



GENERAL STATUS OF RUMINANT LIVESTOCK IN THE TURKISH REPUBLIC OF NORTHERN CYPRUS

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Abstract: Among other agricultural activities, animal production has the most important strategic importance for the country's economy. In the Turkish Republic of Northern Cyprus (TRNC), animal production constitutes 45% of the total agricultural production. In response to the increasing population, the need for animal food continues to increase day by day. State hatcheries and many private companies run animal production activities along with small-scale family enterprises. Almost all animal feed raw materials are imported. On the other hand, most of the food of animal origins that is marketed (e.g. meat, milk, egg etc.) is produced in TRNC and the rest is imported when it is necessary. Halloumi, which covers almost all animal-based imported goods, is imported into many countries especially Turkey and Kuwait and contributes to the country's economy. This study concentrates on the general state of animal production in TRNC and aims to present the current state of ruminant animals (66 thousand head of cattle, 197 thousand head of sheep and 78 thousand head of goat) in the country's livestock farming, their contributions to the economy and the type of their production.

Keywords: TRNC, Agriculture, Animal husbandry, Import-export, Halloumi

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1. Introduction

Animal production, which is a branch of agriculture, has a strategic importance in terms of its contribution to other fields of agriculture and the country's economy (Görgülü, 2009). Grain crises (difficulties in finding grain and sudden increases in price) due to recent epidemics and conflicts between countries with strategic importance have disrupted production in the food sector. For this reason, food prices have doubled in countries that are foreign-dependent in food production, and it has become difficult for human beings to reach the nutrients they need (Gürlük and Turan, 2008, Doğruyol A. 2021.). Due to these factors, it has once again proven the importance of countries to carry out their own agricultural activities. Animal production outputs constitute the largest share of agricultural production in the economy. Animal products such as meat and meat products, milk and dairy products, leather and fleece, which are needed by the society, are met through bovine and ovine breeding (Paksoy and Özçelik, 2008; Semerci and Çelik, 2016).

Thanks to the Mediterranean climate of the island of Cyprus, it has a suitable structure for plant and animal production (Anonymous, 2022a). It is known that food resources should be used more efficiently with the increase in consumption due to the increasing population in the Northern Cyprus (Anonymous, 2022b).

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2. Agricultural Sector in North Cyprus

2.1. Geographical and Economic Structure

The island of Cyprus is the third largest island in the Mediterranean after Sicily and Sardinia. The island, with a total surface area of 9251 km², consists of three natural geographical structures: Beşparmak Mountains, Troodos Mountains and Mesarya plain. The climate that is effective in Cyprus is the Mediterranean climate. The characteristic feature of the climate is hot and dry summers, mild and less rainy winters (Anonymous, 2022c, Anonymous. 2022g).

Due to the internal turmoil in the 1960s, the island of Cyprus was divided into two regions, Turks in the north of the island and Greeks in the south, in 1974. The Turkish Republic of Northern Cyprus was established on November 15, 1983, and its surface area is 3242 km² (Koday, 1995; Anonymous, 2022c). Its population in 2011 was 286,257. The majority of the population is also located in non-rural areas, mainly in the cities of Nicosia and Famagusta (Anonymous, 2022d). In addition,



800,000 people come from Turkey and other countries for touristic purposes, especially in the summer months. Therefore, with the increasing population, the North Cyprus' need for animal and vegetable products will increase. According to the statistical data of 2021, approximately 8.38% of the Gross National Product (GNP) originates from the agriculture sector and approximately 45% of this is the livestock sector (Anonymous, 2022d).

2.2. General Condition of Livestock

The agricultural sector in Northern Cyprus consists of plant and animal production (bovine and ovine animals and fisheries). According to the 2021 data of the Ministry of Agriculture and Natural Resources (TDKB), animal production in Northern Cyprus is a large, medium, and small-scale business model.

There are 890 cattle breeding, 3550 sheep and 2510 goat breeding enterprises in the northern part of Cyprus. There are very few large-scale companies in the poultry sector. In 2021, 8,124,764 dozen eggs were produced throughout the country, and 15 thousand tons of chicken

meat was produced. Chicken meat has the highest share in meat production in 2021. Poultry production and the processing and distribution of the products obtained from these animals within the country and abroad are also carried out by private companies. Chicken feet, which are slaughterhouse waste in poultry, are exported to the People's Republic of China. Chicken and piece chicken products (such as hips, breasts) are exported to Middle East countries in the country. In addition, 1 turkey production enterprise operates. In recent years, advertising activities to promote turkey meat have made turkey meat in demand in the country and paved the way for production by private enterprises.

Although North Cyprus is an island country, the contribution of fisheries to national income is limited and below the expected level due to the low fish stocks on the coasts outside the Karpaz region and the inability to engage in open sea fishing. According to 2018 data, fish production is reported to be approximately 650 tons (Anonymous, 2022e) (Table 1, Figure 1).

Table 1. The condition of the agricultural sector in the TRNC between the years 2016-2021 (Anonymous, 2022e, Anonymous. 2022f.)

Years	2016	2017	2018	2019	2020	2021
Agricultural s-Sector	5,6	4,5	6,2	5,5	6,0	8,3
Herbal Production	2,7	1,9	2,3	2,6	2,8	4,2
Animal Production	2,5	2,1	3,5	2,5	2,7	3,8
Fisheries	0,3	0,5	0,4	0,4	0,4	0,3

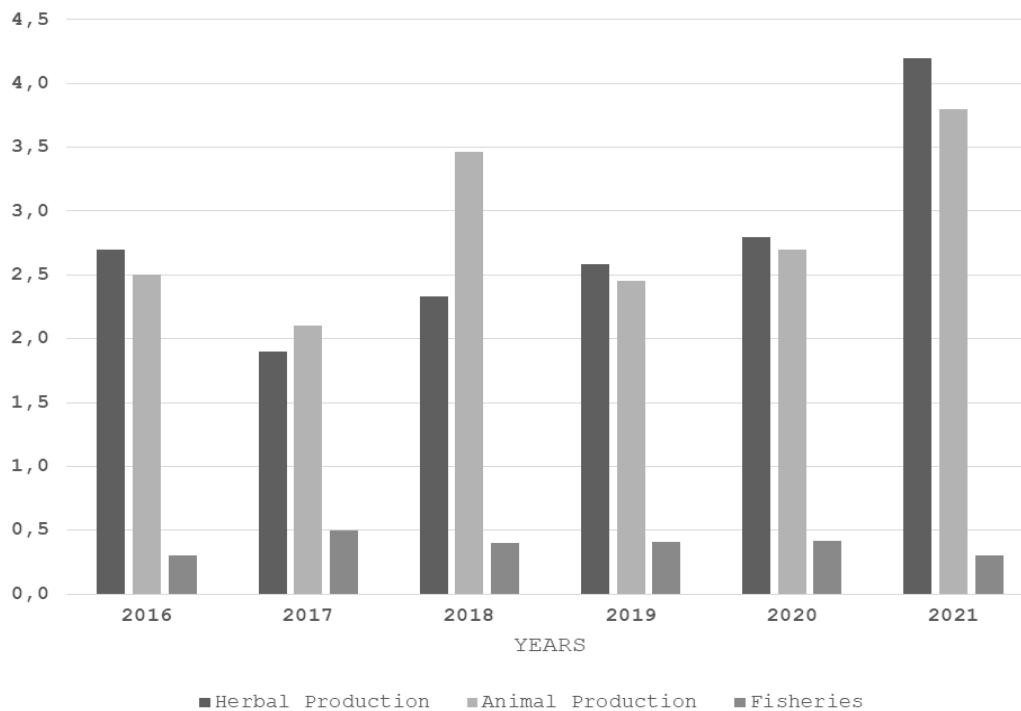


Figure 1. The situation of the agricultural sector in the TRNC between the years 2016-2021 (Anonymous, 2022e).

2.3. Cattle and Sheep Breeding

In today's livestock, there are products of animal origin mostly obtained from cattle breeding. Therefore, cattle

are a factory producing edible and usable animal products such as meat, milk and leather. For this reason, cattle breeding are widely carried out in almost all parts

of the world, especially in the developed and intensive regions of plant production (Canbolat, 2015; Ergün and Bayram, 2021). According to the statistical data of the Ministry of Agriculture and Natural Resources of Northern Cyprus in 2021, there is a total of 65701 cattle. Most of the milk needed by the TRNC is met by the Holstein breed, which is widely used in production. Depending on the rearing conditions, 6500 kg of milk per cow and a total of 159894 tons (2021) of milk are produced annually. 86.87% of milk production in the northern part of Cyprus is provided by dairy cows. Males of the Holstein breed, which are good in terms of milk yield, are used for fattening. In recent years, artificial insemination of Simmental breeds is carried out with Holstein breeds fourth lactation and above cows, which are combined productive, in order to increase cattle fattening performance and to obtain better quality carcasses among producers. Thus, the fattening performance is tried to be increased (Anonymous, 2022a).

Ovine breeding, which is one of the other branches of the livestock sector, has a wide area of use by obtaining products such as meat, milk, wool, mohair and leather (Semerci and Çelik, 2016). According to the statistical data of the Ministry of Agriculture and Natural Resources in 2021, the number of small-scale enterprises engaged in sheep and goat breeding is 4500, the number of medium-sized enterprises is 1480 and the number of large enterprises is 80. There are a total of 196,890 sheep and 77,852 goats in these enterprises (Anonymous, 2022i). There are two state breeding farms engaged in small cattle breeding. Genetic and breeding studies are carried out in these enterprises and they contribute to the country's livestock. (Anonymous, 2022e)

While a decrease was observed in the number of sheep and goats in 2017-2021, the Ministry of Agriculture and Natural Resources and the European Union regarding the registration of Halloumi/Halloumi as a Protected Product of Origin and Protected Geographical Indications (PDO-Protected Designation of Origin) in the European Union (EU). Grant supports have increased in order to develop small cattle breeding and increase production (Anonymous, 2022a). In Table 2, when 2017 and 2021 years are compared, it is given that while the number of cattle producers decreased, the number of cattle increased.

Chios, Awassi, Asaf and their hybrid breeds are used in sheep breeding in North Cyprus. In goat breeding, production is made with Hair, Aleppo (Damascus), Saanen, Alpine, and hybrids. 79% of the 24 tons of ovine milk produced in 2021 is sheep milk and 21% is goat milk (Anonymous, 2022h).

2.4. Production and Marketing of Bovine and Ovine Products

Population growth in the Turkish Republic of Northern Cyprus is ensured every year by the number of tourists and the number of students coming to the island for higher education (Anonymous, 2022d). Thus, it is

estimated that the demand for food in Northern Cyprus will increase exponentially. Northern Cyprus is under an embargo (North Cyprus is a country recognized only by Turkey in the world, and is an independent state founded on November 15, 1983. Since its establishment, it has been under embargoes in economic, social and cultural aspects by the whole world, especially the Greek Cypriot part, foreign expansion has been prevented, the fact that the domestic industry is very weak, and that it is dependent on foreign sources for many products emphasizes the indispensable importance of agricultural production (Doğan, 2009).

Milk production is a universal agricultural production, people milk their dairy animals in almost all countries around the world and almost one billion people live on dairy farms (Anonymous, 2022i). For this reason, while milk production plays a major role for the world food sector, it is also very important for the development of rural areas. When the share of products constituting agricultural exports in terms of value for 2015 is analyzed, it is seen that dairy products have a significant share with 58%. Until the 1960s, families in the villages of Cyprus extensively raised sheep and goats, and from the milk of these animals, they obtained dairy products, mainly halloumi, nor, talar cheese and yoghurt. Industrial type production in the dairy sector started in 1957 in the TRNC, for the first time, with the collection of milk from the producers, and the production of halloumi and perforated cheese. TRNC started to export halloumi for the first time to England, and with the increase in milk production, exports increased with the introduction of private factories. Halloumi was the second leading export product until 1994 (Anonymous, 2022k; Anonymous, 2022b). Until the Abat Decisions, a significant amount of halloumi was exported to other European countries and Arab countries, especially England. As a result of the embargoes applied to the Turkish Cypriots after the Abat Decisions, exports to England and other European countries were prevented. This isolation still continues (Aran, 2006).

Halloumi, which is widely produced in the country among dairy products and is unique to the island; it is exported to many countries, especially Turkey, Kuwait, Saudi Arabia and the United Arab Emirates. The contribution of the state to this export increases the production of halloumi day by day. In 2021, the European Union Commission decided to register the halloumi product as the name of origin (PDO) and included Cyprus as the base country. It has been decided that the milk to be used for the production of traditional halloumi within the scope of PDO should be prepared with 51% ovine (sheep-goat) and 49% bovine (cattle) milk (Anonymous, 2022a). TRNC Ministry of Economy and Energy Chamber of Commerce 2021 halloumi export data are in Table 3 below (Anonymous, 2022c).

Table 2. Number of animals and producers between 2017-2021 (Anonymous, 2022i)

Species	2017		2021	
	Number of Producers	Number of Animals	Number of Producers	Number of Animals
Cattle	998	63,270	890	65,701
Sheep	3,619	203,419	3,550	196,890
Goat	2,560	83,467	2,510	77,852

Table 3. 2021 Halloumi export data (Anonymous, 2022c)

Countries	Quantity	Turkish Lira	Dollars
USA	82,577,00	₺ 4,186,192,77	\$ 509,043,50
Australia	10,004,00	₺ 244,763,78	\$ 26,774,71
Bahrain	96,042,00	₺ 4,208,040,91	\$ 445,043,10
United Arab Emirates	1,088,192,00	₺ 41,854,831,20	\$ 4,628,825,92
Palestine	3,000,00	₺ 109,691,21	\$ 13,300,00
Iraq	60,202,00	₺ 2,683,887,69	\$ 281,805,09
Qatar	83,103,00	₺ 4,416,724,88	\$ 507,479,81
Kuwait	2,733,342,00	₺ 89,807,766,75	\$ 10,270,363,59
North Korea	27,700,00	₺ 964,577,13	\$ 107,180,00
Saudi Arabia	1,278,500,00	₺ 47,437,442,80	\$ 5,348,001,00
Thailand	210,00	₺ 7,515,58	\$ 903,00
Turkey	3,366,094,00	₺ 107,656,159,78	\$ 12,427,984,50
Oman	24,214,00	₺ 1,066,664,12	\$ 131,054,40
Jordan	562,550,00	₺ 19,585,067,82	\$ 2,332,815,00
Total	9,415,730,00	₺ 324,229,326,42	\$ 37,030,573,62

In addition, bottled pasteurized milk production was started in 1963. The KOOP Milk Factory, which is still operating today, was established in 1969 (Anonymous, December 2022k; Anonymous, 2022b). (Anonymous, 2022i) (Table 4). Icebox: It is the event that small-scale producers carry and pour their milk, which they milk due to the lack of electricity in animal shelters, into the freezers in a hygienic environment in their homes by means of cans or jugs.

Foods of animal origin play an important role in nutrition in terms of the proteins, minerals and vitamins they contain. Especially meat and meat products contain essential amino acids needed in human nutrition in ideal proportions. However, due to the availability of iron in the body and being a very good source of vitamin B12, it shows that it is a food that plant-based foods cannot replace meat and meat products (Derinöz et al., 2021). In a healthy diet, 40-50% of the body's protein needs are composed of foods of animal origin. The access of the individuals who make up the society to animal protein sources is affected by the agricultural policies of the countries and the implementations of these policies.

In terms of the belief, tradition and custom of the society we live in, cattle, sheep and goat species are preferred in the production of meat and meat products (Gürer, 2021). According to the Northern Cyprus' 2021 statistical data, chicken has the highest share in meat production, while cattle take the second place. These values are given in Table 5.

According to the data of 2021, approximately 49% of the red meat production in our country is beef, followed by mutton with a share of 40% and goat meat with a share

of 11%. In Table 6, it is observed that the amount of beef has not changed in the last three years, and the amount of sheep and goat meat has decreased. When the data of 2021 is examined, it is noteworthy that the production of sheep and beef is similar (Anonymous, 2022a). Red meat production amounts for the years 2019-2021 are given in Table 6.

Leather, which has a lot of usefulness with its perfection and many aspects, and has been used by human beings since ancient times, is a product that is rarely mentioned among animal products, but has very valuable features. The biggest share in the rapid development in the leather industry belongs to sheep skins, especially sheep skins. The skin is an organic material and it is an armour that has the task of protecting the animal in general, with the hair or wool cover on it, the connective tissue fibres called collagen that make it up (Yakalı, 1979). A total of 271,679 leathers were produced in the North Cyprus in 2021. Approximately 66% of the total leather production is sheepskin and 26% is goatskin (Anonymous, 2022a). The amount of leather produced according to the species is given in Table 7.

Table 4. Milk production by years (Anonymous, 2022i)

Products		2016	2017	2018	2019	2020	2021
Cow's milk (L)	Open	31,028,251	25,504,241	19,456,443	14,119,610	9,993,945	5,708,314
	Cold	117,257,288	124,128,258	134,080,826	120,075,838	132,027,865	142,670,744
	Icebox	0	2,917,334	5,406,147	5,236,872	6,054,464	10,267,393
Total		148,285,539	152,549,833	158,943,415	139,432,320	148,076,274	158,646,451
Sheep milk (L)	Open	1,873,376	2,028,173	1,904,583	1,545,583	1,342,962	1,271,021
	Cold	374,583	485,043	521,598	667,542	729,402	914,399
	Icebox	0	0	0	78,867	150,957	213,015
Total		2,247,959	2,513,216	2,426,181	2,291,992	2,223,321	2,398,435
Goat's milk (L)	Open	2,039,838	2,237,191	2,305,969	1,701,284	1,372,031	1,049,118
	Cold	454,846	612,07	575,306	661,613	653,926	655,807
	Icebox	0	0	0	257,775	448,77	515,860
Total		2,494,684	2,849,261	2,881,275	2,620,672	2,474,727	2,220,785

Table 5. Meat production by species in 2021 (Anonymous, 2022i)

Species	Meat Production (Tons)
Chicken	15,045
Cattle	4,891
Lamb	4,078
Goat	1,134

Table 6. Red meat production (Tonnes) for the last three years (Anonymous, 2022i)

Species	2019	2020	2021
Cattle	4,891	4,891	4,891
Lamb	6,910	3,715	4,078
Goat	1,157	1,150	1,134

Table 7. Leather production amounts by species in 2021 (Anonymous, 2022i)

Year	Leather Production (Number)			
	Cattle	Sheep	Goat	Total
2021	19,566	181,215	70,898	271,679

Sheared dirty wool from sheep is called "fleece". In a broad sense, fleece means all the hairs that are removed from the animals as shirts during shearing and that can be twisted and made into yarn (Kaymakçı and Sönmez, 1992). Wool is the sheared, washed and cleaned form of the fleece shirt covering the sheep (Tüfekçi and Olfaz, 2014). In fabric production, the washed and cleaned form of fleece is used (Kaymakçı and Sönmez, 1992).

Although animals have not been exported as living material in the Northern Cyprus, leather and fleece are exported to Turkey at certain rates. Turkish Republic of Northern Cyprus Trade Office, leather and wool export values for the years 2017-2021 are given in Table 8 (Anonymous, 2022h).

Bovine and ovine manures are a valuable nutrient provider for the soil and a regulator of soil conditions. When properly matured and applied to the soil, it is a better and more economical nutrient provider than commercial fertilizers. Animal manure is a fertilizer rich in organic matter content. Therefore, it increases the water holding capacity of the soil and provides the soil with nutrients such as nitrogen (N), phosphorus (P),

potassium (K) and sulfur (S) (Kacar and Katkat, 2009; Konca and Uzun, 2012). Due to the exorbitant increases in chemical fertilizer prices in recent years, the value of ruminant fertilizers, whose value has not been understood for years and has been launched as if they have no economic value, has started to gain importance today (Teoman and Yaşar, 2016). In parallel with the increase in the number of animals in the North Cyprus in 2017 and 2021, there was an increase in the amount of manure. In Table 9, the amount of bovine and ovine manure produced in the North Cyprus is given in tons (Anonymous, 2022i).

Table 8. Leather and wool exports in TRNC for the years 2017-2021 (Anonymous, 2022h)

Type of Good	TRNC Leather and Wool Export				
	2017	2018	2019	2020	2021
Leather (Number)	207,770	182,660	205,573	154,601	157,280
Wool Fleece (Kg)	262,200	175,280	168,620	77,600	-

Table 9. Amount of bovine and ovine manure produced in North Cyprus (Anonymous, 2022i)

Years	Bovine (Tonnes)	Ovine (Tonnes)	Total (Tonnes)
2017	116,035	21,474	137,509
2021	127,511	24,329	151,84

2.5. Feed Raw Materials and Production

Animals need nutrients such as water, carbohydrates, proteins, fats, vitamins and minerals to survive and produce various products. Animals meet their needs with this nutrient through feed and water consumption. Feeds can be of vegetable and animal origin, as well as their processing residues or by-products (Gürsoy and Macit, 2020).

Feeds are generally examined in three classes. These include roughage, dense (concentrated) feeds and feed additives. Forages are plant-based feeds with high cellulose content, low protein and energy content used as animal feed in fresh, dried or silage form. Dense (concentrated) feeds are those that are rich in energy and protein content and have a high digestibility of nutrients. Feed additives, on the other hand, are substances used to increase feed efficiency, improve the quantity and quality of animal products, reduce costs, and protect animal health (Kutlu and Çelik, 2016). It is stated that more than 60% of livestock operating expenses in our country, as in the world, are feed expenses (Görgülü, 2009).

Producers mostly meet their roughage needs from the lands they cultivate or by renting lands belonging to the state. The negativities seen due to climate change affect the roughage needs of the producers. The state allows the import of roughage in order to eliminate the disruptions in production depending on the climatic conditions, and provides certain amounts of support to animal producers in order to eliminate the problems experienced and for sustainable production. In addition, the grant feed contribution is made by the state. Quality roughage is produced in some of the cultivated lands, while grain group (barley, wheat and oat) is produced in the remaining parts. According to the data of the North Cyprus Ministry of Agriculture and Natural Resources, the amount of roughage produced by region for 2021 is given in Table 10 (Anonymous, 2022i).

The producers separate and preserve some of the grain produced as seeds for the next year. On the other hand, producers who make both plant production and animal production together use the excess grain to meet the concentrated feed needs of the animals. On the other hand, producers who only produce plants sell the remaining part of the seed product to the TRNC Soil Products Authority (TÜK) according to the price

determined by the TRNC Ministry of Agriculture and Natural Resources. The distribution of cereals produced according to the statistical data of 2021 is shown in Table 11 (Anonymous, 2022i).

In the TRNC, the most barley is produced, followed by wheat. Producers who make their own feed, registered with the Ministry of Agriculture and Natural Resources Livestock Department of the TRNC, benefit from the discounted barley purchase given by the ministry and reduce the cost of barley ration purchased below the current price.

In our country, almost all of the raw materials used in feed production are imported, as in other areas. According to the statistical data of the TRNC Ministry of Agriculture and Natural Resources, the raw materials imported in 2021 and their quantities are given in Table 12 (Anonymous, 2021a, b).

There are 6 feed factories in the Northern Cyprus. While only 1 of these factories is state supported, the others are privately owned. However, there is one feed additive manufacturing enterprise in North Cyprus.

Table 10. Amount of roughage produced by regions in 2021 (Anonymous, 2022i)

Regions		Nicosia	Famagusta	Kyrenia	Morphou	Trikomo	Total
Barley production	Area, Acres	12,921	27,900	2,830	3,750	-	47,401
	Yield, Kg/Acre	-	-	-	-	-	-
	Production (Tonnes)	-	-	-	-	-	-
Grain bale	Area, Acres	120,424	243,905	50,030	40,564	129,380	584,303
	Yield, Kg/Acre	136	89	140	117	139	621
	Production (Tonnes)	16,350	21,700	7,000	4,750	18,000	67,800
Legumes bale	Area, Acres	32,980	32,592	21,982	4,908	34,882	127,344
	Yield, Kg/Acre	144	135	308	244	231	1,062
	Production (Tonnes)	4,750	4,400	6,780	1,200	8,060	25,190
Clover	Area, Acres	703	600	25	280	105	1,713
	Yield, Kg/Acre	6,000	6,000	-	6,000	6,000	24,000
	Production (Tonnes)	4,218	3,600	150	1,680	630	10,278

Table 11. The amount of grain produced in the TRNC in 2021 (Anonymous, 2022i)

Raw Materials	Sown Area	Yield	Production
	Acres	Kg/Acres	Tonnes
Barley	545,005	225	122,447
Hard Wheat	86,735	225	19,540
Soft Wheat	24,905	233	5,800
Oat	3,735	227	848

Table 12. Imported raw materials and quantities in 2021 (Anonymous, 2021a, b)

Raw Materials	Unit	Import Amount
Barley Feeder	Tonnes	102,126,20
Sunflower Seed Meal	Tonnes	18,528,68
Wheat bran	Tonnes	3,500,02
Wheat Bran Pellet	Tonnes	1,250,00
Ddgs Corn	Tonnes	4,402,82
Degame Soybean Oil	Tonnes	14,355,52
Low-Quality Semolina Flour	Tonnes	100,00
Molasses	Tonnes	27,34
Soybean Meal	Tonnes	27,388,27
Feed Wheat	Tonnes	3,000,00
Feed Corn	Tonnes	105,119,77

3. Discussion

The island of Cyprus has two separate political entities: the Turkish Republic of Northern Cyprus (TRNC) and the Greek Cypriot Administration of Southern Cyprus (GCASC). The livestock sector is significant agriculturally and economically in both regions. However, economic and political disparities have led to divergent development paths in these two regions' livestock sectors.

According to the 2021 statistics of TRNC, approximately 45% of the Gross Domestic Product (GDP) is constituted by the livestock sector. Large livestock production, which holds a significant share in this sector, includes

approximately 65,000 heads of cattle with a production of 158,646 tons of cow milk. 97% of the produced milk in the country is cow milk. Sheep and goat farming is carried out through enterprises of various scales. Of the produced 4,619 tons of small ruminant milk, approximately 52% is sheep milk, and the remaining 48% is goat milk. As for red meat production in TRNC, beef holds a 49% share, while sheep and goat meat holds 40% and 11% shares, respectively (Anonymous, 2022i).

The Greek Cypriot Administration of Southern Cyprus (GCASC) accounts for approximately 45% of its GDP in the livestock sector, according to statistical data from 2017. The same data indicates the existence of 66,000

cattle with a production of 215,370 tons of milk. Production includes 321,000 sheep and lambs, 257,000 goats and kids, and 350,000 pigs. 52% of the produced small ruminant milk is sheep milk, and 48% is goat milk. In red meat production, pork constitutes a significant share of 80%, followed by beef with 9%, sheep meat with 6%, and goat meat with 5% (Anonymous, 2022i and Papachristoforou and Markou, 2006).

GCASC's membership in the EU enables it to benefit from EU support and funding in the agricultural sector, facilitating the adoption of modern technology and management practices (Papachristoforou and Markou, 2006). On the other hand, TRNC must rely on its internal resources, as it faces international trade embargoes, which restrict access to external markets. While GCASC has alternative sources of red meat production like pork, enhancing product diversity, TRNC's livestock sector needs more access to international markets due to trade embargoes.

Statistics emphasize the importance of the livestock sector in both regions. However, the more diverse economic structure of GCASC provides broader opportunities for external trade in the livestock sector, making it more competitive internationally. In conclusion, although the livestock sectors in both TRNC and GCASC share similar characteristics, different economic and political factors influence their development. While the livestock sector in TRNC contributes significantly to the national economy, its potential is hindered by international embargoes. To enhance its contributions further, the sector requires better internal support and lifting international embargoes.

4. Conclusion

The Turkish Republic of Northern Cyprus is a country rich in agriculture due to its climatic characteristics. Especially animal production, which is one of the branches of agriculture, is increasing day by day with the use of resources and the formation of international market network and population growth. State-supported export promotion activities continue for the development and expansion of animal production. Despite the development of the cattle and sheep livestock sector, it is necessary to continue the activities in the development of the sector due to the problems and limitations such as the standardization of animal products, the lack of an effective marketing system, and the lack of information in small family businesses.

Author Contributions

The percentage of the author(s) contributions is presented below. All authors reviewed and approved the final version of the manuscript.

	Ç.H.K.	M.B.
C	50	50
D	50	50
S	50	50
L	50	50
W	50	50
CR	50	50
SR	50	50

C= Concept, D= design, S= supervision, L= literature search, W= writing, CR= critical review, SR= submission and revision.

Conflict of Interest

The authors declared that there is no conflict of interest.

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