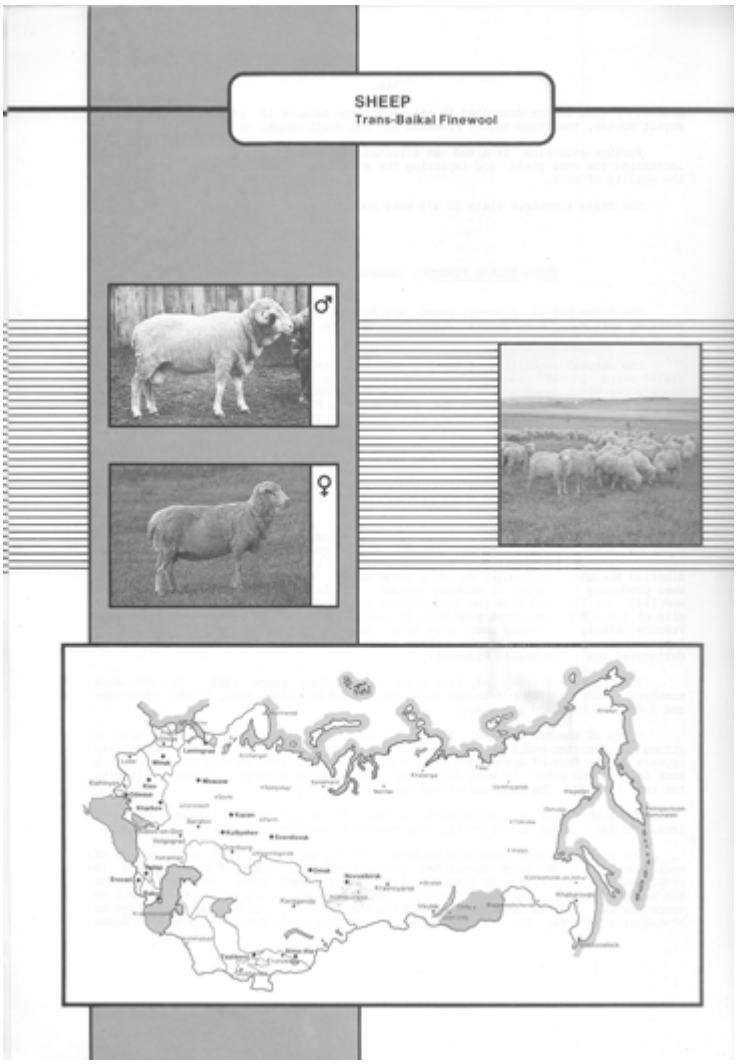


TRANS-BAIKAL FINEWOOL (Zabaikalskaya tonkorunnaya)

The Trans-Baikal Finewool breed was formed between 1927 and 1956 at Krasny Velikan, Karl Marx, Komsomolets state farms and on Kommunism and Russia collective farms of Chita Region.

The natural conditions of the Trans-Baikal area are severe. The temperature in winter drops to -40° to -50° C sometimes to -60°; the summer is hot, and the temperature often reaches 40° C or more; the mean annual temperature is -2° to -3° C. The number of frost-free days in the year is 70 to 80. The rainfall is 250-300 mm. Solar radiation is abundant; cloudy days are few. The vegetation on steppe pastures and hay meadows is scarce and consists mainly of short-stemmed grasses: wheatgrass (Aneurolepidium racemosum), fescue (Festuca sulcata), hairgrass (Koeleria gracilis), meadow grass (Poa) and others. The hay yield is 200 to 400 kg per hectare. In the past, mainly Mongolian and Buryat coarsewooled fat-tailed sheep were raised in this region. These sheep produced only 1.0-1.2 kg of coarse wool, but they were well-adapted to the severe local conditions.

Finewooled sheep first appeared in the Trans-Baikal area in 1831 when 316 Electoral and Infantado sheep were brought there. However, neither pure breeding nor crossbreeding was a success. Between 1927 and 1930 Précoce, Novocaucasian and Siberian Merinos were brought in on a large scale. They were mated to coarsewooled ewes producing crossbreds of various grades. The latter were bred inter se in 1943 and 1944. In 1947 and 1948 the best crosses obtained by inter se breeding had a wool clip of 3.2-3.5 kg when kept year-long on pasture. Later, in order to improve them, Précoce, Altai, and Grozny rams were used. Rigid selection of sheep of the desired type and their inter se breeding have resulted in the emergence of a new breed designated the Trans-Baikal Finewool.

The number of sheep of this breed has doubled since 1964. In 1980 they numbered 4 360 534 (80% purebreds) including 31 378 breeding rams, 52 162 other rams and 3 261 313 ewes and yearlings.

Sheep of the Trans-Baikal Finewool breed are medium or large in size, with a strong constitution and a proportionate build. They have few skin folds; spare skin appears in the form of aprons and small body wrinkles. Rams usually have 0.5 to 1.5 neck folds. The chest is well developed. The back is straight, of medium length; the rump is wide. The legs are strong and set correctly.

The live weight of ewes is 55-60 kg (max. 96 kg) and that of rams is 100-115 kg (max. 150 kg). Sheep mature early; the meat conformation is satisfactory.

The wool is white, generally uniform. The fleece has a blocky staple and is of medium density. The outer staple has predominantly the shape of small squares in cross-section. The crimp is distinct, large and somewhat open. The ewe's wool is 60s and 64s quality, ram's 60s and 58s. Staple length is 7.0-8.5 cm and 8.0-9.0 cm respectively. Yolk is light yellow, light cream or white, sufficiently resistant to atmospheric effects. The head is wooled down to the eyes, the legs up to the knees

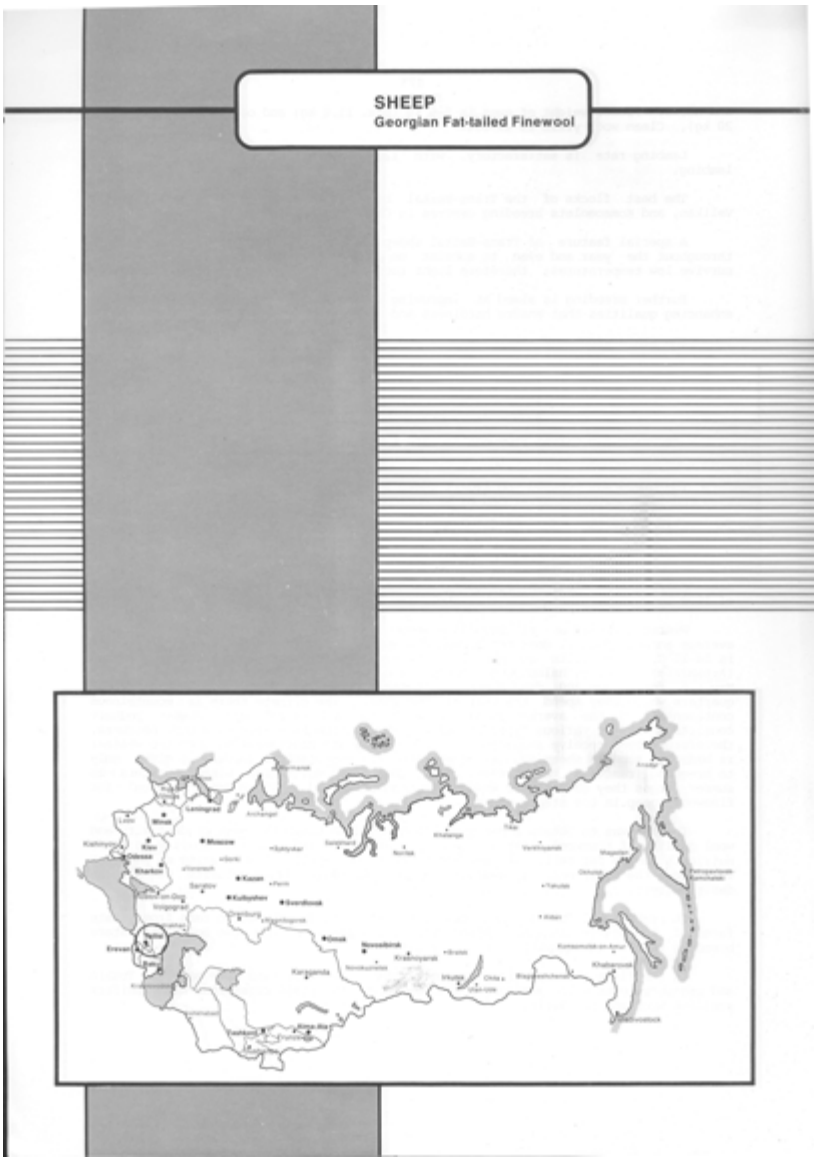
Lambing rate is satisfactory, with 120-130 lambs dropped per hundred ewes lambing.

The best flocks of the Trans-Baikal breed are raised at Karl Marx, Krasny Velikan, and Komsomolets breeding centres in Chita region.

A special feature of Trans-Baikal sheep is their ability to live on pasture throughout the year and even to subsist on snow-covered grasslands. They easily survive low temperatures; therefore light roofless pens are sufficient in winter.

Further breeding is aimed at improving wool quality, increasing the clip, and enhancing qualities that ensure hardiness and viability.

The State Flockbook lists 845 ewes and 205 rams.



3. Mutton-Wool Type
GEORGIAN FAT-TAILED FINEWOOL (Gruzinskaya zhirnokhvostaya tonkorunnaya)

The breed was created on Eldari sheep state farm in the Georgian SSR between 1936 and 1959. It was developed by selection, rigid culling, and inter se breeding of crosses of the first and partly of the second generation obtained by mating Tushin ewes to finewool rams.

The breed was developed in peculiar feeding and climatic conditions. Most of the winter pastures of Eldari state farm lie some 450 km away from the farm in a semi-desert steppe area, while summer ranges are alpine and sub-alpine, at altitudes of 1800 to 3050 m. This means that sheep are kept on a transhumance system.

Winter pastures are at 160-170 m above sea level. The climate is dry: the average annual rainfall does not exceed 250-300 mm and the average

annual temperature is 14-15°C. The soils are mainly brown or light chestnut, covered by wormwood (Artemisia) and other halophytes. Sheep run on winter pastures from 15 October to 10 May i.e. for about 200 days a year. It takes them some 35 days to reach summer quarters where they spend the rest of the year. The climate there is mountainous continental and the average annual rainfall is 500 to 550 mm. Summer pasture consists mainly of various types of fescue. Vegetation is scarce on winter pastures, therefore, sheep receive supplemental feeding (hay and concentrates) when the weather is bad. In summer sheep subsist on pasture, and supplemental feeding is given only to breeding rams and market rams. When sheep are moved from winter quarters to summer ranges they cover 25-40 km/day instead of the 10 or 15 km which is usual for finewool sheep in the steppe zones.

The aim was to obtain a new breed that would maintain the high productivity and wool quality of finewool sheep and develop viability, hardiness and ability to store nutrients in the fat tail. The new breed was to be capable of subsisting on pastures throughout the year and of covering large distances. Early maturity was also a desired trait.

In 1936, local Tushin ewes were first mated to Soviet Merino rams from state farms of the Rostov region. After 1940 Caucasian rams from the Bolshevik state breeding farm in the Stavropol area were used.

In the first phase of breeding (until 1945), finewool rams were mated to Tushin and crossbred ewes with semicoarse wool in order to obtain crossbreds with uniform semifine wool and fat tails.

In the second phase, when there were enough sheep with semifine wool and fat tails, breeders began work to improve the quality of wool. They used crossbred rams with finer wool; the offspring of these rams fuller corresponded to the desired type.

The result was the emergence of sheep which combined the productivity and biological features of the parent breeds, i.e. uniform fine wool and fat tails. In 1985 the sheep were recognized as a new breed with the name Georgian Fat-tailed Finewool.

Sheep of this breed are raised in two districts of Georgia, i.e. Tsiteli Tskaro and Bogdanovka. According to the breed regionalization plan, in 26 regions of eastern Georgia Georgian Finewool Fat-tailed rams are used along with other breeds of Merino rams.

The numbers of this breed had declined very much even ten years after its recognition. From 42 012 in 1964 it now (1980) numbers only 2018 with 67 breeding rams and 1166 ewes and yearlings.

The special features of Georgian Fat-tailed Finewool sheep are their relatively heavy weight, fat tails and fine wool. They usually have a fine constitution, solid frame and good conformation. The head is light and lean; the profile is straight; the withers are level and sufficiently wide; the chest is wide with well-sprung ribs; the back and rump are level. Muscles are well developed. The body is compact. The legs are strong, correctly set, and with tough hoofs.

The fleece has a blocky staple. The wool is close and dense; these qualities, which are very important with extensive husbandry, are pronounced in most sheep. The wool is mainly of 60s and 64s quality, with a length of 7 cm or more, uniform in length and fineness and with crimp like a Merino. The length, strength, fineness, uniformity, condition and

technological characteristics of the wool make it suitable for the production of worsted fabrics. Yolk is light yellow or white; it helps to preserve the wool. The clean wool yield is 47-53%.

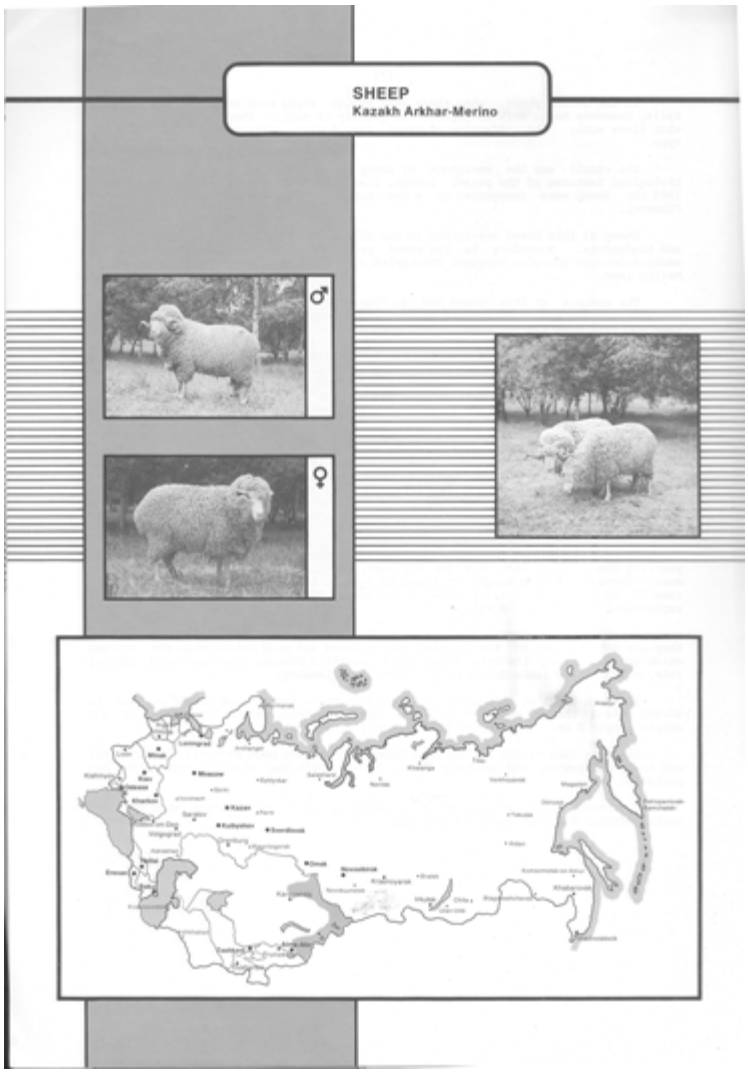
Fleece weight is 7 kg (max. 11 kg) for breeding rams, 5 kg (max. 9.8 kg) for yearling rams, 3.8 kg (max. 6.8 kg) for ewes, and 3.4 kg (max. 9.4 kg) for yearling ewes. The average live weight of breeding rams is 82 kg (max. 120 kg), of yearling rams 50 kg (max. 84 kg), of ewes 56 kg (max. 98 kg) and of yearling ewes for replacement 40 kg (max. 78 kg).

Sheep are well adapted to the extreme conditions of transhumance; in hardiness they are not inferior to the parental Tushin breed and much better than the crosses which are popular in the area. Like other mountain breeds, they have good lambing rate, with 110-118 lambs dropped per hundred ewes lambing.

The best flock of this breed is on Eldari state farm. Live weight of rams is 90-100 kg and that of ewes is 50-55 kg. Average fleece weight is 3.5-4.0 kg and staple length 8 cm. The wool is predominantly of 64s qulity.

Breeding rams of the Fat-tailed Finewool breed have been exported to Tajik SSR and to the Dagestan and Checheno-Ingush ASSRs, where the climatic conditions are suitable.

The breed represents a genetic resource of sheep with uniform wool and fat tails suitable for transhumance husbandry.



KAZAKH ARKHAR-MERINO (Kazakhskii arkharomerinos)

The Kazakh Arkhar-Merino breed was produced between 1934 and 1950 at Kurmektinski experiment station of the Academy of Sciences of the Kazakh SSR. The station lies in the Kungei and Zailiiskii Alatau mountains of the Alma Ata region, at an altitude of 2200 metres above sea level. The breed is based on interspecific hybridization of wild arkhar rams with finewool ewes of the Novocaucasian Merino, Précoce and Rambouillet breeds.
The aim was to develop a new breed of finewool sheep which would combine the valuable qualities of the Merino (fine wool, large wool clip, early maturity and good meat qualities) with adaptability to year-long keeping on mountain pastures at altitudes of 2500 to 3000 m.
The work began in autumn 1934 on Kzyl Oktyabr breeding state farm in the Kirgiz SSR. The semen of slaughtered arkhar rams was used to inseminate Novocaucasian Merino ewes, and in 1935 first crosses were obtained. In 1936 four crossbred rams were brought to Kazakhstan and used to inseminate Précoce and Rambouillet ewes. Third-generation cross rams, with 7/8 of the blood of finewool ewes and 1/8 of the arkhar blood, were

mated to second-generation ewes. Ewes with coarse wool were inseminated by Précoce rams.

Numbers have increased only slightly since 1964. The total in 1980 was 617 847 (84% purebreds) including 8216 breeding rams and 453 733 ewes and yearling ewes.

Sheep of the Kazakh Arkhar-Merino breed have a strong constitution and a well-developed and solid frame. Meat and wool production is satisfactory. Sheep are large, long-legged, with a relatively wide, deep and full chest. There is one small lengthwise skin fold on the neck. Rams are usually horned and ewes are polled. The conformation is good and corresponds to that of mutton-type sheep. The legs are strong and correctly set. Sheep are good jumpers and traverse easily the mountainous terrain. Like the arkhar, they have good hearing and a keen sense of smell.

The live weight of ewes is 55-60 kg (max. 90 kg) and that of rams is 90-100 kg (max. 150 kg). The lambs are early maturing and reach 60% of the adult weight by the age of 4-5 months. The slaughter yield of adult wethers is 53% with a carcass weight of 37 kg.

The wool is thin, sufficiently uniform. The fleece has a blocky staple; it is closed and of moderate density. The outer staple has predominantly the shape of small squares in cross section. The wool is chiefly of 64s and 60s quality. The ewe's wool is 7.0-7.5 cm long and the ram's is 8-10 cm long. The head is wooled down to the eye-line and the legs down to the knees and hocks.

Fleece weight of ewes is 3.0-3.5 kg (max. 6.3 kg) and that of rams is 7-8 kg (max. 11.0 kg). The average clean wool yield is 53% (range 50-55%).

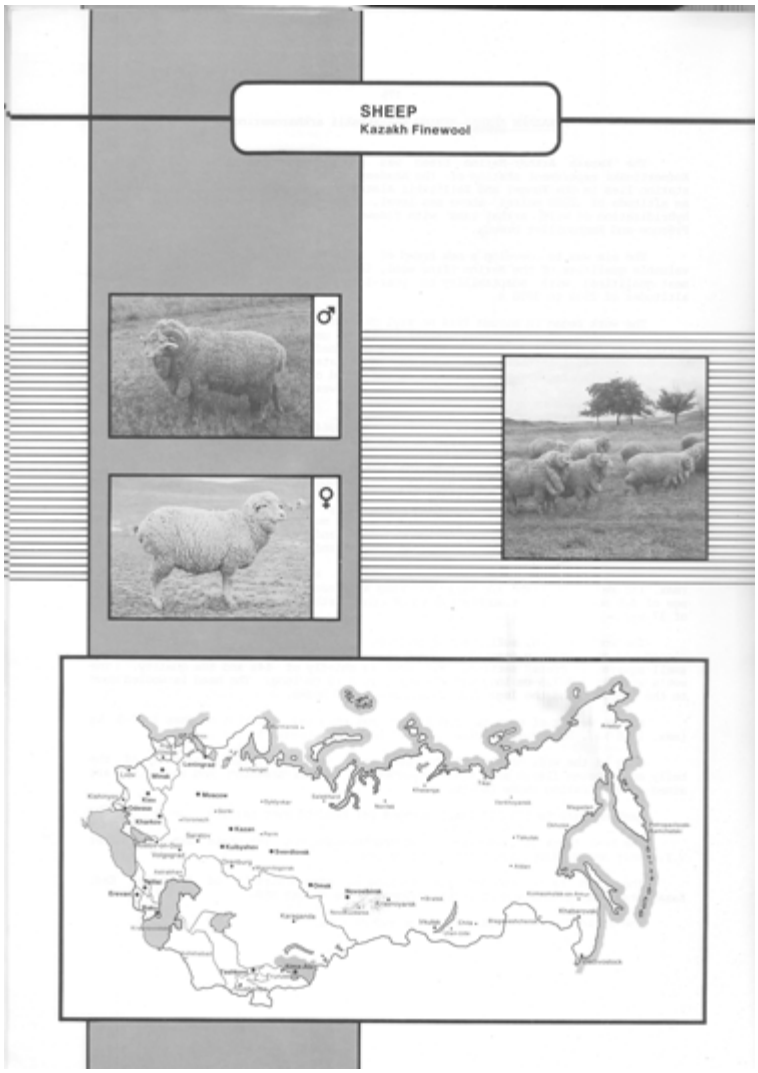
Some of the weak points of the breed are a low wool yield, poor cover of the belly and uneven fleece and staple fineness. Further breeding and selection are aimed at eliminating these faults.

Lambing rate is 115-130 lambs dropped per hundred ewes lambing.

The best flock of this breed is on Uzunbulakski breeding state farm named after V.I. Lenin and N. Krupskaya in Alma Ata region.

The breed is recommended for raising in some districts of Alma Ata, East Kazakhstan, Karaganda, and Pavlodar regions of the Kazakh SSR.

The State Flockbook lists 634 ewes and 24 rams.



KAZAKH FINEWOOL

The Kazakh Finewool was bred on the Mynbaev experimental farm of the Kazakh SSR between 1931 and 1946. The breed is based on the flock of fat-rumped ewes from the former Kargalinsky breeding farm, which were mated to finewool, chiefly Rambouillet and Précoce, rams. The aim was to obtain a new breed that would combine the valuable qualities of the Kargalin variety of the Kazakh Fat-rumped sheep (large size, hardiness and adaptation to local conditions) with wool qualities of the Précoce. The breed was developed in the severe climatic conditions of southern Kazakhstan (Alma-Ata region). Ewes and lambs used to subsist on pasture throughout the year; they received supplemental feeding only when there were snowdrifts or pastures were covered with ice.

In the first stage, fat-rumped ewes were mated to Précoce rams; after selection and culling the offspring of the first and the second generations were bred inter se. Most of the offspring of the first crosses bred inter se had thin, overdeveloped, brittle wool, weak in fibre, and the belly was poorly covered. Therefore, since 1939, local ewes with fine wool were crossed with

American Rambouillet rams. Further selection produced a flock of sheep of the desired type. Finewooled sheep of the flock had high productive qualities and in terms of their adaptability to local conditions were not inferior to fat-rumped sheep.

Numbers have increased considerably since 1964. The total in 1980 was 3 475 799 (92% purebreds) including 55 642 breeding rams, 18 915 other rams and 2 616 652 ewes and yearlings.

Sheep of the Kazakh Finewool breed have good meat and wool production, a high carcass weight, and are suitable for a transhumance system of management. They have a large body size, strong constitution and skeleton and good conformation. Most sheep do not have skin folds or wrinkles. Both rams and ewes are hornless. The body is somewhat elongated; the meat conformation is well pronounced.

The live weight of ewes is 60-65 kg (max. 105 kg) and that of rams is 105-118 kg (max. 140 kg). The weaning weight of ewe lambs is 27-32 kg and that of ram lambs is 30-34 kg. Sheep mature early; by the age of 18 months rams weigh 71% and ewes 86% of the mature weight. In fat wethers the yield of meat and fat reaches 42-47 kg or 55%.

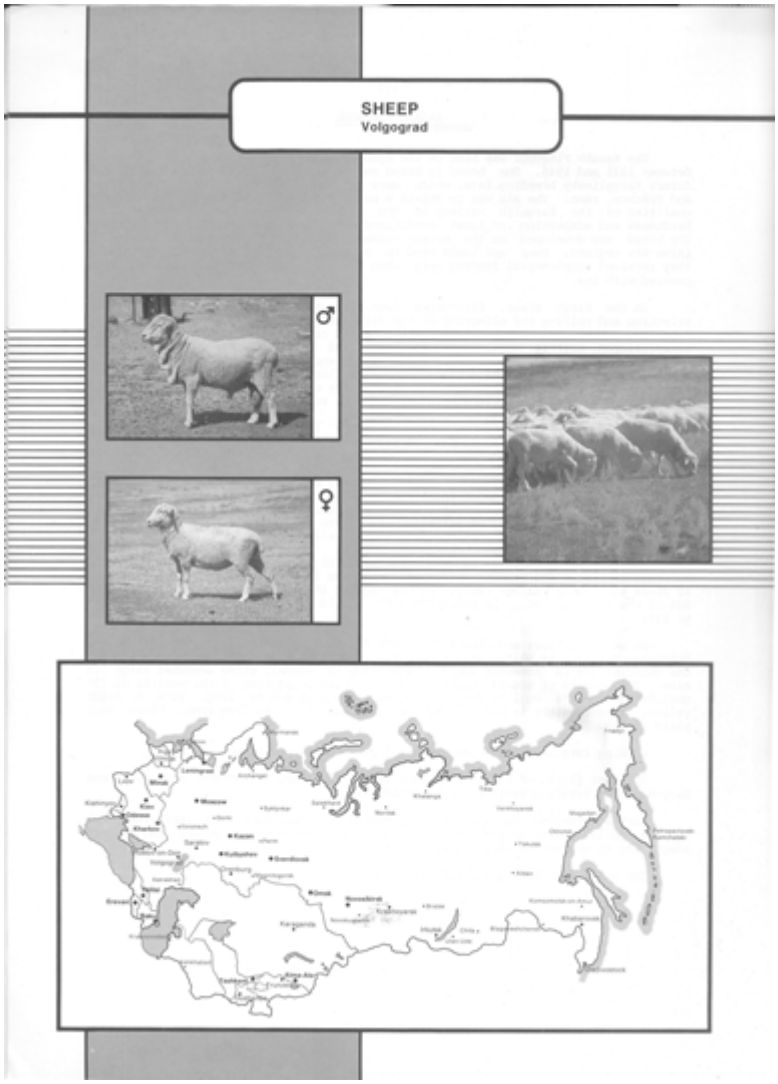
In wool character and fleece structure Kazakh Finewool sheep are similar to the Précoce. The wool is white, usually strong. The fleece has a closed blocky staple; the outer staple is somewhat loose. The crimp is normal, often somewhat large in size. The wool is of 60s-64s quality; a negligible proportion of the wool is of 70s quality. The ewe's wool is 7-8 cm long and ram's is 8-9 cm long. Yolk is light yellow. Fleece weight is 4.3-5.5 kg from ewes and 10-11 kg from rams. Clean wool yield is 50%.

Lambing rate is 105-135 lambs dropped per hundred ewes lambing.

The best flocks of Kazakh Finewool sheep are raised at Mynbaev, Kastekski and Sary-Bulakski breeding centres in the Kazakh SSR.

Further breeding is aimed at increasing fleece weight and improving wool quality, while preserving and increasing the large size and live weight, and perfect adaptation to the severe semi-desert conditions.

The State Flockbook lists 3119 ewes and 260 rams.



VOLGOGRAD (Volgogradskaya)

The Volgograd breed was formed between 1932 and 1978 on Romashkovski state farm in Volgograd region by crossing coarsewooled fat-rumped ewes with finewool rams of the Novocaucasian and Précoce (Soissonnais type) breeds, with some blood of the Caucasian and, in small amounts, of the Grozny breed.

Crossbreds were first obtained by mating fat-rumped ewes to Précoce rams. Then, crossbreds of the desired type, chiefly of the second generation, were bred inter se. The offspring obtained did not meet the desired standards of wool production. Therefore, the problem was not only to improve meat qualities and achieve early maturity but to improve wool production as well. To achieve this, rams of the Caucasian and, in some case, of the Grozny breed were used since 1948. Selection and rigid culling produced a stock of sheep of a new type, which in 1978 were approved as a new breed with the name Volgograd.

The number of sheep of this breed has increased from 22 616 in 1964 to 614 338 (20% purebreds) in 1980 including 2395 breeding rams, 5477 other rams and 412 726 ewes and yearlings.

Sheep of the Volgograd breed are large in size and have well-pronounced meat features and a harmonious conformation. Withers height is 68-70 cm and oblique body length 70-73 cm. Ewes and most rams are polled. Sheep have no wrinkles, except an apron or a skin fold on the neck. Withers, back and loins are wide and the back is level. The body is compact; the legs are strong, correctly set, and the thighs are full.

Volgograd sheep combine meat and wool production. The live weight of ewes is 58-65 kg and that of rams is 110-125 kg. They mature sufficiently early; the live weight of lambs at weaning is 30-35 kg and by the age of one year ewes reach 80% of their mother's weight. Rams at the age of 7-9 months produce carcasses of 20-24 kg.

The wool is white; density (by feel) and uniformity are satisfactory. The fleece has a blocky staple; it is closed and of medium density (by measurement). The outer staple has predominantly the shape of small squares in cross-section. The crimp is distinct, uniform, and somewhat open. The wool is of 60s and 64s quality. The ewe's wool is 8-9 cm long and ram's is 9.5-10.5 cm. Yolk is in light colour, particularly light cream. The head is covered with wool down to the eyes and the legs down to the knees and hocks. Fleece weight of ewes is 5.5-6.0 kg and that of rams is 12-15 kg. The clean wool yield is 48-50%.

Lambing rate is 130-160 lambs dropped per hundred ewes lambing. The milk yield is good: 95-105 kg of milk from ewes with one lamb and 145-150 kg from those with twins.

The best flocks of this breed are raised on Romashkovski breeding state farm, and on Pallasovski, Eltonski, Druzhba and Sorok Let Oktyabrya state farms in Volgograd region.

Further breeding is aimed at eliminating some dryness of the wool and making the fleece more uniform in fineness.