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Sheep Breeding Resources in Rostov Region, Russia

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Abstract: Sheep breeding is one of the most important sectors of agriculture providing the population with food and essential raw materials necessary for many branches of industry. In the Rostov region (Russia) sheep farming is referred to the priority sectors of agriculture. The purpose of this study is to represent sheep breeds: Salskaya, Soviet Merino and Romanovskaya (Romanov) that have been developed in the regional area and today they are the pride of Rostov region pedigree sheep breeding.The main task of sheep breeding in Rostov region is increasing the population of highly productive sheep.

Key wordes: Sheep · Salskaya breed · Soviet Merino breed · Romanov breed

INTRODUCTION

Economically sound management and conservation of the world biological resources is one of priority issues of the global strategy for sustainable development. Developing agricultural production plays a significant role in this strategy [1]. One of the most serious issues is food security. Since providing people with food in physical sense is their life insurance. Experts believe that in the lifetime of the current generation the food issue can grow to a deep international crisis. Currently 17 percent of the world population is starving and in the next decade it is expected to increase by half. At the thirty-ninth session of the Committee on World Food Security (Rome, Italy, 2012), it was noted that food security and nutrition are the key to progress in other fields of developing employment, education, environment and healthcare, with efficient agricultural production being the foundation of food security [2].

Agricultural production is a multidisciplinary system with a complex structure comprising over 10 economy branches. At the same time plant growing and livestock farming are the mainstructuringindustries [3, 4]. Livestock breeding is one of the most important sectors of agriculture providing the population with food and essential raw materials supplying many branches of the industry [5, 6]. Sheep farming has more variety of products than other livestock. It provides us with raw materials for light industry (wool, lambskin, fur, skin coat and leather sheepskin) and food products (meat and mutton, fat, milk and dairy products – cheese, etc.). In this regard, the industry is of particular importance for the agro-industrial complexes in many countries [7, 8]. In some regions, sheep farming is a low cost livestock industrial trend while in other regions it is a historically established economicsector [9].

This paper concerns sheep farming in Rostov region (Russia). The purpose of this study is to represent sheep breeds that have been developed in the regional area and today they are the pride of Rostov region pedigree sheep breeding.

Sheep farming in the Russian Federation is an important and integral sector of the country's economy. The leading regions of the Russian's sheep breading in live-stock capita are Dagestan, Kalmykia and Stavropol regions. Traditionally sheep breeding is also developed in Altai, Buryatia, Chita, Orenburg region, Karachai-Cherkessia, Kabardino-Balkaria, the Rostov region,Udmurdia and Tatarstan. That is, these are the regions where sheep farming is not only traditional, but the socially and economically significant industry as well.

In the Rostov region sheep farming is referred to the priority sectors of agriculture. The main task of sheep breeding in Rostov region is increasing the stock-capita of highly productive sheep in the breeding organizations with the following supply of breeding high-quality material for agricultural producers to provide a high-quality production competitive in the world's market of sheep breeding products.

Rostov region is the administrative center in the South of Russia and one of the largest agricultural regions of the Russian Federation. It covers an area of 100.9

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Fig. 1: Ram of Salskaya breed

thousand km ² (0,6% of Russia's territory). In the Rostov region in sheep are bred mainly in the eastern area. The Don sheep breeders have traditionally been the leaders of the country's fine-wool sheep farming. The sheep breeding base of the Rostov region is represented by seven breeding plants and three sheep reproduction plants of Soviet Merino breed and one breeding farm for Salskaya breed, reproduction farms of karakul sheep, Tsigal and Romanov breeds [10].

The total sheep population at the Regional farms comprises 149 thousand, including 64 thousands of ewes. There are seven districts involved in sheep breeding. In 2012 breeding farms produced 37.5 thousand of lambs with average lambing 96.1% [11].

Salskaya Breed: Salskaya breed isone of the most common in Rostov region (Fig. 1). This breed is zoned in the southern and south-eastern areas of Rostov region. Specific characteristics of this breed are a good wool productivity of the animals and high technological properties.This breed of sheep was developed in the Rostov region in very arid Sal'sk steppes over a period from 1922 to 1950 at the Budenny stud farm. The main food for sheep in this area was the natural herbage of virgin pastures and hayfields. Sheep were grazed not only in summer but also in snowless winters when the sheep eat sheep's fescue (Festuca sulcata) and wormwood (Artemisia). In addition to pasturage, sheep were fed on hay and a small amount of concentrates thenaftershepp fed on cultivated forages.Salskaya breed was the out put of breeding the local merino sheep and American Rambouillet aiming to develop better wool quality well adapted to local conditions, able to give abundant shearing of thin and long wool and used to low-yielding pastures and possessing good immunity and stamina.

Today Sal'sk sheep are large animals with a strong body and satisfactory physique. The live weight of a sheep is 95-110kg, for females 50-56kg. The body is covered with strong good white wool. The fleece is close with staple structure. The fineness of woolis of 60-70 quality rate. Fine fiber length of rams approaches 8.5-9 cm and that of females approaches 8-8,7 cm. Slaughter yield is 41-50%. Annual fertilityof 100 ewers ranges from 115 - 130 lambs.

Soviet Merino Breed: The Soviet Merino is one of the most abundant and widely spread fine-fleece breeds throughout different regions of the country. The bases for deriving this breed were the local merinos and their hybrids of different generations of coarse wool sheep.

The Soviet Merinos have good exterior, strong body composition, proportional physique, strong bone structure and proper limb staging. Sheep of the desired type have one well-developed transverse skin fold on the neck and well developed wrinkles. Soviet Merino sheep have high fertility, so, 100 females produce 140 lambs with average weight of 3.8 kg. During the first months of their life, the lambs' weight is approximately the same as that for yearling sheep and rams. 8 months-old rams weigh 37 kg and 12 months –old ones - 45 kg. Yearling sheep of the same age weigh 34 kg and 40 kgrespectively. The average daily weight gain of lambs, especially before weaning from the female often exceeds 200 g. Weight of mature sheep ranges from 46 to 55 kg,(but not more than 98 kg) and rams - from 98 - to 124 kg (no more than 147 kg.). Meat quality of Merino sheep is satisfactory. Slaughter yield doesn't exceed 48%. For 12 months-old species it is 45%, with pre-slaughter weight of 43 kg.

Indicators of wool productivity of females approach from 6 - to 9.4 kg and that of rams - from 10 - to 28.4 kg. Fleece has staple structure. Yield of pure white wool exceeds 50%. The wool is well crimped, with good evenness in length and thickness. Wool fineness of the most sheep is of the 64th qualityrate (20 - 23 microns) and rarely of the 70th quality rate (18 - 20 microns). The sheep's fiber length is typically 6 - 8 cm, while that of the rams is 8 - 9 cm. Wool yolk is of pale cream or white color.

Romanov Breed: This breed of sheep providing the world's finest sheepskin was derived by local farmers on the territory of modern Yaroslavl region (Russia) at the end of XVII century and was called Romanovskaya (Romanov). These animals endure cold weather and extreme temperatures, but not humidity and poor indoor climate. In addition, the females of Romanov breed have

an extraordinary fecundity (fertility) of about 250 lambs per 100 females (exceptional fertility rates - 270 - 300 lambs). Young animals at the age of 90 - 100 days, weigh 18 kg, at 5 - 6 months - up to 32 lbs. and at 8 - 9 months - 35 - 40 kg. Adult sheep can gain weight of 70 - 100 kg and females - 50 kg, but not more than 90 kg.

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