priorities of agricultural production in the Murmansk Oblast. However, in the 1950s and 1960s, as a result of a shift towards cattle, pigs and poultry, the sheep population in the region declined. The transformations of the 1990s led to stagnation and almost complete loss of this branch of animal husbandry. Historical experience is important in modern conditions for the revival of sheep farming in the Arctic territories.

Keywords: Arctic, Murmansk Oblast, Far North, agriculture, livestock, sheep

Introduction


The consequences of the 1980s–1990s crisis led to the disappearance of entire branches of animal husbandry in certain regions of Russia. In particular, one of the destructive results was the loss of sheep breeding in the Arctic zone of the Russian Federation, where it had existed for a long time.

Currently, in order to assess the prospects and choose the right path in the face of modern challenges, it is important to refer to historical experience.

There is a widespread opinion among experts that sheep farming in the Far North has proven its potential to become a “traditional branch of animal husbandry” [1, p. 4]. This approach, however, is not universally shared. In the specialized literature, there are assessments that cast doubt on this fact, declaring sheep farming in the Far North to be “completely insignificant” as it was allegedly decided here to “keep sheep usually as an addition to cattle” [2, p. 1; 3, p. 224]. The-

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se judgements are obviously based on the application of general criteria to northern and southern regions, which is inherently incorrect. Arctic ecosystems are more vulnerable, and humans are more dependent on them. The introduction of sheep into the households of the Far North can already be considered a phenomenon or an achievement that helps people to develop the territory. Therefore, it is inappropriate to substitute the northern reality with the southern one.

It is important to substantiate the need to refer to historical experience in the process of developing new regional strategies for the revival of Arctic sheep breeding in Russia.

In the course of their research, the authors used methods developed by modern science: statistical analysis, zootechnical assessment of sheep productivity, and extrapolation. The main sources were documents from the State Archives of the Murmansk Oblast (SAMO), as well as statistical yearbooks and compilations. In order to understand the current situation in the Arctic, an analysis of the “Strategy for Developing the Russian Arctic Zone and Ensuring National Security until 2035” was conducted.

One of the areas of the Arctic zone of the Russian Federation where sheep breeding became a popular form of domestic farming even before the 1917 revolution is the Murmansk Oblast. Its territory occupies the Kola Peninsula, which lies almost entirely above the Arctic Circle and is washed by the waters of the Barents and White Seas. The unique natural location of this region is determined by the warm Gulf Stream, which prevents the sea bays on the northern Murmansk coast from freezing in winter, making the Arctic climate milder. Administratively, it was the Kola district, and since 1899 — the Aleksandrovskiy district of the Arkhangelsk province.

Sheep breeding as an element of the economy in the Far North of Russia

Statistics can dispel any doubts about the importance of sheep breeding for the northern regions of Russia. According to Table 1, in 1913, the Arkhangelsk province had the smallest number of sheep in the Aleksandrovskiy district, i.e. in the Kola North (3,865 head), which, given the vast area of the region, creates the illusion of the “insignificant” role of sheep farming in the local economy [4, pp. 62, 82; 5, p. 47]. However, when considering the number of sheep per rural inhabitant, it turns out that the Kola North occupied a significant position in the province: there were 36 sheep per 100 rural residents, which was higher than, for example, the Kholmogorskiy, Arkhangelskiy, and Shenkurskiy districts, which traditionally focused on cattle. Sheep adapt well to various climatic zones, including the Far North, which explains their spread in such remote areas as the Mezen, Pechora, and Aleksandrovskiy districts. Moreover, the number of sheep per 100 rural inhabitants in these extreme locations was only slightly lower than the average for the Russian Empire (51.0).

Table 1

Number of sheep by districts of the Arkhangelsk province in 1913 (excluding cities and towns), heads

Districts	Number of sheep	Number of sheep per 100 rural inhabitants	Number of sheep per 100 head of cattle
Shenkurskiy	25 616	25.9	95.7
Pechorskiy	22 181	47.5	113.6
Kemskiy	19 411	41.8	176.8
Onegskiy	18 847	41.2	137.8
Mezenskiy	18 057	55.6	143.6
Pinezhskiy	15 101	39.5	171.3
Kholmogorskiy	4 430	9.5	36.8
Arkhangelskiy	4 300	8.9	38.6
Aleksandrovskiy (Kola Peninsula)	3 865	36.1	214.0
Total	131 808	31.8	112.4
For reference: The Russian Empire	-	51.0	≈140–144

The already mentioned view of northern sheep farming as “supplementary” to other branches of animal husbandry also requires a critical approach. Calculating the number of sheep per 100 head of cattle reveals that in 1913, the highest rate of the Arkhangelsk province was in the Aleksandrovskiy district —there were two sheep per head of cattle, which was higher than the average for the Russian Empire (see Table 1). This shows that sheep farming was being transformed into a basic element of the household economy more actively in the Kola North than in other districts of the province. Perhaps it was easier to keep sheep than reindeer. On the other hand, the opinion of Professor N.N. Pelekhov, who, in 1925, assessing the prospects for the development of sheep breeding, suggested that in the North “sheep could replace pigs in many places” [6, p. 4], can be considered correct.

Regarding the adaptation of sheep to the Far North, it should be emphasized that the spread of these animals affected not only continental territories, but also those directly bordering the Barents Sea. The warm Gulf Stream current penetrating here created quite viable conditions on the Murmansk coast, where, during the “government colonization” of 1868–1917, numerous domestic animals, including sheep, appeared on private farms. For example, the family of Pechenga colonist Alexander Ivanovich Ananyin owned three cows, nine sheep, and six reindeer, while the family of Teriberka colonist Nikolay Konstantinovich Apodosenkov kept three cows, five sheep, and four reindeer [7, pp. 136, 157]. There were many such examples.

During a statistical survey of Murman in 1899–1902, sheep were found in various coastal areas [8, pp. 4–5, 112–113, 175, 183].

Table 2

Number of sheep on the Murmansk coast of the Barents Sea in 1899–1902

Area	Number of sheep, heads	Cost of all heads, rub.
Eastern Murman	152	459
Kola Bay	60	206
Western Murman	535	1802

Table 2 shows that sheep were numerically more prevalent in Western Murman compared to Kola Bay and Eastern Murman. This could be due to both the milder natural and climatic conditions in this area and the proximity of the state border. Sheep were brought to Murman not only by the population from the regions of the Russian North, but also by immigrants from Finland and Norway, who settled most actively in Western Murman during the period of “government colonization”.

Sheep breeding on the Kola Peninsula in pre-Soviet times

Sheep farming began to develop among the Sami, the indigenous population of the Kola Peninsula, in the 18th century. As Professor I.F. Ushakov noted, “winter headgears and clothing were made from sheepskins, while wool was used to make varegs and pisyags (blankets-capes)” [9, p. 179]. It can be assumed that sheep farming was adopted by the Sami from the Russian population, inhabiting the Kola Peninsula since the 15th century. However, I.F. Ushakov expressed a different opinion — that it spread from northern Norway, since the Sami had “Danish breed” sheep [10, p. 42].

There is relatively little information in the scientific literature on the state of sheep breeding in the Aleksandrovskiy district of the Arkhangelsk province. An unknown document that sheds light on this issue was discovered in the State Archives of the Murmansk Oblast (SAMO) ¹.

In December 1910, the Department of Agriculture and State Property of the Arkhangelsk Province sent a questionnaire on the state of sheep farming to the volost administrations. We have obtained a document with answers compiled in the Kuzomenskaya volost of the Aleksandrovskiy district (the southern part of the Kola Peninsula, covering the Terskiy coast of the White Sea).

By 1911, there were 582 sheep in the households of the Kuzomenskaya volost, which accounted for 12.7% of the total number of sheep in the Aleksandrovskiy district [11]. As noted in the questionnaire, there were approximately two sheep per household. This explains the exclusively domestic use of sheep products, without any claim to profitability. It was not customary to build special sheepfolds here: in winter, the sheep were kept in barns near the house without special bedding, and during the rest of the year they were left to graze freely, “without supervision”. Shearing of sheep in the summer was uncommon. In addition to hay, the questionnaire indicates reindeer moss (white moss) as food. Feed and water were given to the sheep twice a day while they were in the barn. There was no special diet for ewes during pregnancy and after lambing. The “suckling period” of a lamb was defined as “six months or more”. The questionnaire asked, “What is the first food a lamb eats after its mother's milk?” The answer was, “They are not fed anything special.” A shortage of feed is indicated, especially in the spring.

The questionnaire contains data on the weight of animals: rams — up to 2 poods, ewes — up to 1 pood 20 pounds, half-year-old lambs — 20 pounds.

¹ SAMO. F. I-1. Invt. 1. Arch. 260. Sh. 7-8.

There is also information on the productivity of the animals. Each sheep produced from 30 pounds to 1 pood 20 pounds of meat and up to 10 pounds of “good quality” lard. Wool was sheared three times a year, from 1.5 to 3 pounds per animal.

The questionnaire contains information on skin processing. Sheepskin is not tanned, but is processed “at home” for personal use. Most of the sheepskin sold is untanned. No felted footwear is produced. Yarn is prepared for personal use.

The prices at which sheep products were sold are also listed: meat — from 3 rubles 50 kopecks to 4 rubles per carcass; lard — 15 kopecks per pound; wool — 60 kopecks per pound; sheepskin — up to 60 kopecks per piece.

The questionnaire noted that “local conditions prevented” full-scale sheep breeding.

In the second half of the 19th century, sheep farming spread to the northern coast of the Kola Peninsula — the Murmansk coast, which had been the main fishing base in the Russian Arctic (Barents Sea) for four centuries. As part of the “government colonization”, which began during the reign of Alexander II, the Murmansk coast transitioned from seasonal to year-round settlement, resulting in the growth of colonies with permanent residents [12, pp. 212–222]. Similar to the Terskiy coast, fishermen began to acquire livestock, including sheep [7].

Despite harsher natural conditions (and perhaps because of them), the level of sheep farming here was even higher than on the Terskiy coast. Participants in Murman’s statistical study of 1899–1902, modeled on zemstvo statistics, noted that in households keeping only sheep, they encountered special “sheep barns”, which they nevertheless did not call “sheepfolds”: “small and low, unheated; walls are made of boards, sometimes covered with turf to protect against the cold (waste in such sheds does not freeze); inside — wooden flooring; these sheds are kept clean, and manure is thrown out twice a day”. Common barns for cows and sheep were built under the same roof as the house; the entrance to the barn was from the seni (entryway). The careful arrangement of the barn was explained by the long winter: the animals had to be kept in the stall for up to six or seven months of the year.

Interestingly, the sheep were also fed seafood: seaweed, cod and haddock heads, and sometimes fresh and salted fish, cod liver, and discarded seal carcasses. A recipe for making a common feed for cows and sheep is described: “Hay and reindeer moss (or hay alone), as well as dried and salted fish heads, and sometimes fish entrails, are placed in a cast-iron cauldron, which is usually built into the stove in the barn. Everything is covered with water and boiled until the bones are cooked and become soft.” Before giving it to the cattle, the feed is sometimes sprinkled with flour [8, pp. 191–193].

The main area of sheep breeding on the Murmansk coast was domestic farming. Even the wealthy Trifono-Pechenga Monastery, located on Murman, which had considerable capital and developed advanced technologies of its time on its territory, did not dare to engage in entrepreneurial practice in the field of sheep farming: according to the “cattle breeding” records, the monks ac-

quired a small flock of sheep (22 heads in 1898), but after a few years they abandoned their breeding, retaining reindeer and cattle as their livestock priorities ².

None of the descriptions mention the breed of sheep in the Kola North in the early 20th century, which can obviously be explained by the absence of livestock breeding specialists in these areas at that time.

Arctic sheep breeding and the metamorphosis of modernization

In the 1920s, the scale of sheep farming was quite modest. Analyzing the state of the Murmansk province, economist and statistician V.K. Alymov wrote in 1925: "There are approximately 3,900 sheep in the volosts; local sheep produce 5-6 pounds of wool per year; we will assume 4 pounds; the value of raw wool is approximately 1 ruble per pound. Thus, sheep farming will generate an income of 15,000 rubles per year." ³

Positive experience in sheep farming on the Kola Peninsula developed later, when Soviet modernization spread to the Far North and agricultural production appeared in the region alongside household farms.

An unprecedented experiment was carried out in the Murmansk Oblast to transform the polar region not only into an industrial, but also an agricultural complex. However, the agrarization of the Arctic was not a self-sufficient goal, but served the purpose of urbanization. The common perception that the Far North during the first five-year plans was a "total Gulag" is fundamentally incorrect. The Murmansk Oblast became the first Arctic region where voluntary labor was used alongside forced labor, and camp settlements were replaced by full-fledged cities, towns, and villages. The cultivation of an agricultural landscape around industrial cities pursued an economic goal: could this reduce the expense of supplies by eliminating or at least reducing the cost of northern deliveries? The transformation of sheep farming into one of the priority areas of agricultural production corresponded to this goal.

By 1940, there were already 15,100 sheep and goats on farms in the Murmansk Oblast; a decade later, this number had increased to 16,200 [13, p. 55]. As was stated in 1952 by P.I. Pirogov, Chairman of the Terskiy District Executive Committee, a sheep farm had been established on every collective farm in the district ⁴.

The achievements of the Murmansk Oblast in the field of sheep breeding were noted in the Resolution of the Main Committee of the All-Union Agricultural Exhibition, approved by the Coun-

² SAMO. F. I-1. Invt. 1. Arch. 7. Sh. 116; Ibid. Arch.14. Sh. 61.

³ Alymov V.K. How does the rural population of Murmansk province live? (About their income and earnings). *Polyarnaya pravda*, 1925, March 10, no. 31, p. 2.

⁴ Pirogov P. A story about the past and present of the Terskiy Pomor fishermen. *Polyarnaya Pravda*, 1952, October 19, no. 250, p. 2.

cil of Ministers of the USSR and the Central Committee of the Communist Party of the Soviet Union in Resolution No. 624 of 3 April 1954 ⁵.

The project for large-scale sheep breeding on the Kola Peninsula seems not only bold, but also, in a sense, voluntaristic. It is a generic product of national policy aimed at developing sheep farming throughout the country. Meanwhile, if the specific characteristics of the northern territories had been taken into account, the implementation of this decision would have required separate clarifications and additional investments. Therefore, it is not surprising that some leaders in the Murmansk Oblast believed that sheep breeding in the region was unprofitable.

On 30 July 1952, the newspaper *Polarnaya Pravda* published an anonymous article entitled “Anti-State Attitude to an Important Matter”, which criticized the position of opponents of sheep breeding on agricultural enterprises in the Murmansk Oblast. The head of the regional agricultural department, N.V. Trusov, and the chief livestock specialist, E.V. Bystryakova, mentioned in the article, believed that it was more promising to invest in other areas of animal husbandry — dairy and poultry. The article noted that a number of collective farms in the Murmansk Oblast did not have necessary conditions for keeping sheep, leading to the death of animals. In 1951, almost a quarter of all lambs and more than 20% of adult sheep died. The article considered this situation not simply as negligence, but as “anti-state attitude” on the grounds that the number of sheep in the personal use of collective farmers was steadily increasing. One of the problems was related to breeding. It was noted that discussions about breeding a “local semi-coarse-wool sheep” better suited to the conditions of the Kola Peninsula “have been going on for many years” ⁶.

Meanwhile, the position against the development of sheep breeding in the region gained new supporters over time. In the 1950s and 1960s, the Murmansk Oblast saw a diversification of livestock farming: while maintaining the level of traditional reindeer husbandry, there was a shift from sheep to cattle, pigs and poultry (Table 3) [13, p. 55].

Table 3

Livestock and poultry in the Murmansk Oblast in 1940–1990, thousand heads

Groups of farm animals	1940	1950	1960	1970	1980	1990
Cattle	7.0	9.7	14.1	15.9	31.0	40.6
Pigs	5.7	7.3	15.9	32.6	78.6	126.7
Sheep and goats	15.1	16.2	11.8	5.8	3.4	2.6
Birds	...	1.9	154.2	562.9	1934.0	2585.9
Deer	70.3	53.9	74.2	81.8	66.0	77.3

By the early 1980s, the sheep population in the region had fallen to the level of 1913. Subsequently, according to the data in Table 4, it declined even further, amounting to about 400 heads (including goats) in 2022 [14, p. 80].

⁵ From the Resolution of the Main Committee of the All-Union Agricultural Exhibition, approved by the Resolution of the Council of Ministers of the USSR and the Central Committee of the CPSU of April 3, 1954, No. 624. *Polyarnaya Pravda*, 1954, April 20, no. 93, p. 3.

⁶ Anti-state attitude towards an important matter. *Polyarnaya Pravda*, 1952, July 30, no. 179, p. 2.

Table 4

Livestock and poultry in the Murmansk Oblast in 2018–2022, thousands heads

Groups of farm animals	2018	2019	2020	2021	2022
Cattle	7.1	6.6	6.2	6.0	5.6
Pigs	8.0	6.9	6.7	1.8	2.4
Sheep and goats	0.6	0.5	0.5	0.5	0.4
Birds	28.7	32.7	2.0	11.6	1.7
Deer	58.2	58.3	58.7	58.9	57.1

In fact, it can be said that sheep farming has been lost from the agricultural production system of the modern Murmansk Oblast. It is hard to believe, but in the pre-revolutionary economy of the region, with a population of no more than 15,000 people, there were more opportunities for sheep breeding than there are now. The Soviet agricultural experience above the Arctic Circle has also been forgotten.

Conclusion

Developing new regional strategies for the revival of Arctic sheep breeding in Russia is not only possible, but also necessary, taking into account historical experience. However, the situation with sheep farming in the Murmansk Oblast remains challenging. There is no interest in reviving this industry either on the part of the region, or on the part of agribusiness, which is partly due to the lack of a specialized experimental and scientific institution of the agro-industrial complex capable of addressing issues such as selection and feed supply.

Currently, existing sheep farming practices are being monitored in the Arctic territories of the Komi Republic. A gene pool herd of Pechora semi-fine-wool meat-wool sheep has been created at the Pechora experimental station. Various crossbreeding options are being tested here using gene pools adapted to the Far North [1; 15].

Yakutia has also recognized that “all the necessary conditions are available in the republic for the long-term development of this industry, including vast territories with a sufficiently rich feed base, practically unused by other livestock industries, and positive experience in acclimatizing sheep”. The Yakutsk Agricultural Academy has conducted experiments on the hybridization of domestic Buryat sheep with wild snow sheep [16].

One of the measures in the “Strategy for Developing the Russian Arctic Zone and Ensuring National Security until 2035” is to provide state support for projects to create livestock farms. There is an urgent need for a comprehensive assessment and coordination of scattered efforts to revive Arctic sheep breeding.

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