

# Turkey's sheep and sheep management

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## SUMMARY

Sheep breeding has an important place in for Turkey's livestock management. The importance of sheep management depends on country conditions or people's interest toward sheep products. Sheep husbandry is extensively made in Turkey. Approximately 95% of sheep breeds reared constituted indigenous breeds. The great majority of the sheep population of Turkey is composed of multipurpose native breeds, producing meat, milk and wool. The relative importance of each of these production attributes varies from breed to breed. In these studies, it will be summarized mainly raised sheep breeds.

Keywords: Turkey's sheep, sheep management

## CURRENT STATUS OF SHEEP BREEDING

Sheep species, which are produced in almost every country, is believed to have a World population of more than one billion. The sheep quantities in developed countries are fewer than developing or underdeveloped countries. Turkey is considered to be among the first ten world countries with its 21.75 billion estimated populations of sheep species (FAO 2009 and Anonymous, 2011).

Sheep breeding has an important place in Turkey's livestock management. An estimation of 66.8% of the farm animals are constituted by sheep. The importance of sheep management depends on country conditions or people's interest toward sheep products. The country's production of 6% milk and 20% meats is provided from sheep (Anonymous, 2011). The average amount of milk produced per sheep is 78 kg, the average amount of carcass produced from each slaughtered sheep is 18.7 kg and the average amount of wool shorn for each sheep is 1.85 kg (TUIK 2009).

In great measures, sheep managing in Turkey is made extensively. The domestic sheep breeds generally shows seasonal oestrus except Sakız sheep.

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Sheep usually mated between September and October and births take place in February and March. The mating system is usually free mating method. Around 70-80% of businesses that manage in sheep breeding are those who consider sheep breeding as a side budget in peasant sheep farms. In such business enterprises, during the summer mornings, after the sheep are taken by the shepherds to the pastures to graze, they are brought back to their owners by night time. During the winter, when the weather conditions are inconvenient, the sheep are kept in primitive sheepfolds. In these business enterprises, the amount of sheep is few in number and the raiser perceives sheep raising as an extra budget—due to the available productive power. A far from scientific method, sheep breeding is carried out in traditional ways. On the contrary to peasant sheep businesses, a family or a single person who is situated in a flock business with 50-500 sheep or more, the sheep are left under the care of their owners or shepherds as they are kept in pastures during spring and summer months and in sheepfolds during winter months. The interests shown to flocks are a little better than peasant sheep businesses. Turkey's systematic sheep breeding could be said to be made only in government base businesses, and the need for the raiser to breed the sheep is partly met in these businesses. Private businesses for breeding are not available. In government base businesses, the portion of the total amount of sheep bred is quite low.

According to the breeding conditions, almost all of the sheepfolds are primitive. The raiser does not have enough scholarly formation about his field and lacks required capital. Sheep raisers continue to use the methods of their ancestors. Raiser corporations are not yet widespread.

Although it has a character of extensiveness, Turkey's sheep management generally struggles in keeping firm within commonplace pastures. The property and pastures the raiser owns is as though nothing. Due to the fact that the available pastures hold sheep more than its capacity, the pastures are ruined in great measures and they are becoming narrow year by year.

Because of the increase in price for fodders, sheep managing cannot turn into the marketing businesses, and thus is not able to make progress. The stability in the prices of sheep products has not been obtained. The opportunity to market these products is limited. There is no raiser organization to help in the marketing field. The veterinarian services are either insufficient or very expensive.

The demand for mutton is getting lower and lower. In the Thrace and Marmara regions, the problem of early slaughtering of lamb has not been resolved yet. The fattening of lamb is not widespread. Whereas, the production of meat from sheep depends only on the prevalence of lamb fattening.

A large division of Turkey's production of sheep's wool is coarsely assorted. A part of this division is used in carpet textile industry and the rest is used to meet family necessities (example: bed, bed sheets and pillow manufacturing). The price of wool is very low. Almost all of the quality wool that is needed in textile industry is being imported.

There are important problems in Turkey's sheep management. The number of sheep is gradually decreasing because raisers do not see any profit in sheep management. Also the conditions for raising is gradually becoming harder. There is a serious amount of migration of youth population from the country's Southeast and Eastern regions to the Western regions. It has become a major problem to find shepherds. In order to have an increase in the income provided from sheep management and to bring the sheep industry back to life, there must be enough provision for care-feeding, proper management, health-protection and enough expertise of the raiser. It is also needed to direct wealthy businessmen to make investments in this field. The government should be very encouraging on this point. Otherwise, it seems very hard for sheep management to last because of the present conditions of farm industries. From among the raised sheep, 95% of the racial group are native and low productive. In order to increase the produced amount of product and their quality for every individual sheep, there must be a speed in melioration activities, which the government should show leadership in. Through melioration, the type of sheep with shorn wool-meat should be improved and to make these types prevalent. Thus, Turkey's fully developed textile industry would be able to acquire its needed wool from within the country, sheep with high nutrition would be able to be used for meat production, lamb fattening would be able to be widespread.

#### SHEEP BREEDS

The great majority of the sheep population of Turkey is composed of multipurpose native breeds, producing meat, milk and wool. The relative importance of each of these production attributes varies from breed to breed. Detailed information on the sheep breeds of Turkey is given in the following sections. The section on each breed includes general knowledge about the breed, its distribution and numbers, and describes its phenotypic appearance and production performance.

In addition, although outnumbered in some local breeds (Güney Karaman, Kangal Akkaraman, Karakaş, Norduz, Herik, Tuj, Hemsin, Ödemiş, İmroz, Malya) and selection studies developed as a result of local importance in some types (Menemen, Bafra, Karacabey Merino, Anatolia Merino, Hasmer, Hasak, Sönmez, Tahirova, Acıpayam, Türkgeldi and Asaf) of sheep are available. Put

the following in the presence of numerous important features or performances of some sheep breeds were introduced.

### 1. Akkaraman



The Akkaraman is a fat-tailed sheep breed constitute of half of the total sheep population (approximately 11 million heads). Like the other fat-tailed sheep breeds in the country, it is very hardy and strives well under poor feeding and extreme climatic conditions (Yalçın, 1986). Also, its ability to walk is good to grazing in pasture. Two local types (Kangal which is raised in Sivas and Malatya provinces and Karakaş which is raised in Southeastern Anatolia) are recognized in addition to the common type. The Akkaraman breed is distributed throughout Central Anatolia, and into the parts of eastern and southeastern regions (Ankara, Eskişehir, Malatya, Çankırı, Çorum, Konya, Kayseri, Niğde, Yozgat, Sivas, Erzincan, Elazığ, Hakkari, Kars, Van, Mardin and Diyarbakır provinces).

The colour of Akkaraman sheep is white with black around the nose, and rarely around the eyes and on the legs. Besides, sometimes dark brown marks are in ears and legs. Average weight of the fat-tail is from 5 to 6 kg. The thin end of the tail bends twice on the main part and forms an S-shaped curve. Body weight of the Akkaraman sheep changed from 45 to 80 kg. Nearly all the sheep are hornless. The fleece is of carpet-wool type, with 36-42 'S. Annual greasy fleece weight is about 2.0-2.5 kg. Average carcass weight is 20-25 kg, and the flesh is hard and dry. Daily live weight gain of fattening lambs received about 250 g. Ewes is milking up to 30-40 kg milk during 3-5 months except suckling period. Fertility is low, it is obtained for about 120 lambs from 100 sheep. Mating takes place in September and October due to reproduction period is seasonal.

### 2. Morkaraman

The Morkaraman is distributed in the eastern provinces of Turkey, namely Ağrı, Van, Bingöl, Bitlis, Elazığ, Erzincan, Erzurum, Gümüşhane, Hakkari, Kars and Muş provinces. Morkaraman sheep constitute 20 percent of the total sheep population in Turkey (approximately 4.35 million heads). The

Morkaraman flocks are managed under either sedentary or migratory management systems.



The colours are ranged from brown or reddish-brown to purple colors; the colour is darker on head, neck and legs. The Morkaraman is a fat-tailed sheep as in Akkaraman. But, the size of the body and the tail are larger than in Akkaraman. Average weight of the tail is about 7-8 kg. Body weight of sheep changed from 55 to 75 kg. 40% of the rams and 30% of ewes have approximately horns. Annual greasy fleece weight is about 2.0 kg, the fleece is of carpet and rugs-wool type, with 36-44 'S. The color of wool (almost black or dark brown, reddish-brown or purple) is a distinct disadvantage. Average carcass weight is 30-35 kg, and the flesh is hard and dry. Ewes are milked up to 40-45 kg milk during 4-5 months except suckling period. Fertility is low, it is obtained for about 110-120 lambs from 100 sheep.

#### 4. Dağlıç



The Dağlıç is the third largest population in the country. The main breeding area of the Dağlıç covers the central-west provinces and lakes region of Afyonkarahisar, Kütahya, Eskişehir, Bolu, Bilecik, Aydın, Muğla, Burdur, Isparta, Antalya, Uşak, Manisa, Denizli and Konya. There is about 16 percent of the total number of sheep in Turkey (approximately 3.5 million heads).

The body colour is white, with black spots around mouth, nose and eyes. Rams have usually horns and ewes are polled. Body weight of sheep changed from 35 to 60 kg. The Dağlıç is fat-tailed, tail in one piece, and oval and partly a long, and taper towards the end. There is a median groove on the external side of the tail. Tail weight is approximately 4.0 kg. Wool is carpet-wool type with

46-50 'S. Annual wool yield is about 2.0-2.5 kg. Ewes are milked up to 30-35 kg milk during 4-5 months except suckling period. Fertility is low, it is obtained for about 105-110 lambs from 100 sheep. Meat quality is better than Akkaraman and its quality is medium.

#### 4. İvesi (Awassi)



İvesi sheep can be raised in the Southeast Anatolia (Gaziantep, Diyarbakir, of Iskenderun, Mersin, Kahramanmaraş, Hatay, Mardin, Sanliurfa and eastern parts of the province of Adana. It is also raised in Central Anatolia (Konya and around). There are about 2 percent of the total number of sheep in Turkey (approximately 450 000 heads). İvesi originated in the Mesopotamia between Fırat and Dicle Rivers. İvesi sheep are raised in Syria, Iraq, Iran, Jordan, Lebanon and Israel outside of Turkey. İvesi sheep were also taken to be reared in Germany, Cyprus and some North African countries.

The colour is white on the body and dirty yellow-brown, black or white on the head, neck and legs. İvesi has fat-tail, and its average weight is approximately 3 kg. Body weight of sheep changed from 50 to 80 kg.

The fleece is of carpet-wool type, with 46-48 'S. Annual greasy fleece weight changed from 2-3 kg. Average carcass weight is 20-25 kg, and the flesh is hard and dry. Daily live weight gain of fattening lambs received about 300 g. The taste of meat is similar to Akkaraman meat. İvesi is known as a dairy sheep breeds. Ewes are milked up to 80-100 kg milk during 6-7 months except suckling period. Milk yield in good conditions can reach 400 kg. Although a dairy sheep breed, fertility is low, and it is obtained for about 120 lambs from 100 sheep.

#### 5. Kıvrıcık

Kıvrıcık is raised in Northwestern Anatolia, Marmara and Thrace (Edirne, Tekirdağ, Kırklareli, İstanbul, Kocaeli, Sakarya, Bursa, Balıkesir, Çanakkale, İzmir, Aydın, Manisa provinces). There are about 6 percent of the total numbers of sheep in Turkey (approximately 1.3 million heads). Kıvrıcık sheep is

assumed to be related to Çigaya sheep which is raised in some Balkan countries.



The colour is white on the body. There are black marks on the head, around the mout and ears, but their ratio is very low. However, black colour sheep can be found a little within herds. White colour of Kıvırcık is called as "Belka", and also black color of Kıvırcık is named as "Karnabant Kıvırcığı". Rams have horns and ewes hornless. Body weight of sheep ranged from 35 to 55 kg. Its tail is fatless, thin and long. Meat of these breed is the best quality flesh within domestic breeds.

## 6. Karayaka



Karayaka is raised in Eastern Black Sea Region (Sinop, Samsun, Ordu, Giresun, Tokat, Amasya provinces). There are about 3 percent of the total numbers of sheep in Turkey (approximately 650 000 heads). The colour is white on the body. Black and brown color can be found around the eyes and mout with on the ears and legs. This is called as "Karagöz". The head, ears and legs may be completely black ones. These are the "Çakrak" is called. Also, completely white color sheep can be encountered within herds. Has a long forelock. Body weight of sheep ranged from 35 to 55 kg. Rams horned, ewes are generally polled, and they have thin and long tail. The wool is the coarsest wool with quality of fleece is 36-40 'S within indigenous breeds. Annual greasy fleece weight ranged from 2.0-2.5 kg. Meat of sheep is quality. The flesh is brittle due to fat between the muscle fibers. Karayaka is the second breed of

the most delicious meat after Kıvrıkcık breed within domestic breeds. Milk yield is low, and ewes are milked up to 30-35 kg milk during lactation except suckling period. Fertility is low, and it is obtained for about 110-115 lambs from 100 sheep.

### 7. Sakız (Chios)



The origin of the breed is Sakız island in the Aegean Sea. Sakız is raised in Aegean Region, Southern Marmara and Mediterranean Region (İzmir, Aydın, İstanbul, Antalya, Isparta, Mersin provinces). The population number is very small. Its number are estimated to be under 10 000 heads.

The color is white with black spots and speckles around eyes, mouth, and on nose tip and legs. Body is large, narrow and long legs. Ewes are hornless, rams have spiral horns. The tail is long and a fatless. Body weight of sheep changed from 40 to 70 kg. Udders are well developed, bezel and pendulous structure. The fleece is of carpet-wool type. Annual greasy fleece weight is about 1.5-2.0 kg, the fleece is of carpet and rugs-wool type, with 46-48 'S. Meats, especially suckling lamb meat, is delicious. The Sakız is known for its dairy characteristics are raised in groups of 3-5 topics in order to herd instinct of creation does not develop. Ewes are milked up to 150-200 kg milk during 6-7 months except suckling period. Fertility is high and litter size is changed 3-5. It is obtained for about 200 lambs from 100 sheep.

### CONCLUSIONS

Maintaining the current presence of sheep, sheep breeding should be encouraged and supported. In particular the loss of genetic resources should not be allowed. Studies towards selection of native breeds and generation of new types of sheep could be given weight and they should be continuity.

Lamb meat and wool production should be a priority target in sheep breeding. So, breeders should be trained in the production of lamb meat and supported the production of lamb meat.

If the sheep milk production is prompted to be increased, the milking machine should be encouraged for quality sheep's milk and breeders

supported the production. Also, one of the dairy sheep breeds, the breeding of İvesi (Awassi) breed should be necessary widespread.

Sheep farming should go to organizations. In addition to this, the private and public sector and universities must be contained within the integration. They should ensure that the necessary economic and technical support. Likewise, environmental conditions such as health, nutrition and sheepfold should be improved in course of time.

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