

# The Rise and Fall of *merino* Sheep Breeding in the South of Ukraine during the Long 19<sup>th</sup> Century

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**KEYWORDS:** merino sheep breeding, merino (fine-wool) wool, south of Ukraine, entrepreneurship.

**JEL CODES:** N53, N93, Q13, Q17.

*The paper analyzes factors that were influencing the development of the merino sheep industry to the south of Ukraine during the 19<sup>th</sup> century. The author seeks to highlight the peculiarities of the formation, specifics and directions of development of the wool business, to clarify the disadvantages and advantages of applying the European experience in local conditions. Much attention is paid to determining the economic importance of this industry in domestic and foreign trade in the development of a world market economy. It is established that Ukrainian merino sheep was extensive, had a marketable character, export orientation and depended entirely on market demands. The emergence of new suppliers of cheap raw materials in European markets has led to falling prices for wool and a reduction in its exports. The author focuses on the directions of merino sheep breeding that have developed in southern Ukraine, their specificity and constant modification to preserve the marketability of wool in the face of global competition. The internal problems of local shepherds were also highlighted, which consisted primarily of uncontrolled cross-breeding, the lack of qualified and experienced workers for evaluation and caring for sheep. Conclusion states about the inability to overcome crisis trends without government support, the introduction of professional training and scientific support for the development of this industry and finding additional sources of income.*

## Auge y declive de la cría de ovejas merinas en el sur de Ucrania durante el largo siglo XIX

**PALABRAS CLAVE:** cría de ovejas merinas, lana merina (lana fina), sur de Ucrania, espíritu empresarial.

**CÓDIGOS JEL:** N53, N93, Q13, Q17.

***E**l artículo analiza los factores que influyeron en el desarrollo de la industria de la oveja merina en el sur de Ucrania durante el siglo XIX. La autora resalta las peculiaridades de la formación, las especificidades y las direcciones de desarrollo del negocio de la lana, para aclarar las ventajas y desventajas de aplicar la experiencia europea en las condiciones locales. Se procura determinar la importancia económica de esta industria en el contexto de la integración del mercado mundial. La cría de oveja merina ucraniana era extensiva, tenía un carácter comercial, una orientación exportadora y dependía completamente de las demandas del mercado. La aparición de nuevos proveedores de materias primas baratas a los mercados europeos provocó una caída de los precios de la lana y una reducción de sus exportaciones. La autora se centra en las direcciones de la cría de ovejas merinas que se desarrollaron en el sur de Ucrania, su especificidad y modificación constante para preservar la comerciabilidad de la lana frente a la competencia mundial. Asimismo, se destacan los problemas internos de los ganaderos locales, que consistieron principalmente en el cruzamiento incontrolado, y la falta de trabajadores cualificados y experimentados para la evaluación y el cuidado de las ovejas. Se establece como conclusión la incapacidad de superar las tendencias de crisis sin el apoyo del Gobierno, la introducción de capacitación profesional y apoyo científico para el desarrollo de esta industria y la búsqueda de fuentes adicionales de ingresos.*

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## 1. INTRODUCTION

The territory of the south of Ukraine was mainly a forest-free plain steppe area (except for the Crimean mountains) with lush vegetation and black earth fertile soils, with a mild temperate climate, access to the Black and Azov seas and an extensive system of large and small river arteries (Dnipro, Dniester). Such favourable geographical location caused its special role in the history of the region and Europe as a whole. In particular from the 6<sup>th</sup> century B.C. there were developed Greek colonies that coexisted with the Scythians, Sarmatians, local tribes-Taurus, etc. In the Great Migration era because of constant raiding nomads, the area turned to the “virgin steppe of Central Asian type” and for many centuries remained undeveloped in the economic sense (Semenov-Tyan-Shanskiy, 1910: IV). However, from the last quarter of the 18<sup>th</sup> century after the incorporation of lands into the Russian Empire<sup>1</sup>, the government did everything possible to promote its settlement and development agriculture and animal husbandry in the region.

**MAP 1**  
**Ukrainian lands in the Russian Empire (early 19<sup>th</sup> century – 1917)**



Source: author's elaboration.

1. Lands of the south of Ukraine in the 19<sup>th</sup> century included Ekaterinoslav, Kherson and Tavriya provinces.

A large part of the former Cossacks, peasants, as well as landowners and servicemen received land on preferential terms, sometimes reaching tens of thousands of *tithes*<sup>2</sup>. It is important that in the colonization process of the south of Ukraine were actively involved not only the inhabitants of other regions of the Russian Empire, but migrant people from Europe (Germans, Greeks, Tatars, etc.) (Boyko, 1983: 246). They brought their management experience, which they combined with local climatic features and agricultural traditions. During the 19<sup>th</sup> century in the south of Ukraine grain production and animal husbandry has reached a significant development; since the last quarter of the 19<sup>th</sup> century the same happened to the metallurgical and machine-building industries. This region played an important role in the economic development of the Russian Empire. And the fine-wool merino sheep can be considered a “business card” on the way to the formation of entrepreneurship and integration into the world economic space.

For many centuries, the breeding of simple (coarse-wool) sheep has played an important role in the farms of the population of southern Ukraine, because the products obtained in the form of wool, sheepskin, meat, lard, etc. allowed to meet the internal needs of individual families. However, with the growing demand for fine wool in domestic and world markets in the early 19<sup>th</sup> century changed the attitude of the local population to sheep breeding. Wealthy local landowners became interested in popular in Europe merino (fine-wool) sheep breeding. Based on the European experience and local traditions, the owners purchased abroad breeding merinos and established large sheepfold households, in order to obtain substantial cash profits. Eventually sheep household sector turned into a business. The sale of wool brought significant profits to both sheep owners and the state as a whole. As a result, during 19<sup>th</sup> century, merino wool became first on the list (after cereal crops) in trade flow and economics of Russian Empire.

However, the development of sheep breeding, despite its prospects, was very ambiguous and was accompanied by periods of decline and rise. It largely depended on the economic situation. Exclusive market orientation meant the orientation of the *wool business* to meet the demands of the ever-changing factory industry. As a result, southern Ukrainian owners constantly had to look for new, most optimal paths for keeping commercial attractiveness of wool.

Surprisingly, the history of the development of merino sheep in Ukraine –as well as in Russia– has long remained virtually unexplored. In works of Soviet historians, devoted to economic history of Ukraine and Russia of the 19<sup>th</sup> century was stated critical impor-

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2. *Tithe* is an ancient Russian measure of area equal to 1.09 hectares, or 10,925 square meters.

tance of merino sheep industry for southern Ukraine region, but attempts of analysis were not implemented. Today, the modern Russian historiography has a growing interest in studying the history of some sectors of agriculture, including livestock, which the authors refer to the basic facts about the establishment and development of sheep in Russian provinces (Ostrovskiy, 2014; Selionova, 2017). Separate articles by Ukrainian historians are devoted to the study of the leading sheep farms of the Tavriya province (Pashtetskaya, 2017; Ostapchuk *et al.*, 2016). Ukrainian historians Smoliy (2011) and Temirova (2003) emphasize that the development of merino sheep occurred primarily in the estates of large landowners. Therefore, the analysis of historiographical revision shows on the one hand, the growth of a scientific interest in the problem, on the other hand, the lack of any comprehensive study on the history of sheep farming in southern Ukraine region, defining its place in the development of the agricultural sector of national and world economy.

Therefore, this article is primarily based on statistical sources and works of the second half of the 19<sup>th</sup> century. In many provincial, county surveys it provides information on the development of sheep farming in the region, quantitative, digital indicators and so on. Important data on sheep owners and the history of their origin, features of sheep keeping, their productivity, product orientation, etc. are collected in a seven-volume edition devoted to the study of sheep in the sub-Russian provinces (Ministry of State Property of the Department of Agriculture and Rural Industry, 1883, 1884, 1886). It was the crisis that befell sheep farming in the post-reform period that led to a revival of public and scientific interest in sheep farming. There are experts in the field of animal economists, such as Kuleshov (1890, 1896, 1900, 1916), Dyumin (1895), Shchepkin (1869), Polferov (1915), Chernopyatov (1873) and others, devoted a number of works featuring formation and development of the domestic merino sheep, finding out the causes of the crisis in a period of development and offered a different way and overcome it.

Therefore, as we can see, the study of different types of sources and literature required the use of different methods and approaches. The research methodology is based on the principles of objectivity, systematization and historicism with the use of general scientific and special-historical methods: historical-genetic, historical-comparative, descriptive, historical-typological, system-structural. The article for the first time attempts to systematize quantitative data from various sources on the dynamics of sheep development in southern Ukraine with further analysis. Attention is focused on the development of south Ukrainian merino sheep in the conditions of world market competition. The author reveals and establishes causal links between domestic and foreign economic factors that influenced the development of merino sheep during the 19<sup>th</sup> century.

## 2. THE BEGINNING OF MERINO SHEEP BREEDING IN THE SOUTH OF UKRAINE

It is known that the state interest in Russia in the development of sheep was manifested in the 18<sup>th</sup> century during the reign of Peter the First, due to the growing demand for woollen products, especially the cloth needed for army uniforms (Selionova, 2017: 8-12). In addition, wealthy landowners who travelled throughout Europe became interested in merino sheep in Spain and Saxony, as merino sheep's wool was very popular in European markets and brought the owners considerable benefits. They concluded that the south of Ukraine was best suited for breeding merinos.

Here it is necessary to explain why the southern Ukrainian region was one of the leading centres for the development of merino sheep in the Russian Empire. First, there were favourable natural and climatic conditions, namely the mild temperate climate typical of the steppe region. Secondly, the presence of large steppe areas suitable for grazing and feeding cattle contributed to this<sup>3</sup>. Thirdly, the active processes of settlement and economic development of this area by representatives of various social strata of the population (nobles, peasants, merchants, German colonists, etc.)<sup>4</sup>. Fourthly, as already mentioned, the presence of some experience in breeding local breeds of sheep (Zertsalov, 1892: 2-3). Fifthly, there was a fairly developed land (since the 1860's rail line) and sea<sup>5</sup> infrastructure for domestic and foreign trade.

Therefore, the symbiosis of entrepreneurial interest and government incentives contributed to the formation of fine-wool sheep as a separate industry.

On the January 12<sup>th</sup>, 1804, the Russian Emperor Alexander the First approved the rules for the granting of public lands in the provinces of southern landowners who wanted to engage in the breeding of merino sheep<sup>6</sup>. The lands were given for use for a period of 10 years, during which the landowners had to increase the number of flocks at the rate of 1

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3. The active plowing of land for growing cereals developed rapidly after the abolition of serfdom in 1861.

4. The tsarist government of the Russian Empire used the practice of distributing lands in the Ekaterinoslav, Kherson, and Tavriya provinces as a reward for military service, and also allowed anyone to move here on preferential terms.

5. In the south region there were ports of Azov and the Black Sea, through which the wool fell on of the European markets.

6. *Complete Collection of the Laws of the Russian Empire: First Collection: From 1649 to December 12, 1825*: In 48 volumes. St. Petersburg: Printing House of the 2nd Branch of His Imperial Majesty's Own Chancellery, 1830. T. 28: 1804-1805.

sheep per 1 *tithe* of the pasture area. In addition, following these agreements they could use the land for life. If at the end of the ten-year period the owner continued to engage in sheep breeding and sold purebred sheep, the land passed to him in hereditary possession (Verner, 1889: IV: 18; Chernopyatov, 1873: 16).

Interestingly, the first owner of merino farms in southern Ukraine and founders of merino direction in the region as a whole were not local nobles but French migrants – Wilhelm Rouvier and his henchman and cousin Rene Vassal. After getting acquainted in detail with the economic conditions in Spain, they appealed to the government with a proposal to breed Spanish sheep in the Tavriya province and asked for help from the state. As a result, on January 31<sup>st</sup>, 1805, they received a cash loan of 100,000 rubles<sup>7</sup>, more than 30,000 *tithes*, and a ship to buy sheep abroad (Skalkovsky, 1853: 354-55). In turn, they were obligated to contribute to the quantitative growth flocks (up to 100,000 heads) and the spread of merino sheep among local shepherds by selling at reasonable prices and teach sheep breeding to 100 students (Chernopyatov, 1873: 18).

Overcoming a series of obstacles worthy of an action-packed adventure novel, Rouvier and Vassal managed to bring 100 heads of the best merino sheep from Spain in 1803, and later 487 rams and 948 ewes from the Saxon sheep households. Despite scepticism, by memories of Vassal, of “speculation and rumours about the impossibility of their breeding in Russia”, in 1808 Rouvier had already had 4,000 sheeps of second and third generation and the 4,000 mestizos of first generation of the local ordinary (*tsyhayskyi*) sheep (Chernopyatov, 1873:17-8; Skalkovsky, 1853: 355-57).

The first years of management revealed problems that all breeders, without exception, had to deal with, at least at the initial stage. The situation in most sheep farms was unsatisfactory; the owner was unable to independently control the situation in large areas, and there was a severe shortage of competent workers. The local climate, which was unfavourable for the adaptation of demanding electoral sheep to new conditions, led to new diseases, low productivity and high mortality of sheep. The absence of separate structures for merino and simple sheep threatened further levelling of merino traits in cattle (Druzhinina, 1970: 243). Over the next years he managed to improve the situation: in 1812 the number of sheep has almost reached agreement defined in standards (25,000 sheep). Difficulties were finally overcome only by Vassal’s heir. New generations of sheep have finally “become acquainted with the local climate and region” and had become as

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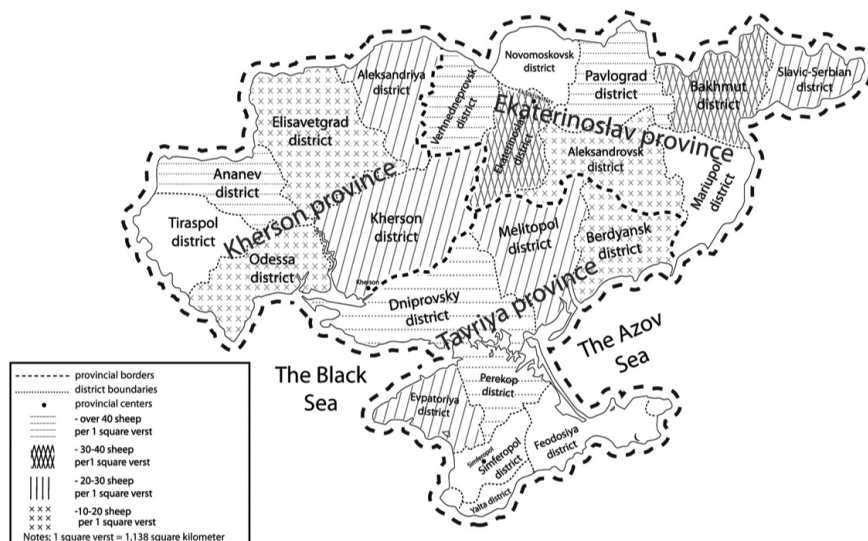
7. The loan was granted for a period of 5 years. During 1810-14 the creditor had to pay the loan (20,000 per year, and over next two years interest) in the amount of 40,000 divided according to two payments (SKALKOVSKY, 1853: 354-55).



unpretentious in content as the local sheep (Gersivanov, 1849: 155). Despite the permanent loss due to disease, the total number of sheep increased to 60,000, which held 40,000 *tithes* of land (Sidorovich, 2018).

In case of Kherson province, sheep founding was assigned to A. Miller, who in 1805 also received 12,000 *tithes* from the Emperor in the Odessa district<sup>8</sup>, the interest-free loan in size of 20,000 rubles for 15 years and the right to use the stalls on the cloth factory in Ekaterynoslav (Skalkovsky, 1853: 354; Schmidt, 1863: 224). In addition, to the 1,200 Spanish merinos, the government also added a flock of Austrian merinos purchased at public expense from the Prince of Liechtenstein. For his part A. Miller undertook to increase the herd to 30,000 heads in three years, leaving 1/3 purebred, to promote the crossing of their own merino sheep with sheep of simple breeds of local breeders, within 3 years to supply at the request of the state breeding sheep, teach 30 boys sheep breeding and so on. He managed to achieve this goal: in 1808 Miller's plants had over 7,000 of merino, 25,000 of mestizos and 38,000 of lambs (Chernopyatov, 1873: 19).

**MAP 2**  
**South of Ukraine: The Number of Merino Sheep Relative**  
**to the Area of Districts in 1860s-80s**



Source: our own elaboration from Ministry of State Property of the Department of Agriculture and Rural Industry (1884).

8. *Complete Collection of the Laws...* (1830).



The successful experience of Rouvier, Vassal and Miller demonstrated the possibility of breeding fine-wool sheep in southern Ukraine and making high profits. Fine-wool sheep breeding gradually gained popularity among those local owners who owned vast land resources. In the Tavriya province, Rouvier's successors were his sons-in-law: Vassal, Potier and Marie, whose thousands of flocks occupied a leading position among the local sheep until the 1860s (Skalkovsky, 1853: 359).

In addition to landed estates, fine-wool sheep as a branch of management has developed significantly in the German colonies of Mennonites. A. Miller rightly noted that "sheep, represented by two or three individuals [...] is incapable of rapid spread" without additional investment (Chernopyatov, 1873: 20). Therefore, the government bought from him 4,000 merinos for distribution in colonial settlements and selling to interested individuals on preferential terms (Verner, 1889: IV: 19). Mennonites owe the appearance of the first large sheepfolds to Johann Cornies, whose family settled in the Taurian lands in 1806 (Epp, 1995). Having gained some experience and success in breeding ordinary sheep, in 1824-25 on behalf of the government he acquired electoral merinos to improve the communal sheep of the colonists and founded his own merino sheep household (Druzhinina, 1970: 242). Cattle from the sheepfolds of Cornies and his descendants have long been in high demand among breeders in Tauriia and other Ukrainian regions (Ostapchuk *et al.*, 2016). As a result, from the second half of the 19<sup>th</sup> century breeding of merino sheep has become widespread here.

### 3. DIRECTIONS OF MERINO SHEEP BREEDING

Despite the significant spread of merino sheep in the south of Ukraine during the 1820-60s, it should be noted that only a small number of shepherds followed the proper care of livestock and had breeding shepherds. However, it was them who followed the innovations in European sheep breeding, replenished their sheepfolds with breeding merinos and sold them to their shepherd neighbours. They marked the main directions of sheep breeding that existed in the southern Ukrainian region during the 19<sup>th</sup> century.

Importantly, the merino sheep for farmers of the south of Ukraine was primary trade household sector. The main commodity was wool, which was entirely focused on sale. Favourable geographical location, namely the presence of Azov ports, determined the export nature of the south Ukrainian sheep. Accordingly, the directions of its development depended on the demand of European markets and the demands of the European factory industry.

For example, in the first half of the 19<sup>th</sup> century, there was strong demand for electoral wool, which produced woollen fabric. However, with the invention of special machines, medium quality wool became popular among manufacturers (damask, and especially long worsted one from which they began to make *sheviot*) a strong, thin pile fabric, which became extremely popular in Europe. As a result, the difference between the price of electoral and worsted wool in the 1860s was not more than 10% (Shchepkin, 1869: 20).

Under such circumstances, keeping merinos of the electoral type due to low wool yield, demanding care, falling demand and prices for wool was recognized by shepherds of the southern Ukrainian region as extremely unprofitable and prompted a reorientation to breeding worsted type sheep. After all, according to average data, in the 1860's the profit from the electoral wool was 1.25-1.50 rubles from sheep, and worsted 2-2.50 rubles (Shchepkin, 1869: 90). Local owners and specialists saw the way out of the situation in improving the quality characteristics of wool –first of all, quantity, length and worsted structure in accordance with market demands, strengthening the physique and endurance of sheep by crossbreeding merinos of different breeds (Kuleshov, 1890: 43-4).

A. Electoral direction. As already noted, was the first who came from Europe to southern Ukraine. Sheepfold Cornies' and Vassal's were the only centres of breeding purebred sheep electoral type. Owners periodically replenished their flocks with merinos from the sheepfolds of Logmen, Rotschenberg, Kliphaesen, Oshatz, and Leytewitz (Kuleshov, 1890: 43-4). These sheep were distinguished by "noble, fine damask wool, a fairly thick and even fleece" (Ministry of State Property of the Department of Agriculture and Rural Industry, 1883: 49). They were small, demanding of climatic conditions, in addition, the yield of wool was negligible (5-6 pounds per sheep). Note that this wool was the only thin (electoral), which was used to make a very thin and warm pile fabric, popular in Europe in the first half of the 19<sup>th</sup> century. However, as noted, the demand for it in Europe was reduced because this area had lost popularity among the local shepherds with second half of the 19<sup>th</sup> century.

B. Direction Negretti-Infantado. Instead, most local farmers from the 1840s began to buy Negretti sheep, which were becoming popular in Germany. The owner of the estate, Blanche M. Abaza, in 1880 said that he got up to 17 pounds of wool from a Negretti sheep breed. This obviously attracted local farmers, so breeding rams there cost from 10 to 250 rubles. However, this breed also brought trouble to local owners: Negretti sheep were very demanding on the quality of food. Of course, farmers who owned a huge flock of several thousand sheep were unable to balance their diet. As a result, Negretti became smaller with each succeeding generation and produced less wool. M. Abaza sadly mentioned that the output of wool from the first Negretti he brought from Europe was up to 30 pounds!

(Ministry of State Property of the Department of Agriculture and Rural Industry, 1883: 56). Therefore, there were also few purebred Negretti breeding sheep in the south of Ukraine.

Most owners crossed them with Spanish Infantado sheep, which began to be imported to Ukraine in the 1820s. They were attracted by their strong physique and ease of feeding. Exit wool was small (up to 7 pounds), which owners sought to increase by cross-breeding with Negretti. In households of Negretti-Infantado direction (sheepfold F. A. Lovshyn, W. G. Kankrin) wool production was low, but the sheep had more stamina and were less dependent on feed, fattening them often used straw (Dyumin, 1895: 4).

C. Direction Rambouillet-Negretti became the most popular in the south of Ukraine in 1880. Among the prominent landowners were Great Prince Michail Nikolaevich, E. I. Faltz-Fein, A. Bulatsel, Prince Vorontsov (Ministry of State Property of the Department of Agriculture and Rural Industry, 1883: 93-9). They replenished their flocks with French sheep of the Rambouillet breed, which were imported mainly from Pomerania. Even Vassal who founded electoral direction decided to change the direction of management in accordance with market demands, so in 1880 they bought 40 French rams at the Rambouillet breeding sheep farm. Pedigree sheep from their farms were sold to neighbours at a price of 200-600 rubles (Ministry of State Property of the Department of Agriculture and Rural Industry, 1883: 98). The main aim of sheep breeding in this direction was to get worsted wool that was most valued in Europe.

D. Direction of Worsteds Black Sea type. In addition to the acquisition of pedigree merinos from leading European sheep farms and their breeding, sheep breeding in the south of Ukraine was aimed at breeding the best European breeds of merinos with local breeds of sheep. This was a characteristic feature of local sheep breeding. In this way, they sought to breed merinos of “ideal type”. They had to be adapted to environmental conditions, unpretentious in food and care, to have long and thick worsted wool, and so on. The Mazaev family of German colonists achieved considerable success in this, thus initiating a new trend in sheep breeding: the Worsteds Black Sea breed (also known as Mazaev’s). Without substantial funds, a simple farmer Peter Mazaev originally bought at local sheepfolds of Cornies and Filibert rejected electoral merino sheep types and the best merinos of local breeds from local residents. He himself was engaged in the breeding of sheep and achieved significant success. According to the descendants, the owner received 10-12 pounds of dirty wool from sheep and 6-7 pounds –from the uterus, which was used to make high-quality thin damask fabric (Kuleshov & Petrov, 1896: 5). However, due to the growing demand for long worsted wool, Peter Deevich undertook to breed a new type of sheep by culling breeding sheep with too short wool. As a result, the type of the new

Mazaev's sheep became very popular among local shepherds, because the yield of dirty wool from breeding sheep ranged from 11 to 30 pounds, and the length of the wool was 10-12 cm (Ministry of State Property of the Department of Agriculture and Rural Industry, 1883: 80). In addition, the British old-style machines that were used in Russia could scratch with the benefit of worsted tape only with long hair. Thus, long Mazaev's wool cost to local wool markets 1.5-2 rubles more expensive than another, shorter one (Selionova, 2017: 23-4).

Mazaev's sheeps were very popular among local shepherds. Peter Mazaev willingly sold sheep to neighbours from 25 rubles up to 800 rubles (Ministry of State Property of the Department of Agriculture and Rural Industry, 1883: 80). His business was continued by his son Fedot, who increased the flock of sheep to 5,000. The founding brothers left behind three sons, who at the end of the 19<sup>th</sup> century owned tens of thousands of acres of land in Ukraine, the Kuban and the Caucasus, and flocks totalled up to 200,000 sheep (Kuleshov & Petrov, 1896: 5). Sheep of this type were leading in the south region and were known under the names Mazaev's, Black Sea, Filiber's, molokans, and so on. The only drawback that required further selection work was the low yield of wool after cleaning (only 20%) (Chernopyatov, 1873: 41)<sup>9</sup>. The famous Russian breeder, Professor P. M. Kuleshov used rams of French and German breeds Rambouillet in order to upgrade Mazaev's breed. In fact, they dominated in merino sheep breeding in the late 19<sup>th</sup> century.

As we can see, the way of adaptation of merino sheep of European breeds to local conditions was not easy. With the help of long-term crossbreeding –selection– by Ukrainian shepherds it managed to bring a new breed of sheep that best meet local conditions of keeping and provided owners with high quality wool. However, this process required constant effort, knowledge and investment from shepherds and was complicated by the crisis phenomena that constantly accompanied the development of sheep breeding in the region.

#### **4. DYNAMICS OF DEVELOPMENT: QUANTITATIVE INDICATORS OF MERINO SHEEP BREEDING IN THE SOUTH OF UKRAINE**

Merino sheep of the south of Ukraine from the moment of origin had exclusively business direction, as more than 90% of wool, the main product, went on sale. Therefore, dependence on market conditions was one of the defining features of its development. This was the first seen on the dynamics of its development.

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9. Average output rate after clearing the wool from the European merino was 30%.

The first crisis in the development of sheep happened in 1830–40 and was caused by falling of wool prices. For example, in the 1820's the Vassal received for a fee of wool from 105 to 150 rubles in assignations for pood, then in 1842 –less than 70 rubles (Gersivanov, 1849: 156). On average over the 20-year gap (since the 1820s), the cost of merino wool has declined by 60%<sup>10</sup>.

On the one hand, this had positive result and pauses uncontrolled *merynomania* in the region, helping to stabilize certain area. After all, high prices for wool, the availability of pasture land, breeding stock, state support, etc. did not guarantee success and profitability. After all, often such endeavours either ended in failure, or the owners simply lost interest in the popular “entertainment”, which required, of course, significant efforts, knowledge, and investment. In this case, the shepherds were passed into the hands of more affluent owners (Verner, 1889: IV: 20; Chernopyatov, 1873: 31). So in the middle of the 19<sup>th</sup> century in the southern Ukrainian region there was a certain institutionalization of commercial merino sheep with the formation of the main centres of its development. In total, there were more than 500 merino sheep farms, more than 70 of which had already been famous for exporting products to European markets. In 25 years, the number of sheep in the Kherson province increased 7 times, in Ekaterinoslav tenfold, reaching 3 million heads in the middle of the 19<sup>th</sup> century.

TABLE 1

## Number of merino sheep in the southern provinces (thousand heads), 1823–1913

Provinces	1823	1848	1861	1866	1871	1880s	1913
Ekaterinoslav	115	1,120	1,950	2,127	1,741	1,833	160
Tavriya	?	965	1,754	2,860	2,892	1,382	369
Kherson	119	866	1,225	2,075	1,670	1,413	147
Total in the south of Ukraine	234+ ?	2,952	4,929	7,062	6,303	4,628	677

Sources: Gulishambarov (1896: 28); Skalkovsky (1853: 363–64); Chernopyatov (1873: 44); Polferov (1915: 121–22); Ostrovsky (2014: 207).

During the first half of the 19<sup>th</sup> century merino sheep as a branch of entrepreneurship has achieved significant development, occupying a prominent place in the agricultural sector of the economy of the southern region and bringing owners significant profits. Positive dynamic processes accompanying the development of the industry to the mid-1860s.

However, certain successes have caused certain problems, which in combination with foreign economic factors since the second half of the 1860s marked a permanent crisis

10. 1 pood was equal to 16.38 kg.

in this area. It is primarily found on display in quantitative terms. Reaching the peak in the mid-1860s of the 19<sup>th</sup> century, over the next 5 years fine-wool sheep decreased by almost 1/5: in Ekaterinoslav province by 18%, in Kherson province by 19.5%, and only in Tavriya province, where it reached its peak, it maintained a positive trend for several years.

An indicative trend in the development of merino sheep in the southern Ukrainian provinces was, first, a decrease in the number of farms focused on commercial sheep, and secondly, the size of the flocks themselves, and thus –a reduction in the number of merinos in the region.

In the 80s of the 19<sup>th</sup> century the crisis of fine-wool sheep breeding has reached a threatening scale, covering, by the way, the Russian regions of development of this industry. During 1871-81 merino flocks in the southern Ukrainian provinces decreased by another 1/4, and among Taurian owners, they halved in general (Statistical Department of the Ekaterinoslav Provincial Zemstvo, 1886b: 2: 69). Exceptions were great sheepfold farm, where during 1870-80 the owners managed to increase stock despite the significant and irreversible reduction in small farms.

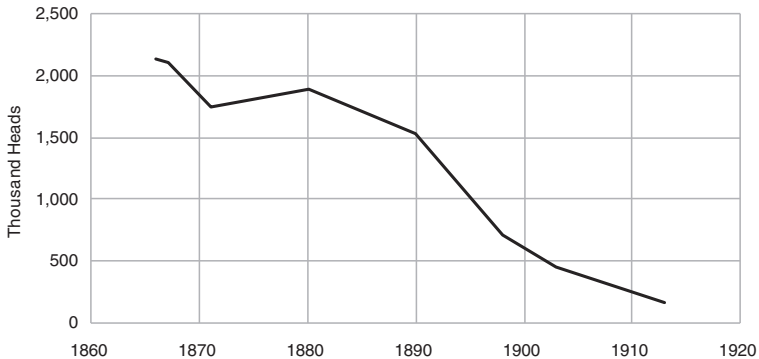
Due to the threatening situation in the merino sheep industry, the government has taken a number of measures to find ways out of the crisis. At the initiative of the Ministry of State property in 1880 began a comprehensive study of sheep in the regions of the Russian Empire; in 1879-84, congresses of shepherds, wool-industrialists, and manufacturers were held in Kharkiv to discuss urgent branch problems. However, these measures did not yield tangible practical results. Due to the stabilization of the situation with harvests and rising prices and demand for bread, it again –and finally– lost the lead in competition with commodity agriculture. Therefore, the process of reducing merino sheep continued until the First World War. During the 1880-1913, the quantitative losses of the merino population in the southern Ukrainian region amounted to 85%.

For example, consider the dynamics of the reduction of the merino population in the Ekaterinoslav province. In 46 years, it decreased 13 times, and the intensity of this process was highest in the late 1890's and during 1903-13.

In the early 20<sup>th</sup> century contemporaries noted a steady decline in the number of specialized sheep farms in the region. During the 1900-07 almost 1/2 medium and small shepherds finally ceased to exist, and the owners of large ones cut merino sheep herds in half or even 70-80% (Polferov, 1915: 124-25). By the way, the reduction of sheep (simple breeds) was also observed in peasant farms, due to lack of own and high cost of leased pastures (Chirvinskiy, 1903: 45). In Tavriya province that was a powerful centre in the re-

gion of sheep, sheep survived only in isolated farms. “Merino sheep”, said Y.Y. Polferov (1915: 121), “is experiencing the last stage of its decline”.

**FIGURE 1**  
**The number of merino sheep in the Ekaterinoslav province, 1866-1913**



Sources: *Commemorative book of the Ekaterinoslav province for 1867* (1867: 244-47); Ministry of State Property of the Department of Agriculture and Rural Industry (1886: 156); *Review of the Ekaterinoslav Province for 1898* (1899: 9); *Review of the Ekaterinoslav Province for 1903* (1904: 9); Polferov (1915: 121-22).

Despite the important role of merino sheep in the agricultural sector of the economy and the significant achievements of local shepherds, this industry in the early 20<sup>th</sup> century lost leading positions. Prerequisites and causes of the crisis that accompanied the merino sheep in the south region began to emerge from the 1860's and significantly appeared since the 1880s. They were due to the situation on the European market (foreign economic conjunction), internal economically factors and local specifics. So we suggest to get acquainted with them in detail.

## 5. EXTENSIVITY AS CHARACTER TRAIT OF MERINO SHEEP

The specificity of the development of merino sheep in the southern Ukrainian region, in contrast to the European region, was primarily in its extensive nature. Merino sheep was concentrated in the hands of large landowners who had enough land to graze thousands of flocks based on the principle: “more land-more sheep”. It turns out that the availability of free fodder as the most important component in keeping sheep prompted extensive sheep farming of south Ukrainian latifundists.

The largest flocks numbered from 25 to 100,000 sheep. They were kept in the Tavriya province in the huge estates of latifundists Filibert, Falz-Fein, Corni s, Vassal, Princes



Vorontsov and Kochubey. Imagine, in the sheepfolds of E. I. Falz-Fein in the 1880s there were up to 200,000 merinos! The average number of sheep in the shepherds of Ekaterinoslav and Kherson provinces was lower (on average up to 10,000) (Gersivanov, 1849: 157; Skalkovsky, 1853: 359, 366-67). Most local shepherds believed that the level of profit depended on the number of sheep. Therefore, they raised as many cattle as it was possible to feed at the expense of their own lands.

This raises the following question: what amount of pasture area was needed for quality maintenance (fattening) of 1 sheep?

It was estimated by that time specialists that to get quality wool standards of grazing in the south region envisaged allocation of 1 tithe of grazing area for 2-3 merinos. However, this rule was followed only by the owners of exemplary sheep farms, which, as a rule, owned huge areas of land. For example, the heirs of E. I. Falz-Fein for grazing of 200,000 flocks of sheep allocated almost 500,000 tithes land (*i.e.* 2.5 sheep per tithe); Vassal, 200,000 tithes (2 sheep per tithe); Mazaev, 2.68 tithes per 1 sheep, Count Mordvinov, 0.8 tithe (Verner, 1889: 4: 22). However, in small farms often more than ten merinos grazed on one tithe, which led to a qualitative degradation of the resulting products. During the winter (stable) period, which lasted in the southern Ukrainian region for 5 months (from October 15 to March 15), the owner had to harvest 9-13 or even up to 15 poods of hay and about 8-18 poods of straw for fattening 1 sheep (depending on the ratio of these feeds in the diet of cattle) (Ostrovskiy, 2014: 198; Statistical Department of the Ekaterinoslav Provincial Zemstvo, 1886a: 2: 79)<sup>11</sup>. According to the calculations of Y.Y. Polferov (1915: 39), “on average, a sheep consumes up to 30 poods of hay per year”. It turns out that for a satisfactory annual maintenance of at least 3,000 flocks, the owner had to provide it with one thousand acres of pastures and hayfields<sup>12</sup>.

If in the first half of the 19<sup>th</sup> century landowners tried to comply with these conditions, then from the 1860's the situation changed. In the south region active development of goods commodity agriculture (growing cereal crops) took place. Therefore, landowners were widening cultivated land by reducing fallow, long used as hayfields and pastures for livestock. The phrase “the sheep does not put up with the plow” has become widespread among many owners. They considered reducing sheep as a natural phenomenon that

11. The daily diet of 1 sheep averaged 2.5 to 4 pounds of hay and 5 pounds of straw. The cost of straw, as a rule, was not taken into account by the owners, because it was available in sufficient quantities after the harvest of cereals.

12. Based on the average hay yield in southern Ukraine per tithe, which was 33 pood (2,000 pounds) in crop years.

should have been carried proportionate to agriculture development (Ministry of State Property of the Department of Agriculture and Rural Industry, 1884: 6). Thus, in 1867 in Ekaterynolav province was more than 4 mln. tithes of land for meadows, and in 1897 only 554,000 tithes, *i.e.* their area shrank more than 7 times. This accordingly affected the rate of decline of sheep (Gololobov, 1899: 100). For example, if in 1880 3 sheep in Kherson province accounted for 2.2 tithes of meadows, then in 1913 only 0.3 tithes of meadows (Polferov, 1915: 58). Analysing the dynamics of sheep and grassland areas, Y. Y. Polferov (1915: 9-10) stated: “We have in availability almost complete overlap in the process of reducing sheep and meadow areas”. Extensive sheep farming in the southern Ukrainian provinces, therefore, could not compete with intensive crops farming, which brought more profits.

In addition, the growing demand for land in the southern Ukrainian provinces has led to a sharp rise in both purchase and rental prices for land ownership; in economically attractive agricultural areas, they have increased 4-8 times. In such circumstances, most local landowners preferred crops farming over sheep. Part of landowners wanted to get “easy money” by renting land rather than breed sheep there<sup>13</sup>.

From an economic point of view, this has led to an increase in the cost of merino wool. Often, especially in dry years, the owners could not provide food for large flocks. For example, Filibert’s famous sheep farm has shrunk tenfold (Verner, 1889: 4: 22). Contemporaries even regretted the deaths of cattle from starvation (for example, in the estate of Princess Dolgorukaya of the Slavic-Serbian district) and the complete absence of intensive farms (Statistical Department of the Ekaterinoslav Provincial Zemstvo, 1886b: 2: 79). S. M. Dmitriev (1918: 249) argued that in the south, where the prairie owners accustomed to “a wide expanse and flocks and depending only on accidents and weather”, the practice of combining sheep with rational grain farming was not used. In conjunction with increased competition and unstable prices on European markets this led to loss of recently a lucrative industry and reduction of sheep in the region.

## **6. SHEEP BREEDING AND THE EUROPEAN MARKET: EXPORT ORIENTATION AND PRICING POLICY**

Of course, the profitability of merino sheep was cause of its popularity among landowners of southern Ukraine. Low cost of keeping (primarily feeding) of sheep, a large num-

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13. Issues of land lease in the south of Ukraine are covered in detail in other works of the author (CHERNIKOVA, 2020a, 2020b).

ber of flocks and high profits from the sale of wool fully offset the costs at the initial stage. It should be noted that the export orientation of the south Ukrainian merino sheep largely determined the peculiarities of its development. This was facilitated by a favourable geographical location, as in the south of the country there were ports of the Azov and Black seas, through which wool was delivered to European markets. As early as 1805, Emperor Alexander the First granted permission to export merino wool. And Britain's suspension of trade relations with virtually all of Europe, except Russia and Sweden, contributed to the establishment of stable trade relations (Selionova, 2017: 13; Chernopyatov, 1873: 15). During the 19<sup>th</sup> century England traditionally remained the main country, whose markets received almost 9/10 of all wool from the south of Ukraine, and the rest of the wool was exported to Austria and Prussia.

Note that among exported goods raw wool was one of the most profitable sources of the Russian economy. In 1864, the ratio of the three "leaders" in terms of money turnover of exported products (cereals, wool and oilseeds) was 2.9: 1.02: 1, respectively (Shchepkin, 1869: 1).

The following figures testify to the important place of south Ukrainian merino sheep in Russia's foreign trade. More than 2/3 of merino wool, which came to European markets from Russia, was obtained from sheep farms in southern Ukraine. During the first half of the 19<sup>th</sup> century wool exports from Russia increased 33 times and in 1855 amounted to 662,000 pounds per year (Gulishambarov, 1896: 27).

The ports of the Black and Azov seas, located in the south of Ukraine, played an important role. From biggest Odessa National port in 1845 were exported more than 485,000 poods of wool –in 1847, 229,000 poods (Skalkovsky, 1853: 365). During the 1872–82, despite crisis in sheep breeding, turnover exported through the southern Ukrainian port of wool averaged 184,000 poods, and in some years even exceeded 500,000 poods (Ministry of State Property of the Department of Agriculture and Rural Industry, 1884: 191). Wholesale purchases of wool were made directly on sheep farms or at specialized local fairs. The most important –in terms of turnover of merino wool– for shepherds of the southern Ukrainian provinces was the Trinity (from 1 to 15 June) fair in Kharkov, which began work immediately after shearing sheep (Mendelev, 1893: 250). Annual market prices for wool were set here. In the 1880's the turnover of wool here amounted to 410,000 poods, and the turnover from the sale of products (wool and sheep-skin) reached 5 million rubles (Mendelev, 1893: 251).

However, the changes in wool suppliers that have taken place on the world market have had a negative impact on the development of the industry, causing a crisis in Eu-

ropean sheep farming as a whole. In Russia from 1870 to 1882 the number of fine-wool sheep decreased by 15%, in Germany from 1863 to 1883 by 33%; the situation was similar in France and the United States. In the post-reform years, the European markets began to grow with cheap wool from Australia, New Zealand, and South America, where already in 1890s 1/3 of the world sheep breeding was focused there (Kuleshov, 1890: 12).

Ultimately, this led to falling prices on the world market, cheaper domestic wool and reduced export volume. Local shepherds, who faced an increase in the cost of keeping sheep, were unable to withstand colonial competition, where the cost of breeding merinos was minimal. “Sheep do not develop because”, wrote Mikhail Kuleshov (1900: 13), “behind the ocean there are areas with the eternal pasture period (as in Australia) and the land is almost worthless. Millions of sheep are bred there, and their wool and meat fill European markets”. So cheap Australian wool, which in the late 19<sup>th</sup> century accounted for half of European imports, on the eve of First World War was almost 2/3, thus displacing Russia from market circulation (Ostrovskiy, 2014: 32).

Simultaneously with the decrease in wool exports, the opposite trend was observed – an increase in its imports, which indicated the inability of local sheep to meet domestic needs. Between 1870 and 1883, the total volume of imported wool to Russia more than doubled up to 800,000 poods, including non-spun dyed wool as much as up to 56 times (Ministry of State Property of the Department of Agriculture and Rural Industry, 1884: 193). If in the first post-reform decades the export of wool exceeded its import (in 1861-65 the ratio was 93% and 7%, respectively; in 1881-85 was 82% and 18%; in 1891-95, 52% and 42%), then in the early 20<sup>th</sup> century scales finally leaned in favour of imported products, which in 1896-1900 was 51%, in 1901-05, 65%, in 1906-10, 75% (Ostrovskiy, 2014: 329; Polferov, 1915: 23-124).

Let’s compare: during 1888-92 the total value of woollen products imported annually to Russia exceeded the value of exports by 6.7 million rubles, and during 1893-1903 the difference was already 28.6 million rubles for a year! (Kuleshov, 1916: 7).

According to most shepherds and industrialists, it was impossible to stabilize the situation in the field of sheep without government intervention. In order to prevent “colonial” competition and oust local wool from the domestic market, shepherds, wool traders, manufacturers, etc., appealed to the government to impose a high or “protective” duty on imported wool. They stressed that due to the cheapness of imported wool, local owners were forced to minimize the cost of their own, which led to the loss of sheep breeding in general. In the United States, for example, the amount of tax was 35% of the value

of the goods, while in Russia it did not exceed 10-14% (Ministry of State Property of the Department of Agriculture and Rural Industry, 1884: 197).

Import taxes have indeed played a significant role in the supply of imported raw materials. If in the pre-reform period due to small volumes of imports the low tax was not a problem for local sheep, then in the post-reform decade it did not hinder foreign competition in any way. In the customs issue, an important aspect was to take into account the type of imported wool products. In contrast to the predominance of dirty wool in exports, local manufacturers were willing to buy foreign processed products in the form of dyed and undyed woollen ribbons (purified combed wool), yarn, etc., which have long been supplied at a relatively low rate<sup>14</sup>. Thus, in 1867-68 it amounted to 0.22-0.24 rubles for a pood of raw wool and twice as much for non-spun dyed, for spun 4.50-4.95 rubles (Ministry of State Property of the Department of Agriculture and Rural Industry, 1884: 197). Introduction by the Ministry of Finance of new tariffs taking into account product differentiation (for example, the establishment of 1 ruble from a pood of washed wool, 2 rubles from dyed wool, or 3-4.50 rubles from a pood of woollen ribbons, 7.50-9 rubles from yarn, etc.) did not contribute to the growth of the price of dirty wool in the domestic market, as when converted to dirty taxation was only up to 0.3 rubles for pood (Selionova, 2017: 31). Unification and increase of duties in 1890 to 3.16 rubles on dirty and customs wool also did not help reduce imports, as only imported cleaned or processed products. In addition, the lack of a clear trade system, the weak development of the local wool processing industry compared to the European one also had a negative impact on the level of marketability of wool products (Selionova, 2017: 30-31).

The growth of market demand and the maintenance of high prices for merino wool undoubtedly served as a motivating factor for the development of south Ukrainian sheep breeding. Quite high prices for wool were maintained until 1880, but they were characterized by wavy dynamics.

For example, in the early 1860's wool prices began to fall, reaching a minimum in 1868-70. In 1876, after five years of growth, they experienced a second decline. In 1879-1880 the situation improved significantly: the cost of wool did not fall below 11 rubles per pood, which instilled a lot of optimism in breeders and even led to an increase in the size of flocks in some counties. For example, in Bakhmut district in the Ekaterinoslav province in 1880 the number of sheep increased by 15% in 8 years (Ministry of State Property of the Department of Agriculture and Rural Industry, 1884: 5). It should be

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14. The cost of processing yarn in local factories cost 17 rubles, while in England, taking into account the additional profits of the manufacturer, 9 rubles.

noted, however, that this phenomenon, described as “involuntary sheep-breeding”, was caused more by problems in the field of commercial agriculture: crop failure due to droughts, destruction of grain crops by pests, etc. (Review of the Ekaterinoslav Province for 1880, 1881: 3). Under such adverse circumstances landowners hoped to get low, but guaranteed profits from the sale of wool.

**TABLE 2**  
**Sales prices for dirty wool in large farms in southern Ukraine (rub. for pood), 1867-80**

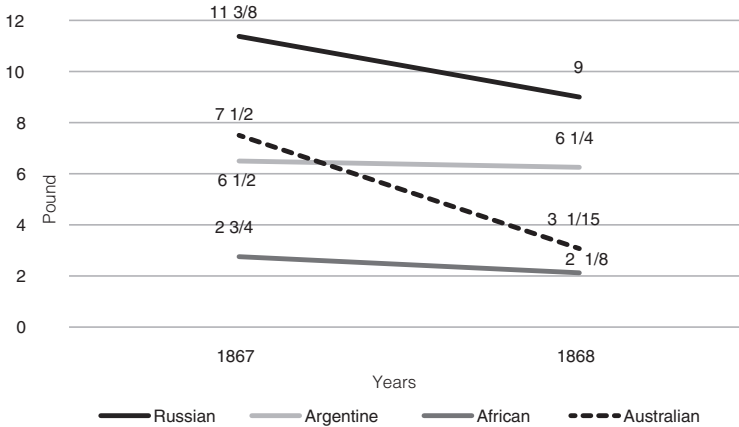
Farms	1867	1870	1872	1875	1876	1878	1880
Ekaterinoslav province							
Majorske	—	9.15	9.75	9.20	9.65	10	12.00
Dariivka	—	7.00	8.75	9.27	8.00	10	11.50
Tavriya province							
Vesele	—	—	8.75	8.90	8.00	9.60	12.25
Mordvinovka	—	6.85	10.15	9.65	7.75	10	11.00
Sasin—Kiyat	8.25	6.75	9.50	9.00	7.15	8	11.25
Kherson province							
Novovorontsovka	—	7.00	10.00	8.82	8.00	9.60	12.90
Bakmali	8.25	6.40	8.25	8.75	7.00	9.00	11.00

Sources: Ministry of State Property of the Department of Agriculture and Rural Industry (1884:136-37); Verner (1889: 4: 34).

However, from 1880s with improvements in agriculture and increased competition on European markets, there was a progressive fall in prices of merino wool. In Ekaterinoslav province 1 pood of dirty wool worth of 7-8 to 9.50 rubles (Gololobov, 1899: 209), and even under such conditions a significant part remained unsold (Statistical Department of the Ekaterinoslav Provincial Zemstvo, 1886b: 2: 71). In some places the cost dropped to 5-6 rubles, which led to another crisis of phasing the pace and development and sales of wool in the region as noted, cost of southern wool was 1.5-3 times the supply of other countries (Chernopyatov, 1873: 54).

This ultimately led to a fall in world market prices and, consequently, a reduction in the price of southern Ukrainian wool and a reduction in export volumes. “Competition from cheap wool delivered from Australia and South America”, wrote Mikhail Kuleshov (1916: 7), “was and will be one of the major causes of reduction of sheep and its slow improvement in the qualitative sense”.

**FIGURE 2**  
**Market prices for merino wool in London (pound for pound), 1867-68**



Source: Chernopyatov (1873: 54).

## 7. THE REASONS FOR THE QUALITATIVE DEGRADATION AND DECLINE OF MERINO SHEEP AT THE TURN OF THE 19<sup>TH</sup>-20<sup>TH</sup> CENTURIES

In these circumstances, leading sheep experts and owners of large sheep farms in southern Ukraine sought to beat the competition by improving the quality of merino wool and its productivity. This was possible only with qualified breeding and providing quality professional care for sheep.

It should be noted that the south Ukrainian region was characterized by a fairly high level of professional *boniting*<sup>15</sup> in breeding shepherds. Given the achievements of European sheep breeding, powerful local owners invited the best breeders and experienced professionals from Germany. So the question arises: why in the 1880s Professor Kuleshov (1890: 7), stated “[...] quality sheep regression in competition conditions?”

The fact that most sheep farms, designed exclusively for the sale of wool, appraisal was not used that adversely, affecting the quality and characteristics. In the Ekaterinoslav province, the owners supported the idea of intensifying merino sheep, so the services of professional breeders were used by 30% of owners. On the other hand, in the Tavriya province it occurred only 4.3%, *i.e.* 6 times less, which was considered a “weak spot” of

15. *Boniting* is a system for assessing the breeding qualities of the animal on a set of economically useful traits.



the Tavriya sheep (Verner, 1889: 4: 32, 37-49). Even if the owner bought breeding merino because of uncontrollable crossbreeding their farms with each successive generation as merino deteriorated.

Despite considerable experience, European breeders often did not take into account the Ukrainian specifics of steppe sheep of many thousands, extrapolating the “German microcosm to macrocosm” of the local (Ministry of State Property of the Department of Agriculture and Rural Industry, 1883: 15). Often it had a negative impact on their work performance, giving rise to distrust and scepticism of local owners about further involvement of this kind of professionals. Sometimes, for example, it was managed to achieve increase of wool quantity, but its quality (fragility, openness, high level of pollution fleece), in contrast, worsened and did not survive market competition (Chernopyatov, 1873: 41).

In addition, according to most Ukrainian shepherds, the lack of experienced, qualified, conscientious flock care staff was, not surprisingly, one of the most painful problems of sheep breeding. This prompted the owners of thousands of flocks to either reduce livestock or abandon farming altogether. According to the Kherson owner V. Dobrovolsky, sheep-breeding “does not give profits due to corruption and bad behaviour of shepherds” (Perepelkin, 1894: 146). The situation was more stable only in those farms where the owners were directly involved in sheep breeding (such as Mazaev, Cornies) or involved specialists-bonitors. Therefore, the need for on-site training of qualified specialists by opening schools for bonitors, wool scientists, etc. in existing agricultural schools since the 1880s has been repeatedly discussed at congresses of shepherds, wool industry and manufacturers (Kuleshov, 1890: 1).

Due to unqualified grading or lack thereof, insufficient care and nutrition, etc., the yield of wool often even decreased, and its quality was often inferior to overseas competitors. The main disadvantages of local wool, which primarily affected foreign demand, were: diversity, uneven fleece, its openness, tortuosity, etc. (Melnikov, 1884: 382).

There were also problems encountered in a particular region. For example, the article already emphasized the high quality of Black Sea sheep (Mazaev’s) type, which were bred in the Tavriya province. However, a significant problem for the owners was its contamination with *burdock*<sup>16</sup>, where it was impossible to get rid of local wool treatment fac-

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16. *Burdock* is a generalized name for inflorescences and fruits that have numerous spines and are able to cling to human clothing, animal fur, and so on. Distributed in the steppes of the Tavriya province.

tories. Therefore, local owners had to reduce its cost by 10-15% or export it at a reduced price to France, where there were already special treatment plants (Ministry of State Property of the Department of Agriculture and Rural Industry, 1884: 131, 134).

It should be emphasized that conditions of keeping of merino served as an important factor in quality wool boards. The inconsistency of climatic and economic conditions of the south of Ukraine for keeping French or Spanish sheep with worsted wool gradually led to a partial loss of its properties. Let us recall how the character of the work of the Ukrainian writer M. Stelmakh, the owner of the Rambouillet sheep, said: “In cold barns not golden wool, but pig bristles will grow” (Stelmakh, 1962: 40). According to some manufacturers, the wool of local merinos, having lost its cloth features, has not acquired pure worsted (Chernopyatov, 1873: 64). Unqualified crossbreeding and care, malnutrition of most sheep farms led to a decrease in productivity of wool and its competitiveness on the European and domestic markets. All these factors together have led and the gradual decline of merino sheep industry as a business entity in southern Ukraine.

## 8. CONCLUSIONS

Thus, during the first half of the 19<sup>th</sup> century sheep breeding, which was historically typical of the southern Ukrainian region, was gradually transformed from an ancillary type of farming into a leading livestock industry. Favourable natural and geographical conditions, the availability of land resources, growing demand for wool, and hence revenues from its sale in combination with government support contributed to the growth of sheep farms and the number of flocks, and thus the productivity of the industry.

One of the important problems of the initial period was the adaptation of demanding European merinos to local conditions, the solution of which was seen in crossbreeding crossing the latter with local breeds. The primary task of the owners was to improve the quality characteristics of wool in accordance with European market demands. This meant the formation of several areas of sheep breeding in the region, the common basis of which was the crossbreeding of European merinos of the breed chosen by the owner and/or local sheep in order to obtain “ideal” –in terms of quality– for selling wool and increase its productivity (*i.e.* quantity).

The specificity of merino sheep in the south of Ukraine was primarily in its entrepreneurial nature. The market orientation of merino sheep in the southern Ukrainian provinces, on the one hand, contributed to the development of entrepreneurial initiative on the part of owners, a significant stimulus for which was the economic attractiveness

and demand for wool in domestic and European markets. However, on the other hand, it meant the permanent dependence of the level of marketability of wool, and hence the profits of owners, on the economic situation and the need to find new ways to maintain its competitiveness.

Among the internal factors that hindered the improvement of the marketability of wool, it should be noted the lack of qualified grading and care of flocks, which in most cases led to a deterioration in the quality of wool. Due to the extensive nature of steppe sheep breeding, plowing of lands due to reduction of lands for cattle fattening and increase of land rent value had a negative impact on the quantitative and qualitative position of sheep breeding.

The dependence of the south Ukrainian wool business on the European market led to a number of external factors that marked its development during the post-reform era. Despite the important place of wool turnover in the Russian economy, the cost and volume of exported wool significantly depended on the foreign economic and political situation, which created additional “risks” for shepherds. The filling of European markets with cheap wool from Australia, New Zealand and South America and the growth of domestic demand for imported wool products led to falling prices on the world market. Local shepherds were unable to withstand colonial competition, which ultimately led to a reduction in the turnover of wool. Extensive development of southern Ukrainian sheep breeding with a predominance of wool direction in these conditions, thus, threatened the progressive decline of this industry. Enterprising owners saw output to use additional sources of income from sheep which, again, was appointed and market demands.

Undoubtedly, among sheep breeding products that were in demand in the local and European markets, merino wool occupied prominent place. However, other sheep products also played an important role in trade. It is known that in the late 19<sup>th</sup> century local shepherds tried to overcome the crisis in the sale of wool by selling meat, lard, and sheepskin, which were in demand abroad. This problem also requires a detailed study. In general, the study of merino sheep in the south Ukraine region, according to the author, is a step towards a detailed study of the development of commercial livestock (horse breeding, livestock) in general, its place in the agricultural sector of Ukrainian and European market economy. For more than a century, merino sheep, despite all the problems and crises, has occupied a leading position in the agricultural sector of Ukrainian lands and the Russian Empire as a whole. Therefore, the study of the specifics of its development will help to clarify the peculiarities of the formation of Ukrainian entrepreneurship in the agricultural sector of the economy in the formation of capitalist relations and the demands of the world market. On the other hand, it would be interesting to expand the research

horizons and make a comparative analysis of the development of Ukrainian merino sheep with European (Spanish, German), Australian and so on.

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