



REPUBLIC of TURKEY
MINISTRY of FOOD AGRICULTURE and LIVESTOCK
GENERAL DIRECTORATE of AGRICULTURAL RESEARCH and POLICY



DOMESTIC ANIMAL GENETIC RESOURCES IN TURKEY





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Ankara / TURKEY
December 2011

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2011, First edition
650 copies printed

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FOREWORD

While population growth rate and economic pressure force the changes in traditional agricultural systems, biodiversity has been reducing rapidly. Animal genetic resources, one of the main components of biodiversity, meet the increasing demand on food and agriculture. Farm animals are extremely important national and global resources in terms of food security and economic development. In this respect, the conservation and management of farm animal genetic resources are essential to sustain and improve the quality of life on earth.

Turkey is one of the most significant countries in the world in terms of biodiversity and animal genetic resources. Archaeological findings show that sheep, cattle and goat were domesticated in Anatolia or close to this area (Fertile Crescent). The rich genetic diversity of Anatolia results from the accumulated and blended genetic diversity of farm animals belongs to different cultures that lived and ruled in different times. Various environmental conditions that Anatolia's wide geography holds the different needs and preference of livestock breeders also contribute to diversity of farm animal genetic resources.

Information which indicates population number, distribution and risk status of farm animal breeds in Turkey is still insufficient. For this reason risk status of the breeds is predicted based on current data such as census information, research outputs and expert evaluation. However it is known that serious losses on animal genetic resources occurred in last 50 years. Breeding studies, unconscious crossbreedings, importation of exotic breeds and AI implementations especially in cattle resulted in decrease or loss of diversity on animal genetic resources. Moreover, some of the breeds have been lost without characterization and recording.

Considering this, Government of Turkey has shown its intent to put the issue on the priority list of action plan and giving strong emphasis on conservation and sustainable utilization of farm animal genetic resources. The Ministry of Food, Agriculture and Livestock conduct all activities, either *ex situ* or *in situ* conservation, sustainable utilization, characterization, infrastructure and human resources development, and enhancement of public awareness.

According to the Regulation on Animal Breed Registration, the Animal Breed Registration Committee has registered 45 animal breeds and 3 lines since 2004. The registration lists of this breeds and lines include morphological, physiological and genetic information. The publishing dates of the breed registration lists in the Official Gazette are given in this catalog.

The breed catalog named 'Turkey Domestic Animal Genetic Resources' has been prepared to help survey takers to classify breeds and crossbreeds more accurately. Turkish version of the catalogue is also considered an educational material for pilot breed inventory studies.

The English version of the breed catalog aims to introduce some of our domestic animal breeds to a broader audience. It includes brief information and photographs of cattle, water buffalo, sheep, goat, chicken, rabbit, dog, cat, bee and pigeon breeds, and silkworm lines of Turkey. Of course there are more species such as horse and duck, and breeds that could not take researchers' attention so far are not covered in this catalog. It is prepared by Asist. Prof. Dr. Seyrani Koncagül, Canan Demiralp, Nermin Aksümer and A. Oya Akin with the kind advisory of Prof. Dr. Mehmet Ertuğrul.

On behalf of the Ministry, I would like to thank all contributors who work either administrative, research or farm level for the conservation and sustainable utilization of animal genetic resources.

Assoc. Prof. Dr. Masum Burak
Director General

IDENTIFICATION and CONSERVATION STUDIES of ANIMAL GENETIC RESOURCES

In the UN Convention on Biological Diversity, genetic resources are defined as "genetic material of actual or potential value". In order to meet the basic needs of people, only about 40 of the 50 000 known avian and mammalian species have been domesticated. DAD-IS (Domestic Animal Diversity Information System) now reports breed-related information on 18 mammalian species, 16 avian and two infertile interspecies crossings. A global total of 8 054 breeds have been reported; 7001 are local and 1 053 are transboundary breeds. Among the transboundary breeds, 504 are regional transboundary breeds and 549 are international transboundary breeds. Of the 613 breeds classified as extinct, only 7 are transboundary breeds. A total of 1 710 breeds are classified as being at risk. Considering the speed of the extinction rate, the world agriculture is estimated to be adversely affected in the near future. For this reason, a significant increase in effort for the conservation of animal genetic resources has been observed in the world in recent years. In particular, after the acceptance of the Global Plan of Action (GPA) for Animal Genetic Resources (AnGR) and the Interlaken Declaration in 2007, the conservation of AnGR has been accelerated in the global scale. The GPA has four strategic priority areas, (I) characterization, inventory, monitoring of trends and associated risks; (II) sustainable use and development; (III) conservation; and (IV) policies, institutions and capacity-building. With the Interlaken Declaration, the countries confirmed that they are aware of the erosion in animal genetic resources, and accepted that they are those who are primarily responsible of the conservation.

Due to the continuous efforts for increasing the productivity of farm animals, resistance to negative environmental conditions, diseases etc. are weakened. For this reason, conservation of genotypes which possess high adaptability is required at all times.

Local breeds can put up with extensive management conditions and benefit low-valued feed resources. Also local breeds can use the areas unsuitable for plant production and turn to meat, milk, and draught power. These breeds have special qualities and are very well adapted to their original breeding conditions of poor environment in which they are able to live and reproduce. Through the conservation of local breeds, it will be taken advantage of heterosis. Since the existing conditions of climate, shelter, feed and health-related situations can be change in the future, conservation or even enhancement of existing variation will provide ability to adapt to the possible situations. Today, it is difficult to predict which of the production characteristics

or genotypes that neglected so far become economically important in the future. As a result of the negative effects of possible reduction in natural resources and global warming, depending on the decreases in plant production for food and feed, it is considered that intensive animal breeding shall be restricted and the production systems tend to be extensive. In this case, the domestic AnGR will be the insurance for the animal husbandry. At the same time, the AnGR is an important educational, research and cultural material, and play an important role in the conservation of ecology in many parts of the regions where they live. Recent studies showed that the products obtained from domestic animal breeds are healthy and flavor, and have some unique features in terms of quality, and are preferred by consumers.

The first step of the conservation of AnGR is determination of the current situation, another words, is the preparation of inventories of these genotypes. There is an urgent need to set out a well-attended inventory study for the purpose of using it in conservation and planning activities in Turkey.

There are three types of conservation measures can be implemented: *in situ*, *ex situ* - *in vivo* and *ex situ* - *in vitro* conservation. The conservation of live farm animals is a high-cost activity consisted of labor, space, maintenance supply and so on. Additionally, the initial cost of cryo-conservation method is high, and ensuring the continuity of gene banks requires an adequate budget and human resources. It is recommended that all conservation methods should be implemented to increase the success.

The next step of conservation work is the determination of genotypes to be conserved based on the inventory work. While determining of breeds which will be conserved current data, expert evaluations and field investigations are considered. In this field studies, it is experienced some difficulties in finding pure breeds, it is also found unique breeds which has not been previously recorded.

AnGR Conservation Project has been carried out by the General Directorate of Agricultural Research and Policy (GDAR), the primary goal was to characterize and conserve the breeds at risk, so descriptive information of these genotypes obtained and they were excluded from the extinction threshold. The conservation program initiated in cattle breeds with high risk of extinction in 1995 and was expanded to cover sheep, goats, buffalo, chicken and silkworm in 1996 and 1997, and bee in 2002. In this context,

Angora Goat, Native Black Cattle, Denizli and Gerze chicken breeds in Lalahan Livestock Central Research Institute; Sakiz, Kivircik and Gokceada sheep breeds, Anatolian Gray Cattle and Anatolian Buffalo in Marmara Livestock Research Station; South Anatolian Red Cattle in Cukurova Agricultural Research Institute; East Anatolian Red Cattle breed in East Anatolian Agricultural Research Institute; South Karaman sheep breed in Middle Anatolian Bahri Dagdas International Agricultural Research Institute, Caucasian Honey Bee in Caucasian Bee Manufacturing Training and Gene Center Directorate, Bursa Beyazı, Bursa Beyazı Alaca and Hatay Sarısı silkworm lines in Bursa Agriculture Provincial Directorate, including a total of 13 breeds and 3 lines have been conserved.

Based on the 'Veterinary Services, Plant Health, Food and Feed' Act. (No 5996), two regulations have been published named Conservation of Animal Genetic Resources and Animal Breed Registration. According to these regulations two committees have been established 'National Consultative Committee on Conservation of AnGR' and 'Animal Breed Registration Committee' that the secretariat charges carried out by GDAR. Identifying objectives and policies on conservation, sustainable utilization, characterization, domestic and abroad utilization, import and export operations are among the duties of National Consultative Committee on Conservation of AnGR.

According to Committee's discretion, in situ conservation subsidies of cattle, sheep, goats, bee, water buffalo breeds possess extinction risks has been continued in their original living areas since 2005. In order to support the conservation of breeds, farmers, expansion areas and project leaders were determined, and the projects were prepared for each breed. In this context, subsidized payment was made to 236 breeders for the purpose of conservation of the total of 3 131 heads belonging to 20 breeds and 5 822 bee colonies in 18 cities; including the following breeds of livestock: Sakiz, Cine Capari, Gokceada, Kivircik, Herik, Karakul, Norduz, Hemsin, Daglic sheep breeds; Angora Goat, Kilis and Honamli goat breeds; Anatolian Buffalo; Native Black, Kilis, Native Southern Yellow, East Anatolian Red, Anatolian Gray and Zavot cattle breeds.

Considering the erosion in animal genetic resources in recent years in Turkey, conservation of our indigenous breeds, albeit in small herds, has been provided by the conservation program in farmer conditions. Before the beginning of the program, in the field scan, a large difficulty was encountered in finding pure breed animals, and even some breeds were at the edge of extinction. On the other hand, the conservation subsidies was attracted the interest of the public to

the subject, most of the breeders have realized the importance and the value of breeds existing in Anatolia for thousands of years.

The project named "*In vitro* Conservation and Preliminary Molecular Identification of Some Turkish Domesticated Animal Genetic Resources -I" has been carried out since 2007. In the project context 13 sheep breeds (Karayaka, Herik, Gokceada, Karakul, Morkaraman, Akkaraman, Kivircik, Ivesi, Daglic, Cine Capari, Hemsin, Norduz, Sakiz), 6 cattle breeds (Anatolian Gray, Native Black, East Anatolian Red, Kilis, Zavot, Native Southern Yellow), 5 goat breeds (Angora Goat, Kilis Goat, Hair Goat, Norduz Goat, Honamli Goat), 1 buffalo breed (Anatolian Buffalo), and 5 horse breeds (Cukurova, Ayvacik pony, Canik, Hinisin Kolu Kisasi, Malakan) have been used and two gene banks have been established in Lalahan HMAE and TUBITAK Marmara Research Institute.

In addition, morphological, physiological, or cultural characteristics of the breeds by higher revenue survival are an issue on the agenda. Moreover, milk products, wool-mohair products, a wide variety of local products such as buffalo cream, the breeds with symbol value such as Denizli Rooster, horn features of Norduz Goats may be of interest. Organizing animal breeders, increase revenues by increasing the variety of products, development of animal and product marketing opportunities are important. Thus, while maintaining the genetic diversity of livestock breeds, sustainable utilization of animal genetic resources will be possible.

Breeds registered studies of our native breeds of animal, in accordance with the decisions of the Animal Breed Registration Committee, has been carried out. All the published scientific studies related to the breeds to be registered are being gathered by expert researchers and the information is being recorded in registration lists on the basis of species by specifying the related literatures. Committee is to prepare a list of all the literature, to organize the derived data from existing studies, to complete the missing information, to present the information to the Committee with the smallest and the highest value, and to enter the weighted averages calculated from the obtained averages to the table. After the list prepared by Sub-Committee, it is evaluated and adjusted by the Animal Breed Registration Committee and published in the TR Official Gazette.

A. Oya Akin
National Coordinator for AnGR

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* Because of the reorganization, committee member will be appointed later on.

REGISTERED LOCAL ANIMAL BREEDS, TYPES, LINES and LAYER HYBRIDS

	Name	Date and number of TR Official Gazette	Notification Number
Big Ruminant Breeds	Native Black Cattle / <i>Yerli Kara</i>	12/12/2004 and 25668	2004/39
	South Anatolian Red / <i>Güney Anadolu Kırmızısı (Kilis)</i>		
	Native Southern Yellow / <i>Yerli Güney Sarısı</i>		
	Anatolian Gray Cattle / <i>Boz Irk</i>		
	East Anatolian Red / <i>Doğu Anadolu Kırmızısı</i>		
	Anatolian Water Buffalo / <i>Anadolu Mandası</i>		
Sheep Breeds	Red Karaman / <i>Morkaraman</i>	12/12/2004 and 25668	2004/39
	Daglic / <i>Dağlıç</i>		
	Awassi / <i>İvesi</i>		
	Norduz / <i>Norduz</i>		
	Tushin / <i>Tuj</i>		
	Chios / <i>Sakız</i>		
	Imbros / <i>Gökçeada</i>	22/04/2006 and 26147	2006/16
	Turkish Merino/ <i>Karacabey Merinosu</i>		
	Kivircik / <i>Kıvırcık</i>		
	Karayaka / <i>Karayaka</i>		
	White Karaman / <i>Akkaraman</i>		
	Malya / <i>Malya</i>	09/07/2006 and 26223	2006/32
	Cine Capari / <i>Çine Çaparı</i>	04/07/2007 and 26926	2008/39
	Anatolian Merino / <i>Anadolu Merinosu</i>	28/12/2007 and 26740	2007/52
	Central Anatolian Merino / <i>Orta Anadolu Merinosu</i>		
	Acipayam / <i>Acipayam</i>	08/02/2009 and 27135	2009/21
	Sonmez / <i>Sönmez</i>		
	Polatli / <i>Polatlı</i>	16/07/2010 and 27643	2010/27
	Bafra / <i>Bafra</i>		
Goat Breeds	Angora Goat / <i>Ankara Keçisi</i>	12/12/2004 and 25668	2004/39
	Hair Goat / <i>Kıl Keçi</i>		
	Norduz Goat / <i>Norduz Keçisi</i>		
	Kilis Goat / <i>Kilis Keçisi</i>	22/04/2006 and 26147	2006/16
Poultry and Small Domestic Animals	Denizli / <i>Denizli</i>	12/12/2004 and 25668	2004/39
	Gerze / <i>Gerze</i>		
	Native Silkworm Lines / <i>Bursa Beyazı, Bursa Alaca, Hatay Sarısı</i>		
	Caucasian Honey Bee / <i>Kafkas Arısı</i>		
	Angora Rabbit / <i>Ankara Tavşanı</i>		
	Layer Hybrids / <i>ATAK, ATAK-S, ATABEY</i>	22/04/2006 and 26147	2006/15
	Kangal / <i>Kangal</i>	22/04/2006 and 26147	2006/16
	Van Cat / <i>Van Kedisi</i>		
	Akbas / <i>Akbaş</i>	09/07/2006 and 26223	2006/32
	Angora Cat / <i>Ankara Kedisi</i>	05/12/2008 and 27075	2008/64
	Bursa Tumbler / <i>Bursa Oynarı</i>	16/07/2010 and 27643	2010/27
	Thrace Roller / <i>Trakya Makaracısı</i>	25/08/2011 and 28036	2011/38
	Zagar Hunt Dog / <i>Zağar İzci Köpeği</i>		

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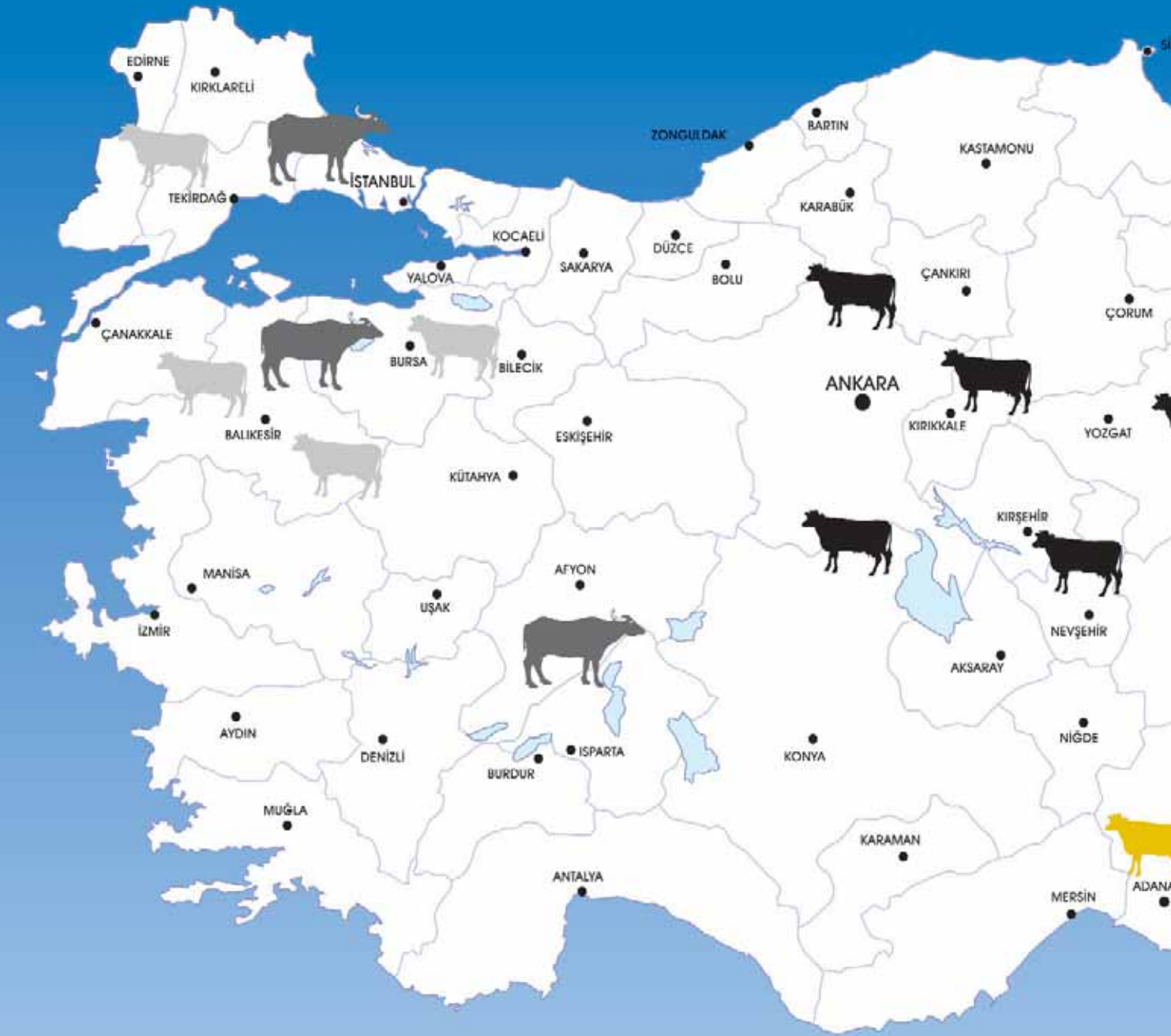
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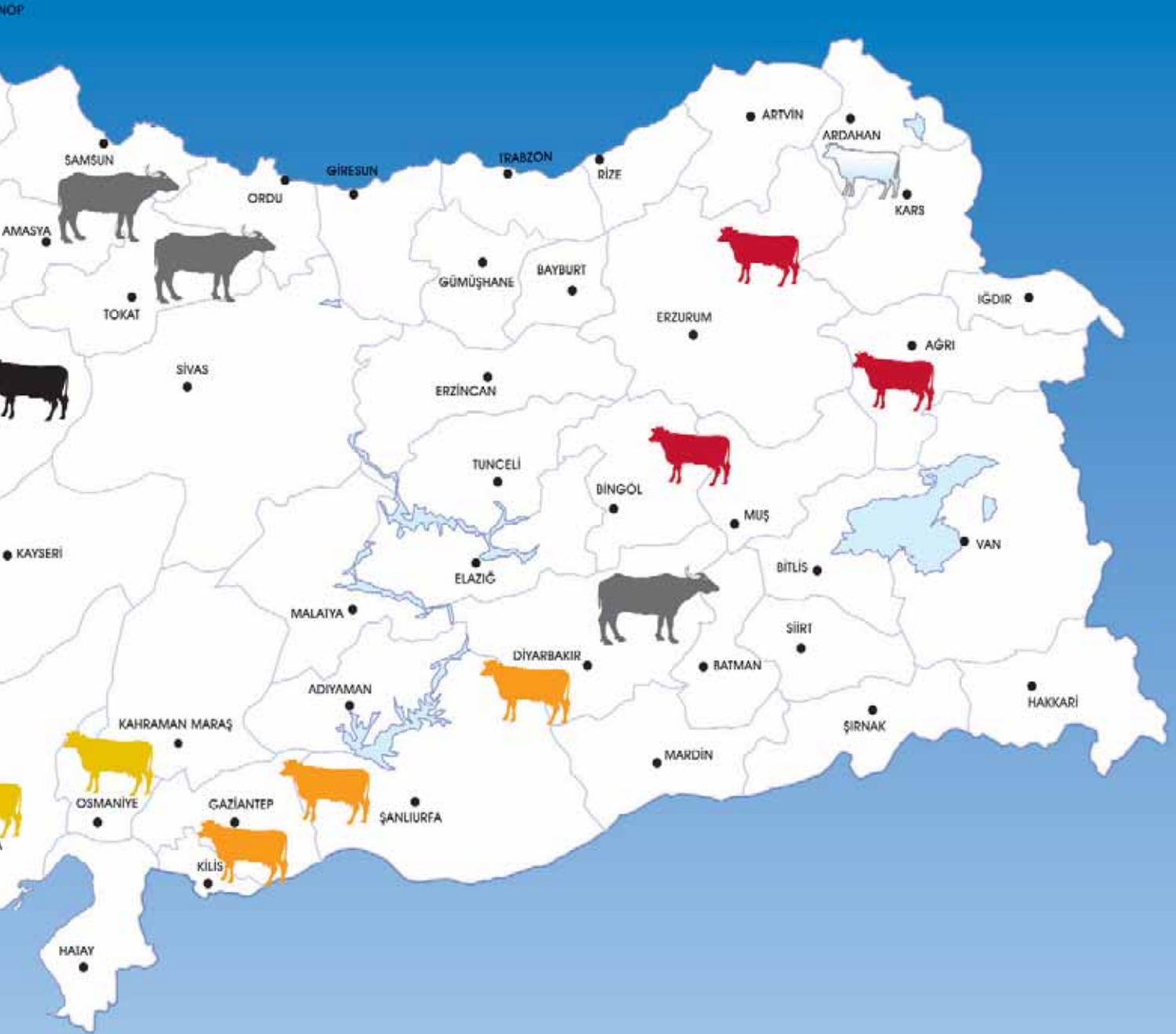
Native Rabbit Breed

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BIG RUMINANT



BREEDS



South Anatolian Red
Güney Anadolu Kırmızısı (Kilis)



Native Southern Yellow
Yerli Güney Sarısı



Native Black Cattle
Yerli Kara



East Anatolian Red
Doğu Anadolu Kırmızısı



Zavot
Zavot



Anatolian Gray Cattle
Boz Irk



Anatolian Water Buffalo
Anadolu Mandası



♂



♀

SOUTH ANATOLIAN RED - KILIS

GÜNEY ANADOLU KIRMIZISI -KİLİS

LOCATION : As Kilis is center, it expands from Mersin to Şanlıurfa in the South Anatolian Region.

BREEDING PURPOSE :

Dual purpose (milk and meat)

GENERAL DESCRIPTION : It has an elegant appearance with short neck, vertical head and

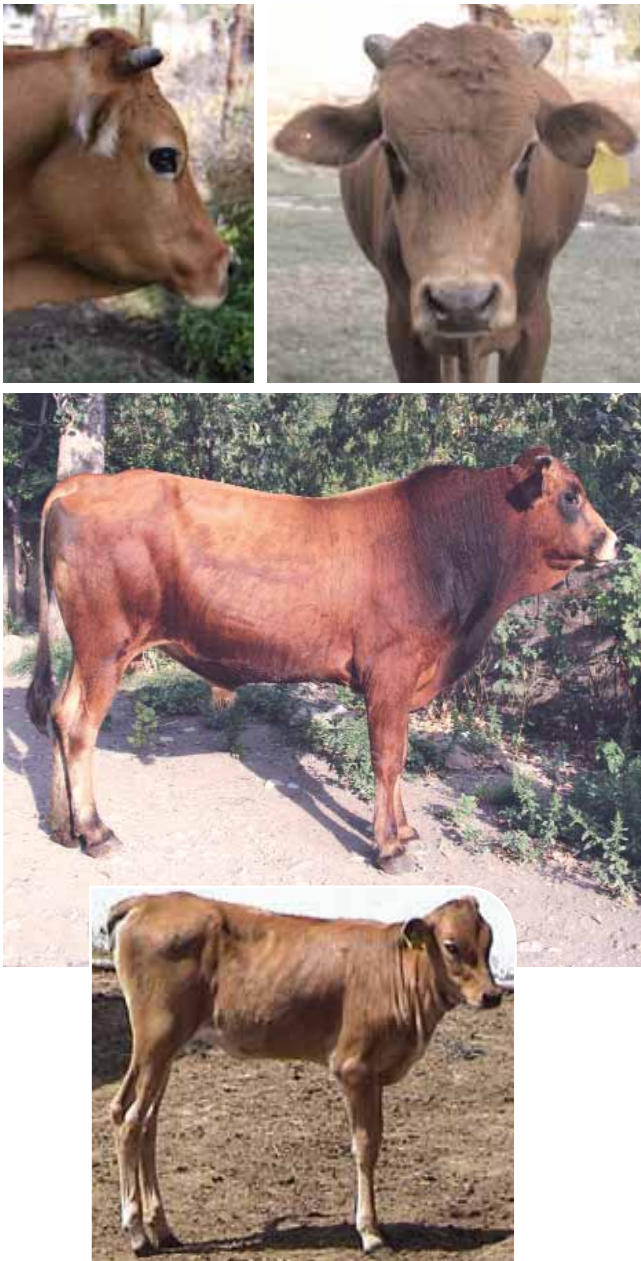
prominent wither. In older ages, the structure of skin on its dewlap becomes curly and flabby. Males have hump on and around wither. Body is narrow and relatively short. Chest is narrow, and the rump is short and higher than wither. Tail head is strong and higher than wither. Generally, the structure of



front legs are slim, thin and fairly long, and hind legs are thinner than front legs. Due to the conformation characteristics, its walking seems rocky. Body colour is generally yellowish red but various colours like yellow, red and brown are also common. There is a light coloured ring around the nose. Internal side of legs, udder and abdomen have lighter colour in comparison to the whole body. Front part of body is darker than the back. Tail-end is black. Horns are short (brachyceric), thin, turned up and lateral.

BREED CHARACTERISTICS : From the side view, appearance is square. It has the largest body and the highest milk yield among the native cattle breeds of Turkey. It is resistant to diseases caused by ticks and blood parasites. It can be raised even in the condition that feeding and keeping are not orderly enough. It has an ability to walk long distances. It does not fit to machine milking because of some behavioural problems and small nipples. Maternal instinct is very good. Milking is not possible unless she sees her calf.

BREEDING CONDITIONS : The prevalent breeding is in primitive keeping, feeding and sheltering conditions as in the form of village-herds. Pasturing period includes three fourth of a year, in some places it carries on whole year. Feeding in barns is made only in winter. Barns are generally made of rushes and mud-bricks in the places such as Hatay and Adana where winter is warm. In the places as Şanlıurfa and Gaziantep, where winter is relatively harsh, the barns are made of stones.



Body Measurements and Production Performance	Male	Female
Wither height, cm	140-150	125-135
Body length, cm	135-145	130-140
Birth weight, kg	25-27	23-25
Mature body weight, kg	550-600	350-450
Breeding age, month		24-26
Daily live weight gain, g	700-900	
Lactation milk yield, kg		1500-2500
Lactation length, days		200-250
Milk fat, %		3.5-4.5



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NATIVE SOUTHERN YELLOW

YERLİ GÜNEY SARISI

LOCATION : The provinces from Mersin to Şanlıurfa, mainly between Mediterranean Sea and Taurus, Amanos mountains and their north and east sides.

BREEDING PURPOSE :

Dual purpose (meat and milk)

GENERAL DESCRIPTION : It is one of the small bodied and short horned cattle breeds. Rump is

higher than wither. Line of dorsal side is straight. Colour changes from brownish yellow to red and cinnamon. Horn colour is dark as black. Colour is deep around eye, on lateral sides of face, neck, shoulder and tail-end. Muzzle is in deep colour changing up to black. There is a light or whitish coloured ring around the muzzle. The internal side of legs are light



colour. The colour of hoofs is deep gray close to black or black.

BREED CHARACTERISTICS : Skin colour is brown close to black. It can climb up mountains like goats. It is resistant to diseases, and can survive in harsh environmental conditions. It is able to graze on rugged lands, thus well adapted to mountainous regions. Maternal instinct is very good. Milking is not possible unless she sees her calf.

BREEDING CONDITIONS : Breeding is generally executed in the form of village-herds. Rearing, feeding and sheltering conditions are mostly insufficient. The animals are dispatched to mountains in April and May then they stay there for about 6-7 months without any human intervention. They return back to their villages when snowy days begin.



Body Measurements and Production Performance	Male	Female
Wither height, cm		105-115
Body length, cm		110-120
Birth weight, kg	15-17	12-14
Mature body weight, kg		150-250
Breeding age, month		30-36
Lactation milk yield, kg		600-650
Lactation length, days		180-200
Milk fat, %		3-4



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NATIVE BLACK CATTLE

YERLİ KARA

LOCATION : The Central Anatolian Region

BREEDING PURPOSE :

Dual purpose (meat and milk)

GENERAL DESCRIPTION : It is one of the small bodied and short horned cattle breeds. Generally, the neck is average length with weak curls. Dewlap is small. Trunk is rather long. Depth of chest is medium sized. Because of the short ribs, chest is

quite narrow behind the shoulders. Shoulders are generally narrow, long and slant. Rump is slant, sharp and high in comparison to wither height. Line of dorsal side is straight. Back part of the body is wider and higher than the front part. Inner surface of ears is covered by thick hairs. Head becomes slim as coming close to nose, and the orbits are profound. Head of bulls is rather big and has rather



convex profile. Cows' head is narrow and small, its face is long and head profile is not convex. The structure of bones is slim. Legs are short, the hoofs are strong. Colour of hair is raven black. Generally, its skin is thick and tough. Both males and females are horned.

BREED CHARACTERISTICS: It can survive in harsh conditions of keeping and feeding, and it is highly resistant to diseases and parasites. Maternal instinct is very good. Milking is not possible unless she sees her calf.

BREEDING CONDITIONS : It is raised in primitive conditions of feeding, keeping and sheltering in steppe climate.



Body Measurements and Production Performance	Male	Female
Wither height, cm		100-110
Body length, cm		110-120
Birth weight, kg	18-20	17-19
Mature body weight, kg	300-400	200-300
Breeding age, month		24-28
Daily live weight gain, g	700-900	
Lactation milk yield, kg		1000-1100
Lactation length, days		240-260
Milk fat, %		4-5



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EAST ANATOLIAN RED DOĞU ANADOLU KIRMIZISI

LOCATION : Primarily the provinces of Erzurum, Kars and Ardahan, in the East and Northeast Anatolian Region.

BREEDING PURPOSE :

Dual purpose (meat and milk)

GENERAL DESCRIPTION : It has a small body and tough temper, the structure of bones is strong,

chest is narrow and the skin is tick. Generally, rump is narrow, sharp and low, and it is higher than wither. Colour is red and tones. Edge of ears, neck, chest, sides of forearms, area between legs and hoofs are in dark colour. It is one of the short horned cattle breeds. Both males and females are horned. Horns are in dark colour and turned forward.



BREED CHARACTERISTICS : It has a small but strong body, and well adapted to harsh environmental conditions. It can survive even with poor quality feeds. It is able to pasture on rugged lands, and its resistance to diseases is high. Its herd and maternal instincts are good. Milking is not possible unless she sees her calf.

BREEDING CONDITIONS : Breeding is carried on by small scale livestock farmers in primitive shelters and on rugged lands in steppe climate zones. Beginning from May, it is grazed on pasture of high plateaus, and kept on pasture for six months of a year. Supplement feeding is not provided during pasturing period.



Body Measurements and Production Performance	Male	Female
Wither height, cm	115-125	105-115
Body length, cm	130-140	115-125
Birth weight, kg	20-22	17-19
Mature body weight, kg	350-450	250-350
Breeding age, month		24-26
Daily live weight gain, g	800-1000	600-800
Lactation milk yield, kg		900-1000
Lactation length, days		200-220
Milk fat, %		4-5



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ZAVOT ZAVOT

LOCATION : The provinces of Kars and Ardahan with the hinterland

BREEDING PURPOSE :

Dual purpose (milk and meat)

GENERAL DESCRIPTION : It has a middle-sized

and strong body structure. Dorsal line is straight, bones are strong, and skin is elastic. Generally, body is white but yellow colour can be seen. Muzzle is in light or dark colour, or stained. Head looks like the head of milk type breeds. Both males and females are horned.



BREED CHARACTERISTICS : It is well adapted to harsh steppe climate conditions and resistant to diseases.

BREEDING CONDITIONS : It is raised in primitive shelters on rugged lands in steppe climate zone by small scale farmers. Beginning from May, it is grazed on pasture and high plateaus, and kept on pasture for six months of a year. During the pasturing period, extra feed is not provided.



Body Measurements and Production Performance	Male	Female
Wither height, cm	122-137	102-130
Body length, cm	127-164	117-143
Birth weight, kg	19-28	17-24
Mature body weight, kg	400 - 600	270-450
Breeding age, month	24-36	17-27
Daily live weight gain, g	900-1000	700-850
Lactation milk yield, kg		2300-3300
Lactation length, days		275-300
Milk fat, %		3.5-4.5



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ANATOLIAN GRAY CATTLE

BOZ IRK

LOCATION : The Thrace, Marmara and North Aegean Regions

BREEDING PURPOSE :

Dual purpose (meat and milk)

GENERAL DESCRIPTION : It has a strong body structure. The part of rump closed to sacrum is rather narrow, so it seems triangular from above. Body of males becomes narrow throughout front side to backside. Rump height is higher than the wither height. Colour of hairs changes from light

silver-gray to dark ash-gray. There is a dark coloured ring looks like eyeglasses around eye of bulls. Muzzle is surrounded by a black coloured ring. Inside of ears is covered by black hairs. Cow colour is lighter in comparison to bulls. Generally, colour of neck, breast, chest, underside of shoulders and legs are darker in comparison to the other part of the body. Skin is deep gray, and hoofs are black. Anus in black colour is accepted as a sign of being purebred. Calves are born in light brown and then their colour



changes into gray as they grow. Both males and females are horned. Horns’ shape is like crescent, their cross section is circular and they have no nodes.

BREED CHARACTERISTICS : It is resistant to feed changing. Its digestive system is fit for utilization of poor quality feeds. It has good endurance for every kind of harsh environmental conditions, insufficient feeding and diseases. If it gets sick, it is able to recover rapidly. It has strong and tough hoofs. It has violent temper and aggressive nature, also its instincts of defending herd and calves are very good. Milking is not possible unless she sees her calf.

BREEDING CONDITIONS : Its natural life space is generally inside of forests and rugged lands on mountainous regions. In such areas, it is able to survive and reproduce without human intervention.



Body Measurements and Production Performance	Male	Female
Wither height, cm	123-128	115-120
Body length, cm	120-125	110-115
Birth weight, kg	24-26	22-24
Mature body weight, kg	450-500	300-400
Breeding age, month		24-28
Daily live weight gain, g	1000-1100	
Lactation milk yield, kg		1000-1200
Lactation length, days		210-230
Milk fat, %		4-5



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ANATOLIAN WATER BUFFALO

ANADOLU MANDASI

LOCATION : Mostly in the Black Sea Region but it can be seen anywhere in Turkey.

BREEDING PURPOSE :

Dual purpose (meat and milk)

GENERAL DESCRIPTION : Body is coarse, cornered (angled) and muscular, rump is low,

articulations are thick and strong. Hair covering adult body is black or dark gray. White hairs may rarely be seen on head, pastern and the end of tail. Muzzle is black. Skin is thick and tough. Both males and females are horned. Bottom of horns turned backward or lateral sides and the end (point) of



them turned up, inside or slightly forward. There are gradually reducing rings round the horns from bottom to top.

BREED CHARACTERISTICS : It is resistant to sudden changes of feeds and diseases as foot and mouth disease, BSE, IBR-IPV and infections caused by blood parasites. Warble fly can not be harmful to water buffalo. It can utilize poor quality foods. Herd and maternal instincts, ability of pasturing are so well that it looks after not only its own calves but also other calves in herd and it tries to prevent them from dangers.

BREEDING CONDITIONS : The temperature has an adverse effect on the animals if it is below 5 °C or above 30 °C. It has so few sweat glands and hairs that it needs to get into some puddles or lies down on muddy places during the hot seasons. It likes well-watered or marsh places and moist regions. Rushes, reeds and wild grass in well watered places are main coarse-food that it is utilized.

SPECIAL PRODUCTS : Horns are used for making Turkish bow and reed flute apparatus, its milk is used for making cream (kaymak) and some kind of cheese (like mozzarella) and its meat is preferred for making Turkish type of sausage because of its colour.



Body Measurements and Production Performance	Male	Female
Wither height, cm	130-140	125-135
Body length, cm	140-150	130-140
Birth weight, kg	30-32	28-30
Mature body weight, kg	550-600	400-450
Breeding age, month		24-26
Daily live weight gain, g	550-600	
Lactation milk yield, kg		800-1000
Lactation length, days		200-250
Milk fat, %		6-8

S H E E P



White Karaman
Akkaraman



Kangal White Karaman
Kangal Akkaraman



Red Karaman / Morkaraman



Daglic / Dağlıç



Awassi / İvesi



Cine Çapari / Çine Çapari



South Karaman / Güney Karaman



Karakul / Karagül

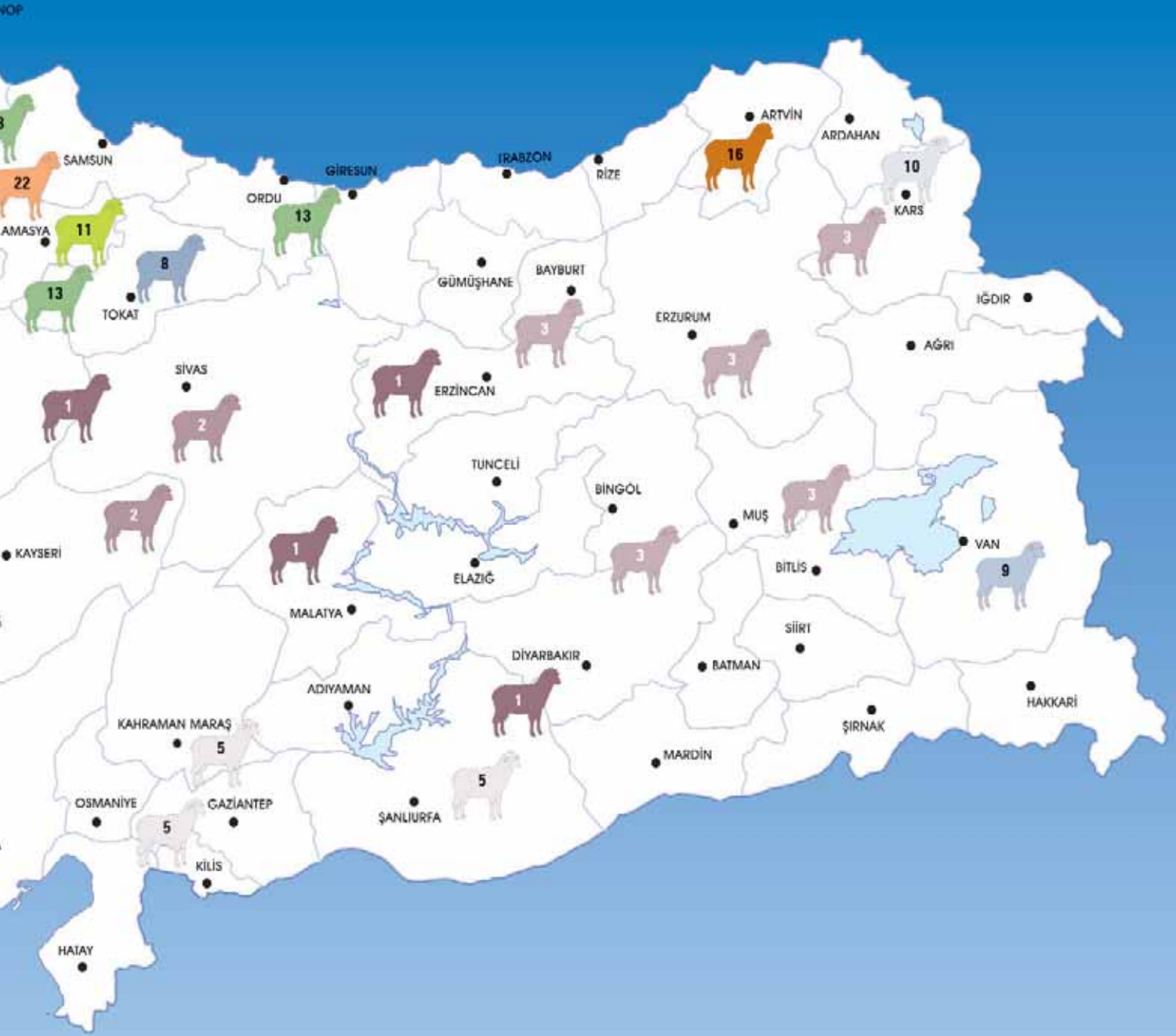

















Norduz / Norduz



Tushin / Tuj

BREEDS



- | | | |
|--|--|--|
|  11 Herik / Herik |  16 Hemsin / Hemşin |  21 Acipayam / Acıpayam |
|  12 Kivircik / Kivircik |  17 Turkish Merino
Karacabey Merinosu |  22 Bafra / Bafra |
|  13 Karayaka / Karayaka |  18 Anatolian Merino
Anadolu Merinosu |  23 Polatli / Polatlı |
|  14 Chios / Sakız |  19 Malya
Malya |  24 Pirlak / Pırlak |
|  15 Imbras / Gökçeada |  20 Central Anatolian Merino
Orta Anadolu Merinosu |  25 Karya / Karya |



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WHITE KARAMAN AKKARAMAN

LOCATION: Primarily in the Central Anatolia and neighbouring areas

BREEDING PURPOSE: Meat, milk and wool.

GENERAL DESCRIPTION: It is a large framed sheep among the native breeds. Body is narrow and long. Dorsal line is usually straight but sometimes a slight dent may be seen. Head is narrow and long. There is no fleece on the face. Neck is long. Sometimes there is fringe (bangs) in various sizes

on the forehead. Head of rams are slightly convex. It has long and pendulous ears. Legs are long and strong, hoofs are tough and strong. Colour is generally white. There are black stains on head, nose and hoofs. Fleece is mixed coarse and carpet type and also sparse. Head, underside of neck and legs are usually devoid of fleece. Ewes are polled and rams may have small or rudimentary horns. It has a S-shaped fatty tail; from the backside it



seems in three pieces that settled one right after the other. At the base, there is a large and big chunk of fat on which there is the second piece of tail that looks like heart-shaped, smaller and fatty, and at the end there is a long piece of tail without fat and with hairs and drooping down.

BREED CHARACTERISTICS: It is resistant to harsh environmental conditions and infectious diseases. Body is strong. It can survive in different climates with insufficient feeding and keeping. Because of its fatty tail, it has high survival potency during poor feeding periods. It is the most submissive one among the native breeds, so the management is quite easy. Herding and maternal instincts are good. It is able to walk long distances and utilize poor pastures.

BREEDING CONDITIONS: It is adapted to the climate of steppes where summer is hot and dry, and winter is cold and snowy. Breeding is on large and sparsely vegetated pastures without much rugged. Feeding depends on pasture except for snowy days. On snowy winter days, feeding is largely applied depending on straw and it is provided few grainy foods. Housing is simple in low cost sheepfolds. They are raised in family, village and individual herd size of 30 to 500 heads.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	73	65	Lactation milk yield, kg	50-60
Body length, cm	72	64	Lactation length, days	140
Birth weight, kg	4.7	4.4	Fleece yield, kg	2.2
Mature body weight, kg	62	50	Breeding age, month	16-18
Daily live weight gain, g	240		Litter size	1.2



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KANGAL WHITE KARAMAN

KANGAL AKKARAMAN

LOCATION: The Central Anatolia, especially Sivas and surrounding areas.

BREEDING PURPOSE: Meat, milk and wool.

GENERAL DESCRIPTION: Body is large framed. It has thin lips. Above nose is generally convex. Ears are long, large and pendulous. Both neck and

body are long and narrow. Chest is large especially in rams. Some females have 14 ribs. Legs are long and strong. Body is covered with white and coarse fleece. Around eye, nose and feet are generally in black colour. Head, the neck, underside of abdomen and legs are not covered with fleece. Ewes are polled but very rarely they have small horns. 10%



of the rams have weak horns. It is fat-tailed and the form of the tail resembles to White Karaman (S-shape).

BREED CHARACTERISTICS: It is known as the animal of dry climates, but able to adapt to various conditions of environment. It is able to walk long distances and its herd instinct is good.

BREEDING CONDITIONS: Breeding mainly based on large and sparsely vegetated pastures without much rugged lands where steppe climate prevails. Feeding depends on pasture except for snowy days. During the snowy days, feeding largely depends on straw and a few grainy foods. It can be bred on insufficient feeding and keeping conditions. Kangal White Karaman rams are preferred by most of the White Karaman breeders.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	88	76	Lactation milk yield, kg	70-130
Body length, cm	74	66	Lactation length, days	150
Birth weight, kg	4.7	4.5	Fleece yield, kg	1.7
Mature body weight, kg	90-100	68-72	Breeding age, month	18
Daily live weight gain on pasture, g	280	260	Litter size	1.2



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RED KARAMAN MORKARAMAN

LOCATION : The East Anatolian Region

BREEDING PURPOSE :

Primarily meat, also milk and wool.

GENERAL DESCRIPTION : It has a strong and large body. Rump is a little higher than wither. Neck is long, chest is narrow, rump is low and legs are long. Ears are big, wide, pendulous and semi-pendulous. Head is long compared to the body and becomes thin forward. On head profile there is a slight concavity between forehead and nose.

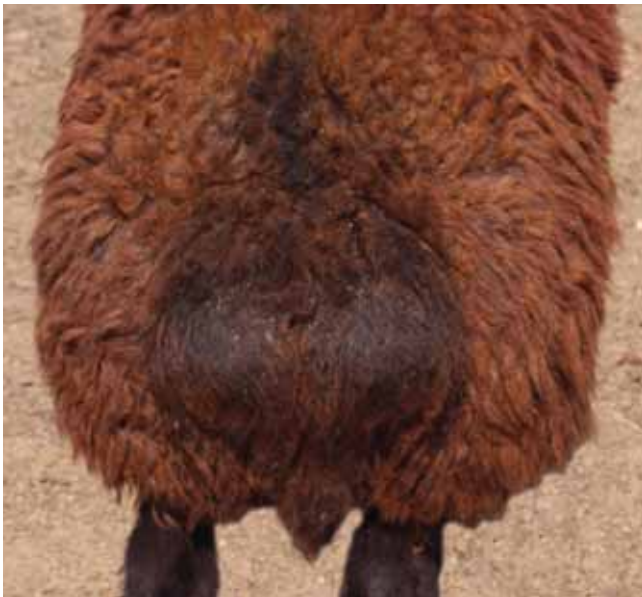
While ewes' nose are more or less convex, rams' nose is clearly convex. Body colour changes among red, maroon and violet, while around eye, mouth and nose are in light head and legs are in dark colour compared to the body. Generally the face and head is not covered with fleece. Belly and neck are generally bare or sparsely covered. Legs are bare from beginning of pastern. Fleece is mixed coarse and carpet type. Rams usually have big and spiral horns. Ewes are either weak horned or polled. It is



fat-tailed and the form of the tail resembles to White Karaman (S-shape) but Its size is bigger.

BREED CHARACTERISTICS: Herd and maternal instincts are good. It is able to walk long distances. Herd controlling is pretty easy. It is hardy and well adapted to harsh environmental conditions. It is resistant to low temperatures. Fatty tail is used for energy source during long and inadequate winter feeding periods.

BREEDING CONDITIONS: It is well adapted to the cold and long winter conditions and mountainous structure of the East Anatolian Region. It utilizes poor pastures on the high altitude. In winter, breeding is normally in sheepfolds completely or partly covered.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	75	68	Lactation milk yield, kg	60
Body length, cm	72	67	Lactation length, days	126
Birth weight, kg	3.9	3.5	Fleece yield, kg	1.5-2.0
Mature body weight, kg	50-90	40-60	Breeding age, month	18
Daily live weight gain, g	192		Litter size	1



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DAGLIC DAĞLIÇ

LOCATION : The eastern part of the Aegean Region

BREEDING PURPOSE :

Dual purpose (meat and milk)

GENERAL DESCRIPTION : Body is smaller than Karaman breeds. Dorsal line is straight, wither height is more than body length, chest and rump are narrow. Nose of rams are typically and of ewes are slightly convex. Generally it is white;

black or dark-brown stains may be seen around eye and mouth, on ears and legs. There may be oval black and dark-brown marks spreading from the eye towards the face. Black and dark stains may be seen on body and turn into gray afterwards. Belly and neck are covered with fleece. Generally rams are horned and ewes are polled. Horns are big, strong, thick, lateral, twisted and black pigmented. Fleece is coarse mixed and carpet type. It is fat-tailed and the tail is smooth, large, drooping and heart-





shaped. Two oval chunks form the tail and there is a groove between them. Its tin end hangs straight down.

BREED CHARACTERISTICS : It survives under inadequate feeding and keeping conditions. It can adapt various breeding and environmental conditions. It is able to walk long distances and its herd instinct is very good.

BREEDING CONDITIONS : Although it is adapted to hot and dry climates, it can be bred in various environmental conditions, on insufficient pasture, shelter and keeping conditions. Sheepfolds are generally built close to a hill. In the provinces Burdur and Isparta it is kept in hollows on the foot of mountains and even it is kept in enclosed areas such as groves on windless places. Its breeding is also as nomadic.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	67	63	Lactation milk yield, kg	57
Body length, cm	65	62	Lactation length, days	75-105
Birth weight, kg	3.5	3.5	Fleece yield, kg	2.3
Mature body weight, kg	53	46	Breeding age, month	18
Daily live weight gain, g	241		Litter size	1



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AWASSI İVESİ

LOCATION : The Southeast Anatolian Region

BREEDING PURPOSE : Primarily milk

GENERAL DESCRIPTION : Body is strong. Bones are thin but strong that conforms to milk type. Body is white-cream coloured. Head may be three different colours as yellowish-brown, black and white. Usually there is a white blaze on the

forehead. There are stains on ears and nose and pigmentation on feet. It is fat tailed. There is a fatless piece of tail on the main big and fatty chunk. There is an uncovered cavity starts from the base of fatty chunk and extends till the middle part. Rams' horns are turned forward and downwards in a spiral form. Also ewes with no horn or crescent horns



can be seen. Among females the ratio of weak horn and ram-horn is 10%. Udder is glandular so as to fit high milk yield. Various udder and nipple types can be seen.

BREED CHARACTERISTICS : It is well adapted to hot and dry climate. In those conditions it is able to walk long distances. Maternal instinct is good. Its great adaptation ability to various environments and herd instinct are accepted as its superiority among other milk type breeds. The origin of Israel Awassi is Turkey.

BREEDING CONDITIONS : Breeding is as nomadic. It is adapted to hot and dry climates but also its adaptation ability to various environments is good and even it can be bred successfully in cold steppe climates. It may be bred as herds in hot and dry desert conditions in 40-45 °C. It can be bred on inadequate pasture, shelter and keeping conditions. Except for the winter period, the feeding depends on pasture and grazing stubbles. Feeding largely depends on straws but it is supported by grains during winter. It is sheltered in primitive and low cost sheepfolds. Adaptation problems can be seen in rainy and moist regions.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	66	65	Lactation milk yield, kg	172
Body length, cm	62	59	Lactation length, days	185
Birth weight, kg	4.6	4.4	Fleece yield, kg	2.5
Mature body weight, kg	74	50	Breeding age, month	18
Daily live weight gain, g	264		Litter size	1.1



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CINE CAPARI ÇİNE ÇAPARI

LOCATION: Aydın province

BREEDING PURPOSE:

Dual purpose (meat and milk)

GENERAL DESCRIPTION : Body is middle-sized. Head is a little small in comparison to the body, ears are middle-sized and semi-pendulous. Body colour is generally beige or ash-gray. Head, ears, legs and belly are coloured in various tones from brown to black or stains in these colours.

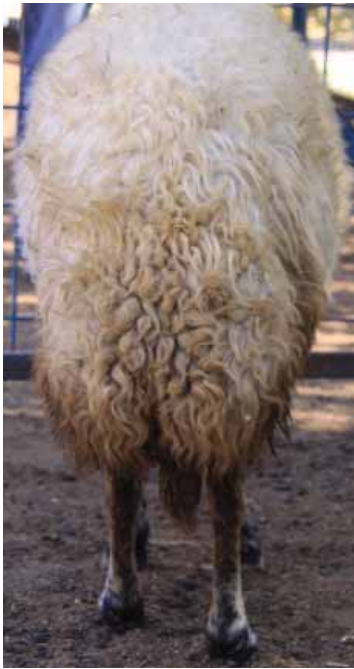
Fleece is mixed coarse and carpet type. Rams have strong spiral horns, ewes are usually polled. It is fat-tailed and also it has plumper tail than other native fat-tailed sheep breeds have. The end of tail is thin and curled. It has big nipples suitable for machine milking.

BREED CHARACTERISTICS: It is resistant to infectious diseases and harsh environmental conditions. Lambs are strong and their growth rate



is high. Although ewes are kept in completely extensive conditions without supplement feeding, they produce averagely 50 kg milk in 5 months lactation period. Herd and maternal instincts, and grazing ability are very good. Because it has rather submissive nature, its herd management is easy.

BREEDING CONDITIONS: Generally, breeding is on mountainous areas by family managing in simple shelters, sheds made from bushes. In summer only for daytimes, in winter only for nights it is kept in shelters. Generally it is grazed on hills and mountainous areas. The pasture has weak hays in summer and at the beginning of autumn, other seasons it has also weak grasses. In critical periods as breeding and birth seasons, in addition to grazing, some breeders with enough economic power can support with supplement feeding.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	70	65	Lactation milk yield, kg	50
Body length, cm	64	62	Lactation length, days	145-150
Birth weight, kg	4.0	3.5	Fleece yield, kg	1.2
Mature body weight, kg	55-60	35-40	Breeding age, month	18
Daily live weight gain, g	210		Litter size	1.1



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SOUTH KARAMAN GÜNEY KARAMAN

LOCATION : Antalya, Mersin, Hatay and Gaziantep provinces

BREEDING PURPOSE :

Dual purpose (meat and milk)

GENERAL DESCRIPTION : It is a small-framed sheep. Colour can be white, gray, brown, red,

black and motley. Especially in black ones the colour becomes sprinkled with gray as it gets older. Males are horned, females are rarely horned. It is fat tailed. There is a groove on the middle of tail. The end of tail droops down as a finger.



BREED CHARACTERISTICS : It is resistant to hot and dry climates and long distance walking. Its herd instinct is well developed.

BREEDING CONDITIONS : In winter, it stays on the foot of Taurus Mountains and in spring, it grazes as climbing to the high plateaus with 2 000 - 2 500 m altitude. It comes back to winter pastures in late autumn. Generally it is kept in uncovered areas. In winter it is taken in simple shelters for nights and rainy days. Parturitions generally occur at outside of shelters.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	68	63	Lactation milk yield, kg	25-30
Body length, cm	63	58	Fleece yield, kg	2.7
Birth weight, kg	4.2	3.6	Breeding age, month	18
Mature body weight, kg	52	37	Litter size	1.0
Daily live weight gain, g	275			



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KARAKUL KARAGÜL

LOCATION :

Tokat province and the neighbouring areas.

BREEDING PURPOSE : Meat, milk and hide

GENERAL DESCRIPTION : It is a small framed sheep breed. Head is middle-sized, neck is short and thick, and legs are in average length. Withers height, dorsal side and rump are almost in equal height so dorsal side seems as a straight line in profile. Its prevalent colour is black. In addition to

black colour, some of them may be seen in brown, grey and white colour. Fleece is mixed coarse and carpet type. The quality of fibre varies between animals. Lambs have curly and bright fleece suitable for producing fur. Rams are horned, ewes are generally polled 13% of them are horned. Rams' horns are strong and twisted forward. Ewes' horns are weak and turned forward with only one curl beginning in the back of ears. It is fat tailed.



BREED CHARACTERISTICS : It is resistant to insufficient environmental conditions and infectious diseases. Newborn lambs have curly and shiny pelt but curls become smooth and form the coarse fibres in a short time after the birth.

BREEDING CONDITIONS : It is well adapted to the steppe and dry climate conditions. It has no special needs for keeping and feeding. It can be bred in inadequate rearing conditions with inadequate pasture. Its traditional breeding is as transhumance. Generally herds are pastured in the evening and night.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	65	58	Fleece yield, kg	1.8-3.0
Body length, cm	66	58	Breeding age, month	11-18
Birth weight, kg	3.3	3.1	Litter size	1
Mature body weight, kg	58	38		



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NORDUZ NORDUZ

LOCATION : Gürpınar in Van province and Norduz locality

BREEDING PURPOSE :

Dual purpose (milk and meat)

GENERAL DESCRIPTION : It has a high body frame. Neck is covered completely with fleece.

Ram headed ewes with bangs and wattles may be found. Some of them have no ears. Basic colour is white, secondary common colour is ash, also gray-white and brown-white colours may be found. There are black stains on some parts of body, especially on the head. Rams and approximately half of the ewes are horned. It is fat tailed. Tail has



three pieces that the third one is longer than the first one and drooping down.

BREED CHARACTERISTICS : Herd and maternal instincts, walking and grazing abilities are good. Herd control is easy. Its resistance, survival rate and adaptation ability are great in the region where it is bred. It has long legs.

BREEDING CONDITIONS : Its breeding is on low and high pastures in Norduz locality where the structure of area is slanted and rugged and rich in vegetation and water resources.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm		71	Lactation milk yield, kg	137
Body length, cm		68	Lactation length, days	182
Birth weight, kg	4.3	4.0	Carcass weight, kg	22
18-month weight, kg		60	Litter size	1.1
Daily live weight gain, g	279			



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TUSHIN TUJ

LOCATION : Kars, Ardahan and Iğdır provinces

BREEDING PURPOSE : Meat, wool and milk

GENERAL DESCRIPTION : Generally, it has a small body frame. It has small head, smooth profile and pendulous ears. Forehead is covered with fleece till the eye. The other parts of head are

generally without fleece. Body is bright white colour. There is black pigment around the nose, eye and mouth, and on the legs. It is preferred if the colour around the eye and on the articulations of tarsus is dark. Cannons can be black or brown colour is also being found. Colour of hoofs



changes between deep-gray and close to black. There is black pigmentation on the hoofs. The fleece is mixed coarse and carpet type. Rams are horned. Horns are spiral and turned forward. Ewes are generally polled but horned ones may be found. It is a fat-rumped breed. Tail is quite short and the coccyx is twisted up on the middle side of it. The thin and fatless end of tail is turned down. Thus, the naked reverse of tail can be seen from the back view.

BREED CHARACTERISTICS : Its herd and maternal instincts and walking ability are good.

BREEDING CONDITIONS : It is bred in the region where the topography of the area is rugged, mountainous and high altitude. Pasturing ability is good.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm		61	Lactation milk yield, kg	45
Body length, cm		71	Lactation length, days	124
Birth weight, kg	3.8	3.7	Fleece yield, kg	2.0-2.5
18-month weight, kg	50-55	45-50	Carcass weight, kg	20
Daily live weight gain, g	190		Litter size	1.2



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CHIOS SAKIZ

LOCATION : Especially in Çeşme and also the provinces of İzmir, Aydın and the coastal locations of the Marmara and Aegean Regions

BREEDING PURPOSE:

Dual Purpose (milk and lamb)

GENERAL DESCRIPTION: Its body is narrow and high, legs are long. Body is white. There are

black stains around eye and mouth, on the end of nose and on ears and feet. Head, legs and underside of abdomen are without fleece. Fleece is mixed coarse. Rams have strong, spiral horns. Ewes are polled. Base of tail is a few fatty and triangular the end of tail is fatless, thin and long. Udder is glandular and suitable for high milk yield. Nipples are drooping and big.



BREED CHARACTERISTICS: It is an early maturing breed. Its reproduction and milk yield are high. Adaptation ability is low. It has oestrus for whole year. Its meat is tasty. Herd instinct is weak.

BREEDING CONDITIONS: It is bred as family flocks of 3-5 heads. Lactation milk yield is 180-200 kg. Also, in good feeding conditions sheep are common that produce more than 500 kg milk yield. Because of its high reproduction potential and milk yield, extra feeding is applied especially in production period.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	75	73	Lactation milk yield, kg	180-200
Body length, cm	75	72	Lactation length, days	190
Birth weight, kg	3.2	3	Fleece yield, kg	2
Mature body weight, kg	70	50	Breeding age, month	8-9
Daily live weight gain, g	242		Litter size	2



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HERIK HERİK

LOCATION : Amasya province

BREEDING PURPOSE : Meat, milk and wool

GENERAL DESCRIPTION : It is a type has semi-fat tail and coarse fleece. It was developed by crossing of White Karaman and Red Karaman ewes with Karayaka rams. Head and body are middle sized and males have convex nose. Neck and legs have

middle-length. Height of rump is a little more than wither height. Wool is generally in white colour, also brown-black wool may be found. There are black-brown stains, spots on the uncovered parts of body such as head and legs. Generally, rams are horned and ewes are polled. Rams horns are spiral, strong and turned forward and lateral sides. Ewes horns are weak. Tail is large at the point of



bounding and it becomes narrow as it lies down. It lies down to the articulations of tarsus and sometimes down more. Generally, large part of tail is smooth but sometimes a groove on the tail is seen as a structure of two pieces. The end of tail is generally fatty.

BREED CHARACTERISTICS : It is ill-tempered and anxious. It is very reactive to outside stimulus.

BREEDING CONDITIONS : Breeding is on hilly areas with low altitudes and smooth areas. While it is sensitive to hot weather, it is also adapted to rainy and moist climate conditions.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	65	61	Fleece yield, kg	1.8-3.5
Body length, cm	67	62	Breeding age, month	18
Birth weight, kg	3.5	3.3	Litter size	1.1
Mature body weight, kg	60	47		



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HEMSIN HEMŞİN

LOCATION: Artvin and Rize provinces in the Eastern Black Sea Region

BREEDING PURPOSE:

Dual purpose (meat and milk)

GENERAL DESCRIPTION: Body is strong and middle-sized. Generally, the neck is short, chest is relatively narrow, rump and legs have middle-length. Rump is a little higher than wither height. It

has small ears. Sheep without ears are also found. Body colour varies from black to brown, also the ones in dirty-white colour may be found. In white sheep, there are black stains on the edge of eye, forehead and legs. Generally, the head is covered with fleece. Hind legs are covered with slim fleece. Usually, it is polled. In horny rams, the horns are strong and spiral. In ewes, weak horns may be found. It is semi-fat tailed. Base of tail is wide and



It gets narrower towards the end and has a thin piece at there.

BREED CHARACTERISTICS: It has the longest tail among the native sheep breeds. Its ability of walking and climbing on rugged and rocky areas are very good. It can graze poor pastures on the high altitudes. Its durability, survival rate and ability of adaptation to harsh environmental conditions are high. Herd and maternal instincts are high. It is ill-tempered.

BREEDING CONDITIONS: It is well adapted to rainy and moist climate of the Eastern Black Sea Region. It can make use of pastures in high altitudes (more than 2 000 m) of mountainous regions. It is kept in uncovered or partly covered sheepfolds during snowy periods. In that period, feeding largely depends on rough fodders.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	79	73	Lactation milk yield, kg	110
Body length, cm	72	68	Lactation length, days	135-170
Birth weight, kg	3.4	3.1	Fleece yield, kg	1.7
Mature body weight, kg	65-70	55-60	Breeding age, month	18
Daily live weight gain, g	215	180	Litter size	1.1



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MALYA

MALYA

LOCATION : Kirşehir and neighbourhood in the Central Anatolian Region

BREEDING PURPOSE:

Dual purpose (meat and wool)

GENERAL DESCRIPTION: It was developed by crossing of White Karaman and German Mutton Merino breeds. Malya Type is formed by mating of

Merino x White Karaman G1 ewes and White Karaman rams. Legs are long and body is bigger than the body of White Karaman. Its colour is white, black stains may be found on head and legs. Underside of the head and neck are covered with fleece, the bottom of legs has no fleece. Both males and females are polled. It is semi-fat tailed. Base of



the tail is wide and it gets narrower towards the end.

BREED CHARACTERISTICS: It is well adapted to the steppe climate where summer is hot and dry, and winter is cold and snowy.

BREEDING CONDITIONS: It is well adapted to steppe climate and dry weather conditions. Good keeping and feeding conditions are preferred. It is raised in Malya State Farm in Kırşehir.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm		70	Lactation milk yield, kg	35
Body length, cm		68	Lactation length, days	90
Birth weight, kg	4.0	3.6	Fleece yield, kg	2.7
Mature body weight, kg	80	58	Breeding age, month	18
Daily live weight gain, g	240		Litter size	1.2



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ACIPAYAM

ACIPAYAM

LOCATION: The Provinces of Denizli, Afyon, Isparta and Antalya

BREEDING PURPOSE:

Dual purpose (meat and milk)

GENERAL DESCRIPTION : It was developed in Acipayam State Farm and carries 50% Awassi, 25% Daglic and 25% Ost Fries genotype. Body is

big structure and white colour without stains. Head is generally white but some animals with brown or black stains can also be found. It has coarse fleece. Both rams and ewes are polled. Tail is oval, fatty, middle-sized and single piece and it droops down as it becomes thin.

BREED CHARACTERISTICS: It is resistant to harsh environmental conditions and infectious



diseases. It is well adapted to extensive conditions in which breed of Daglic has bred. Rams can mate with Daglic ewes with big fatty tail.

BREEDING CONDITIONS: A breeder flock of 1 200 heads is bred in Gozlu State Farm to provide rams for herd-keepers. The pasture of its grazing area is generally poor. It is kept in simple sheepfolds, sheds or in windless groves.



Body Measurements and Production Performance

	Male	Female		Female
Rump height, cm		69	Lactation milk yield, kg	140
Body length, cm		72	Lactation length, days	150
Birth weight, kg	4.2	3.8	Fleece yield, kg	4
Mature body weight, kg	115	70	Breeding age, month	18
Daily live weight gain, g	350		Litter size	1.3



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KIVIRCIK

KIVIRCIK

LOCATION : Thrace, Marmara and North of the Aegean Region

BREEDING PURPOSE: Meat, milk and wool

GENERAL DESCRIPTION : There are two types within the breed: meat and milk. The meat type has large circular and muscular body. Rump is slightly slanting, legs are relatively short. In the milk type, body and chest is narrow and legs are long.

Dorsal line has slight concave, rump is slightly low and it becomes narrow as coming close to back. Body is generally in white colour and also black and motley colours may be seen. Head, belly, legs and neck are not covered with fleece. Fleece is coarse mixed. Males have spiral horns turned towards. Females are polled. Tail is long, thin and fatless which covered with long fibres and lies down to the articulation of tarsus.



BREED CHARACTERISTICS : Its herd instinct and ability of walking long distances on rugged areas are very good. Its ability of adaptation is high. It is able to survive in harsh environmental conditions. Meat and milk yields are rather good. Intermuscular and intramuscular fat deposition is good so that the meat is tender, and delicious. Meat of lambs is light colour and has very thin fibres.

BREEDING CONDITIONS : It is bred in family managements. The flocks are formed in sedentary village and commercial flocks between 20-400 heads. It is well adapted to the environmental conditions of high, cold, scrubby and moist places. Pasture is applied in most part of a year. Keeping and feeding is mostly in extensive conditions. Because early lamb slaughtering in the region is common, lambs are slaughtered after 20-30 days continuing suckling period. Replacement lambs are weaned in 60-70 days after the lambing.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	69	64	Lactation milk yield, kg	83
Body length, cm	80	66	Lactation length, days	180
Birth weight, kg	4.0	3.7	Fleece yield, kg	1.5
Mature body weight, kg	60-70	45-55	Breeding age, month	16-18
Daily live weight gain, g	263		Litter size	1.2



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KARAYAKA

KARAYAKA

LOCATION : Along the coast between Sinop and Trabzon and mountainous areas of the Black Sea Region, the areas around Tokat and Amasya.

BREEDING PURPOSE : Meat, wool and milk

GENERAL DESCRIPTION : Body is small but it is long, wide and deep compared to its height. Head is small-middle sized, narrow and its view is coarse. There is fringe on the forehead. Neck is short and thick, shoulders are narrow. Legs are

relatively short. Body is generally in white colour. Brown and black stains in various sizes are found mostly on the head and neck. Males have strong and thick horns turned towards by curls. Generally, females are polled. Tail is long and thin. Rarely, at the base of the tail is rather fatty. Udder is glandular and less developed.

BREED CHARACTERISTICS : The form of hoofs and legs are strong so that it acts rather fast on the rugged and slant pastures. Its management is



rather difficult. It has the coarsest fleece among the Turkey’s sheep breeds. Because fleece is coarse and long, it is preferred mostly for making mattress and quilt. Wool provides advantage that rain drops thrown out without reaching skin. Fringe may be such long that the sheep cannot see around when wool is long. Its meat is delicious.

BREEDING CONDITIONS : It is bred in mountainous, wooded, moist and cold environmental conditions. Pasture tradition is prevalent. Shearing may be applied twice in a year.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	66	62	Lactation milk yield, kg	40-50
Body length, cm	71	63	Lactation length, days	100-160
Birth weight, kg	3.5	3.2	Fleece yield, kg	2-3.5
Mature body weight, kg	55	40	Breeding age, month	18
Daily live weight gain, g	220		Litter size	1.1



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IMBROS GÖKÇEADA

LOCATION : Gökçeada, Çanakkale and the North West Anatolia

BREEDING PURPOSE:

Dual purpose (milk and meat)

GENERAL DESCRIPTION : Body is small. It is white, black stains are seen around eye, mouth, at

the end of nose, on the ears and feet. Males have strong spiral horns, females are polled. Its tail is thin and long.

BREED CHARACTERISTICS : Its milk yield and survival rate are rather high. It can be bred also in rigorous climatic conditions. It can survive



in a half wild-life as flocks without herdsmen. It is an early maturing breed. It is resistant to infectious diseases, so it can be bred without applying any vaccination program.

BREEDING CONDITIONS : Breeding is mostly in the island of Gökçeada, on the rugged and mountainous lands, on the poor pastures without herdsmen. Also, semi intensive breeding may be encountered. Additional feeding is applied for the sheep taken in shelters in cold weathers.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm		61	Lactation milk yield, kg	121
Body length, cm		63	Lactation length, days	204
Birth weight, kg	3.8	3.7	Fleece yield, kg	2.2
Mature body weight, kg	55	48	Breeding age, month	16
Daily live weight gain, g	191		Litter size	1.2



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TURKISH MERINO KARACABEY MERİNO

LOCATION : The Marmara Region, mainly in the South Marmara

BREEDING PURPOSE:

Dual purpose (meat and wool)

GENERAL DESCRIPTION : It was developed by crossing German Mutton Merino, and Kivircik breeds so it carries Merino genotype over 90%. Body is large and deep. It has circular form and

middle-length. Dorsal line is straight and back and loin are wide, the rump is large and a little low, and legs are middle-length. Rumps are plump and deep. Face and end of legs are not covered with fleece. It is in white colour. Tail is fatless, long and thin 10-15% of males are horned, females are polled. Fibre is fine, uniform and appropriate for textile.



BREED CHARACTERISTICS : Its survival rate is very good. It is polyoestrous. Lambs grow fast. Sheep has good temperament. Herd and maternal instincts are rather good. Flock management is easy. It is calm during milking and shearing. It is adapted to the conditions of region where it is bred. It is resistant to infectious diseases.

BREEDING CONDITIONS : Breed is favoured by flock owners who can provide relatively good feeding and keeping conditions.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	77	73	Lactation milk yield, kg	78
Body length, cm	73	72	Lactation length, days	140
Birth weight, kg	4.5	4.3	Fleece yield, kg	3.6
Mature body weight, kg	80-100	60-65	Breeding age, month	10-14
Daily live weight gain, g	322		Litter size	1.4



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ANATOLIAN MERINO

ANADOLU MERİNO SU

LOCATION: West part of the Central Anatolian Region

BREEDING PURPOSE:

Dual purpose (meat and wool)

GENERAL DESCRIPTION: It was developed by crossing White Karaman and German Mutton Merino and breeds in Polatlı and Altınova State Farms. Anatolian Merino carries 75-80% German

Mutton Merino genotype. Head is medium sized, lips are thick, ears are horizontal and large, neck is short and thick, body is large framed, wide, deep and long, rumps are plump. Legs are long and strong. It is in white colour. Face and the end of legs are not covered with fleece. It has fine, uniform 60-64S fibres. Generally both females and males are polled. Tail is thin and short.



BREED CHARACTERISTICS: It is adapted to the environmental conditions of the Central Anatolian Region. It has high adaptation ability to various environmental conditions. Its herd and maternal instincts and walking ability of long distances are good.

BREEDING CONDITIONS: It is adapted to the less rugged and poor pastures of the Central Anatolian Region with terrestrial climate. Besides, it is raised successfully in managements with relatively good feeding and keeping conditions. Generally, shelters are built on places close to pasture. In snowy periods, it is kept in sheepfolds. Additional feeding is applied according to the situation of pasture and season.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	75	66	Lactation milk yield, kg	70-90
Body length, cm	86	74	Lactation length, days	120
Birth weight, kg	4.3	4.1	Fleece yield, kg	3.0-3.5
Mature body weight, kg	80-90	50-55	Breeding age, month	18
Daily live weight gain, g	240		Litter size	1.4



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CENTRAL ANATOLIAN MERINO

ORTA ANADOLU MERİNO SU

LOCATION: The Central Anatolian Region

BREEDING PURPOSE:

Dual purpose (meat and wool)

GENERAL DESCRIPTION: It was developed by crossing between White Karaman and German Mutton Merino breeds. It carries approximately

80% German Mutton Merino genotype. Head is medium sized, lips are thick, ears are horizontal and large, neck is short and thick, body is big and long and rumps are plump. Legs are long and strong. Colour is white. Face and the end of legs are not covered with fleece. Fleece is formed by



fine and uniform fibres. Generally, both males and females are polled. Tail is thin and long.

BREED CHARACTERISTICS: It is well adapted to the conditions of Central Anatolia, a trait originating from White Karaman breed. Its disease resistance and survival rate are high. It has ability of adaptation to various environmental conditions; its herd and maternal instincts are good. Its reproductive and growth performance is higher than White Karamans’.

BREEDING CONDITIONS: In the Central Anatolian conditions, breeding is in sheepfolds for a while on winter, for other seasons on pasture on daytime and animals are kept in enclosed open air areas at nights. It can make use of dry pastures better than other breeds except for the native ones. It is successfully raised in relatively better herding conditions.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	76	68	Lactation milk yield, kg	60-70
Body length, cm	88	75	Lactation length, days	150
Birth weight, kg	4.4	4.1	Fleece yield, kg	3.6-3.8
Mature body weight, kg	85-90	55-60	Breeding age, month	18
Daily live weight gain, g	290	235	Litter size	1.4



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BAFRA

BAFRA

LOCATION : Primarily the Central Black Sea Region and many other regions in Turkey

BREEDING PURPOSE:

Dual purpose (lamb and milk)

GENERAL DESCRIPTION : It was developed by crossing Chios and Karayaka breeds. It has milk type body conformation. Head length and width

are middle-sized, ears are lateral and large, neck is long and thin. Body is white but black stains around mouth, eye and on ears can be seen. It is not permitted to have stains elsewhere. Head, belly and legs are generally without fleece. Males have strong and spiral horns grow to sides. Females are generally polled but there may be seen rudimentary horns.



Tail is fatless and long but base of it is little fatty. Udder is glandular and slightly drooping.

BREED CHARACTERISTICS : Its adaptation ability is quite good. Disease resistancy of the type is similar to the native sheep breeds. Its herd and maternal instincts, and walking ability are very good. It is an early maturing type.

BREEDING CONDITION : It is bred well in coastal and continental climates. It is in need of more care than native breeds.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm		67,5	Lactation milk yield, kg	120
Body length, cm		71	Lactation length, days	120
Mature body weight, kg	80	66	Fleece yield, kg	2.2
Birth weight, kg	4.0	3.8	Breeding age, month	1
Daily live weight gain, g	241		Litter size	2



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POLATLI POLATLI

LOCATION : The Central Anatolian Region and surrounding areas

BREEDING PURPOSE:

Dual purpose (meat and wool)

GENERAL DESCRIPTION : It was developed by crossing Ile de France and White Karaman breeds in Polatlı State Farm in Ankara. It carries 75 % Ile de

France genotype. Body is large and deep, back and loin are wide, and rumps are plump. It is open face and the upside of nose is slightly convex. Ears are large and semi pendulous. It is white. Its wool is suitable for carpet, blanket and tricot production. Both females and males are polled. Tail is fatless, thin and long. Udder is glandular and well attached to the body.



BREED CHARACTERISTICS : It is well adapted to the conditions of Central Anatolia. Disease resistancy of Polatli is similar to Turkey’s native sheep breeds. Its herd and maternal instincts additionally walking ability are good. It grows fast and produces high quality carcass. Males can be used for commercial cross-breedings.

BREEDING CONDITION : It is well adapted to steppe climate, plains or rugged lands but not mountainous areas. It is also able to bred in various climates and land conditions.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	80	77	Carcass weight, kg	22-25
Body length, cm	74	73	Carcass percentage (%)	50-52
Mature body weight, kg	94	77	Fleece yield, kg	3.0
Birth weight, kg	5.2	5	Breeding age, year	1.4
Daily live weight gain, g	300		Litter size	1.5



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PIRLAK

PIRLAK

LOCATION : Northern part of the West Mediterranean Region and interior part of the West Anatolia

BREEDING PURPOSE:

Dual purpose (meat and milk)

GENERAL DESCRIPTION: It has a middle-sized body. It is white, black stains can be found around eye and mouth, on the end of ears. Also, black

stains can be seen on feet. Ears are turned forward. Males have strong, spiral horns turned lateral sides and females are generally polled. There are different kinds of tails from thin to half fatty. Fatty chunk of the tail decreases from the base to the end.

BREED CHARACTERISTICS: It is resistant to harsh environmental conditions and diseases. Its meat is delicious.



BREEDING CONDITIONS: Its adaptation ability to different environmental conditions is good. It can be bred in inadequate feeding, sheltering and poor pasture conditions. Its sheepfolds are generally built adjacent to a hill. It is kept in hollows on mountains and even in uncovered groves of windless places in the provinces of Burdur and Isparta. Also, it is bred as nomadic. Feeding completely depends on pasture except for snowy winter days.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm		63	Lactation milk yield, kg	75-80
Body length, cm		60	Lactation length, days	120
Birth weight, kg	4.0	3.5	Fleece yield, kg	2-2.5
Mature body weight, kg		45-50	Breeding age, month	18
Daily live weight gain, g	150		Litter size	1.2-1.5



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KARYA

KARYA

LOCATION : The provinces of Aydın, İzmir, Manisa, Uşak and Denizli

BREEDING PURPOSE:

Dual purpose (milk and lamb)

GENERAL DESCRIPTION : It was formed by stockman preferences crossing West Anatolian sheep breeds using Chios and Kivircik rams. It has a middle-sized body. It is white but around eye,

end of ears and feet are generally black. Fleece is coarse mixed. Males have strong spiral horns, females are polled. Tail is thin and a little fatty.

BREED CHARACTERISTICS : It is an early maturing breed. Milk yield and litter size are high.

BREEDING CONDITIONS : Its breeding is preferred especially in rather good keeping and rearing conditions and on plains that have intensification trend.





Body Measurements and Production Performance







	Male	Female		Female
Wither height, cm		67	Lactation milk yield, kg	100
Body length, cm		64	Lactation length, days	170
Birth weight, kg	4.5	3.5	Fleece yield, kg	1.0
Mature body weight, kg	55	45	Breeding age, month	10-14
Daily live weight gain, g	182		Litter size	1.6

GOAT



BREEDS



	<i>Angora Goat</i> Ankara Keçisi		<i>Angora Goat (Coloured)</i> Ankara Keçisi (Renkli)
	<i>Hair Goat</i> Kıl Keçi		<i>Kilis Goat</i> Kilis Keçisi
	<i>Norduz Goat</i> Norduz Keçisi		<i>Honamlı Goat</i> Honamlı Keçisi



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ANGORA GOAT

ANKARA KEÇİSİ

LOCATION : Primarily in the province of Ankara, Central Anatolia and in some parts of Southeast and East Anatolian Regions

BREEDING PURPOSE :

Dual Purpose (mohair and meat)

GENERAL DESCRIPTION : Body is small framed, thin and elegant. Side view of does' head is slightly concave or smooth, and bucks' is convex.

Hind is a little higher than wither. Hind legs are a little longer than forelegs. Except for face and legs, whole body is covered with white, fine, soft, lustre and curly mohair. Rarely coloured animals can be seen as cream, yellow, silver-gray, brown or black. Both does and bucks are horned. In bucks, horns are long, strong, screw shaped and turned slightly backward, and does, horns are weaker and shorter and extend towards posterior.





BREED CHARACTERISTICS : It is a slow growing and late maturing breed. Maternal instinct is very good. It is seen that some goats close to parturition take care of kids of other goats. It has an ability to walk long distances. The most important crop is mohair. Mohair is an important raw material for textile industry because of its strength, elasticity, fine structure, absorbency and dyeability.

BREEDING CONDITIONS : It has no need for special keeping and feeding. It is raised in simple, partly or completely covered sheepfolds in winter and in exposed areas on the other seasons. Furthermore, it can also be raised on rugged and rocky lands. Management is easy. It is resistant to sudden fodder changes.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	66	51	Lactation milk yield, kg	25-50
Body length, cm	67	58	Mohair yield, kg	2.8
Birth weight, kg	2.7	2.5	Staple length, cm	15
Mature body weight, kg	45	35	Breeding age, month	18
Daily live weight gain, g	110		Prolificacy size	1.1



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HAIR GOAT

KIL KEÇİSİ

LOCATION : Anatolian Peninsula except for Black Sea coastal areas

BREEDING PURPOSE : Meat, milk and hair

GENERAL DESCRIPTION : It has generally a middle-sized body, but remarkable differences in body size are seen in different regions. It is named as black goat because of its black hair colour. Gray,

brown or blue-pied can also be seen. There are brown or white stains come down to the mouth on two sides of the black goats' face and prevalently the colour gets light at the end of legs and rear surface of the udder. Colour of skin is dark. Usually both males and females are horned. Bucks have strong horns. Distance between the tips of horns can be 60-70 cm. In does, horns are turned backward,



sometimes twisted and more elegant in comparison to male horns. The cross section of horn is oval or circular.

BREED CHARACTERISTICS : It is well adapted to all climate and rangeland conditions of Turkey. It has a strong body and resistant to infectious diseases, to cold or hot weather and it can be raised in harsh keeping and feeding conditions. It is able to utilize lands covered with heath and scrubs, and climb well on rugged-slanted lands.

BREEDING CONDITIONS : It can be kept on the pasture for whole year. Generally, it can be raised by scrubs, stubbles, plants formed like shrubs on high altitudes, in forests or in the villages near the forests with almost no expenditure.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm		69	Lactation milk yield, kg	98
Body length, cm		68	Lactation length, days	183
Birth weight, kg	3.4	2.5	Hair/Cashmere, g	410 / 46
Mature body weight, kg	45-90	40-65	Breeding age, month	18-20
Daily live weight gain, g	160		Prolificacy size	1.1



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NORDUZ GOAT

NORDUZ KEÇİSİ

LOCATION : Gürpınar in Van province and Norduz locality

BREEDING PURPOSE :

Milk, meat and hair

GENERAL DESCRIPTION : It has a middle-sized body and head. Ears are pendulous. Although its

basic colour is black, also white, cream, black-white, gray, ash-gray and brown animals may also be seen. Bucks have strong horns which are long, turned up and slanted backwards. Generally, does are polled, horned females have small and slim horns. Sometimes it is spiral and slanted downward.



BREED CHARACTERISTICS: Long and strong horns cause a magnificent view of the males.

BREEDING CONDITIONS : It is bred on low and high pastures of Norduz locality with rich vegetation and water resources and rugged, slanted lands. It is kept in simple sheds and fed with straws and dense fodder when the weather is cold and snowy.



Photo credit by Dr. Serhat Karaca

Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm		65	Lactation milk yield, kg	95
Body length, cm		68	Kid carcass weight, kg	11
Birth weight, kg	3.0	2.7	Breeding age, month	18
18-month weight, kg		48	Prolificacy size	1.1
Daily live weight gain, g	133			



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KILIS GOAT KİLİS KEÇİSİ

LOCATION : Provinces of Kilis, Gaziantep, Adiyaman and Hatay

BREEDING PURPOSE :

Dual purpose (milk and meat)

GENERAL DESCRIPTION : It has middle-weight and long framed. Chest and rump are well developed. Dorsal line is straight. Neck is long. While the one bred in Kilis Region has generally convex profile of head, the one bred in Hatay has smooth profile.

It has so big pendulous ears. The average length of ears is about 28 cm. The breed has usually a pair of wattle. Although its usual colour is black, also the chestnut, red-brown, gray and local white stains may be seen. While on someone heads, ears and body are in same colour, someone may be found with gray or brown big stains. Some of them may be horned. Bucks' horns are thick, strong and long. Does' horns are short, slim and turned backward.



Udder is well progressed and flabby. Udder lobes are clearly separated and nipples are turned laterally.

BREED CHARACTERISTICS : It has a strong body. It is able to walk long distances on rugged lands. It has resistance to hot and cold weathers and infectious diseases. Its milk is preferred especially by Kahramanmaraş ice-cream producers.

BREEDING CONDITIONS : Breeding is around gardens as family-herds of 2-10 goats or as commercial herds of 20-200 goats. It is shepherded to the provinces of Osmaniye, Adana and Mersin for grazing.



Body Measurements and Production Performance

	Male	Female		Female
Wither height, cm	70	67	Lactation milk yield, kg	217
Body length, cm		66	Lactation length, days	227
Birth weight, kg	3	2.8	Hair yield, g	550
Mature body weight, kg	60	40	Breeding age, month	16
			Prolificacy size	1.4



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HONAMLI GOAT

HONAMLI KEÇİSİ

LOCATION : The Taurus Mountains in the Mediterranean Region, Antalya, Isparta and Konya regions

BREEDING PURPOSE : Meat, milk and hair

GENERAL DESCRIPTION : It was developed by breeding preferences of the nomad breeders for centuries. It has a strong, long and high body. Its coarse and thin hairs are shorter compared to the

hairs of Hair Goat. Tail looks like a tassel and longer than the Hair Goats'. Generally, it is in black colour but also the one in red or gray colour or with white stains can be seen. There are brown or white stains come down to the mouth on two sides of the black goats' face and prevalently colour gets light at the end of legs and around the rear side of udder. Skin is in dark colour. Generally, both males and females are horned. Males have stronger horns than the



females. Horns are bow shaped curling around ears.

BREED CHARACTERISTICS : It has a big body and long legs. The bottom jaw bone is longer than the top jaw bone (undershot jaw or monkey mouth). Its eye are clearly big and vivacious. Ears are small and thick. Nose is clearly convex. It is a submissive breed and so familiar and submissive.

BREEDING CONDITIONS : Extensively, it is bred by nomads (Yörük) with scrubs, stubbles, plants formed like shrubs, pastures inside the forests almost with no expenditure. It is a breed that can be bred on pastures for whole year. However, it cannot make use poor pastures because of its mouth structure. Its breeding is successful on rich pastures or in managements with possibility for extra feeding.




Body Measurements and Production Performance


	Male	Female		Female
Wither height, cm	91	85	Lactation milk yield, kg	175
Body length, cm	93	84	Lactation length, days	270
Birth weight, kg	3.5	3	Hair yield, g	500-600
Mature body weight, kg	97	72	Breeding age, month	18-20
Daily live weight gain, g	200-250		Prolificacy size	1.9
			Six month carcass weight, kg	20-23

POULTRY AND SMALL



 Bursa Beyazi
Bursa Beyazi

 Gerze / Gerze

 Bursa Alaca
Bursa Alaca

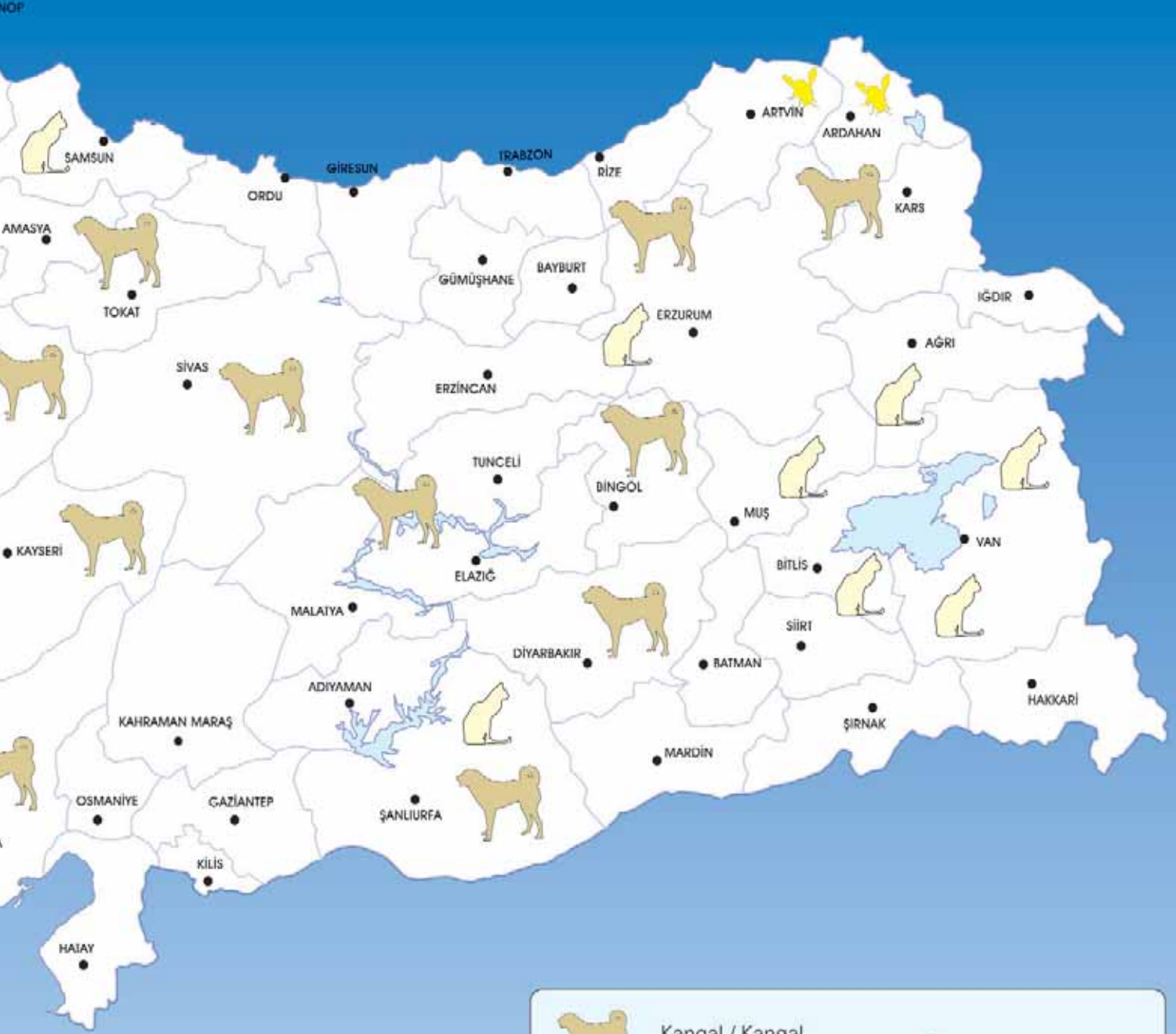
 Denizli / Denizli

 Hatay Sarisi
Hatay Sarısı

 Angora Rabbit
Ankara Tavşanı

 Caucasian Honey Bee
Kafkas Arısı

DOMESTIC ANIMALS



Kangal / Kangal



Akbas / Akbaş



Zagar Hunt Dog
Zagar İzci Köpeği



Van Cat / Van Kedisi



Angora Cat
Ankara Kedisi



Bursa Tumbler
Bursa Oynarı



Thrace Roller
Trakya Makaracısı

♂ *Demir Kir*♂ *AI*

DENİZLİ DENİZLİ

LOCATION : Originally from Denizli and surrounding area, as well as whole Anatolia and Thrace.

BREEDING PURPOSE : Egg and hobby

GENERAL DESCRIPTION : Comb can be single or rose. Eye seem as blackened with kohl. Nose holes are small. Rooster beak is long and in deep grey colour. Ears are covered with short feathers. Ear lobes are evident in red colour or red colour with slight whiteness. Rooster neck is long. Female neck has average length and with long feathers. Tail is strong and it is showy in rooster. Wings are big and feathery. Chest is averagely deep. Quills and the feathers that covered body are in black colour. Roosters may have colourful quills on the neck, dorsal side and wings, and they are named as iron grey, cotton grey, yellow, red and black

according to these colours. Females are in black colour except that some colourful spots on the neck. Skin colour is white. Shanks, toes skin and scales are in light or deep grey colour, without feather. They have four toes and spur. Shanks of roosters are strong and long. Females are shorter than males. Eggshell colour is white.

BREED CHARACTERISTICS : Its roosters are famous for singing for about 15-16 seconds. Rooster may be aggressive in mature age. Some differences may be seen among the individuals in terms of feathering. Obtaining auto-sex chicks is possible by selection depends on quills length and differences of toe colour.

BREEDING CONDITIONS : Breeding is on semi-intensive or extensive conditions.



♂ Pamuk Kır



♂ Kefi Sari



Some Characteristics	Male	Female
Hatching weight, g	38.5	
Mature body weight, g	2050	1100
Egg weight (g)		54
Annual Egg Production, number		114



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GERZE GERZE

LOCATION : Gerze county of Sinop.

BREEDING PURPOSE : Egg and hobby

GENERAL DESCRIPTION : Head has middle-length and crest looks like fork. Nose holes are big and have salient on the beak. Beak is in gray colour tones and middle-length. Ears are covered with short feathers. Ear lobes of roosters are clearly white on both two sides. Neck of rooster has long form. Female neck has middle-length and feathered. Tail is strong and showy. Wings are big and large. Chest is averagely deep. Body is

feathered with black colour. Tail feathers of roosters seem green-black colour under the light. Skin colour is white. Shanks, toe skin and scales are light or deep gray, not feathered. They have four toes and spur. Shanks of roosters are strong and long. Females are shorter than males. Eggshell colour is white.

BREED CHARACTERISTICS : It is rather timid. Roosters are hoarse-voiced.

BREEDING CONDITIONS : Breeding is on semi-intensive or extensive conditions.



Some Characteristics	Male	Female
Hatching weight, g	37	
Mature body weight, g	1850	1100
Egg weight, g		49
Annual Egg Production, number		88



LAYER HYBRIDS
YUMURTACI HİBRİTLER

Name	ATABEY	ATAK	ATAK - S
Developed in	POULTRY RESEARCH STATION		
	GENERAL TRAITS		
General Description	Fearful character, a little sensitive to noise, good adaptation to the uncontrolled environmental conditions, well ability of feed conversion, white feather, showing rapid feather growth, hybrid genotype of egg layer.	Docile temperament, good adaptation to uncontrolled environmental conditions, well ability of feed conversion, brown feather, hybrid genotype of egg layer	Docile temperament, good adaptation to uncontrolled environmental conditions, well ability of feed conversion, black feather and brown breast and throat, hybrid genotype of egg layer.
	EGG PRODUCTION		
72 Weeks Egg Production (number)	305	301	302
Peak Egg Production %	97	96	97
Egg Weight (g)	60.3	63.1	64.7
72 Weeks Egg Mass (g)	18.6	19	19.5
	LIVEABILITY		
Growing Period % (18 weeks)	97-98	97-98	97-98
Laying Period % (19 to72 weeks)	93-95	94-96	94-96
	BODY WEIGHT		
At 8 Weeks (g)	490	550	570
Sexual Maturity (g)	1535	1750	1800
at 72 Weeks (g)	1820-1850	2040-2080	2150-2200
	SEXUAL MATURITY		
First Laying Age (day)	140-145	145-150	147-152
Age at 50% Production (day)	155-160	160-165	162-167
Age of Reach Peak (day)	180-185		
	FEED CONSUMPTION		
Growing Period (kg) (18 weeks)	5.9	6.9	6.9
Laying Period (g) (daily)	100-105	113-117	117-123



Bursa Beyazı Alaca



Bursa Beyazı



Hatay Sarısı

NATIVE SILKWORM LINES

YERLİ İPEKBÖCEĞİ HATLARI

Line Name	BURSA BEYAZI ALACA		BURSA BEYAZI		HATAY SARISI	
Voltinism	1 (Univoltin)		1 (Univoltin)		1 (Univoltin)	
Moultinism	4 moulters		4 moulters		4 moulters	
Egg Characteristics						
Shape of Egg	Elliptical		Elliptical		Elliptical	
Colour of Egg	Gray		Gray		Gray	
Number of Egg Laid (pcs.)	Min.	Max.	Min.	Max.	Min.	Max.
	439	656	390	590	303	545
Other Characteristics	Eggs are not sticky to egg laying base		Eggs are not sticky to egg laying base		Eggs are sticky to egg laying base	
Larval Characteristics						
Colour of Newly Hatched Larvae	Black		Black		Black	
Colour of Matured Larvae	White		White		White	
Markings	Sharp		Shadowy		Shadowy	
Other Characteristics	Larvae has stripes like zebra				At fifth instar pseudo legs are yellow	
Cocoon Characteristics						
Shape of Cocoon	Elliptical		Elliptical		Peanut shape	
Colour of Cocoon	White		White		White	
Single Cocoon Weight	Min.	Max.	Min.	Max.	Min.	Max.
	1.6	2.1	1.3	2.2	1.4	2.1
Cocoon Shell Ratio (%)	13.3	15.7	11.9	15.8	10.9	13.5



CAUCASIAN HONEY BEE

KAFKAS ARISI

LOCATION : Its original spreading area starts from the high valleys of the Central Caucasus and spans on towards to the North East Anatolia.

GENERAL MORPHOLOGY : The body is big, abdomen is large. It is a honey bee breed with the longest tongue. Abdomen chitin colour is black. There are narrow and uncertain yellow bands or brown spots on the first part of the abdomen. Scutellum is black colour. Tomentum is large and dense. Hairs covering the body are short and gray. The chitin colour of queen and males are deep. Thorax hairs of male bee are black.

BEHAVIOURAL AND PHISIOLOGIC

CHARACTERISTICS : It is quite submissive. It is growing slowly in the spring as growing speed of young is slow and it cannot reach the power of colony before the summer come. Its ability to set in for winter is not high. It is sensitive to Nosema among diseases of adult bees. Tendency of swarming is low. It tends to plunder. Its ability of producing

honey and profiting from plants whose nectar is in depth as clover (trefoil) are higher than the other breeds because its tongue is long. It can be active on fields in low temperatures and harsh conditions. It is a honey bee breed that uses propolis most. It tends to make irregular honeycomb bridge. Its honey with honeycomb seems dark and moist



because it does not bring air holes as it is silvering the cells in honeycomb.

BREEDING CONDITIONS : They are not raised prevalently because their ability to set in winter is low and they are sensitive to Nosema. Because growing speed of young is slow, producing honey is hard for them in the south regions where nectar current exists early in the spring. They are successful in flora where flowers have deep and dominant tubes. It is expected that their honey production would be high in regions where nectar current is slow but last long. In short nectar currents they tend to make stock for broody.





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KANGAL KANGAL

LOCATION : Primarily Sivas province and whole Anatolia

BREEDING PURPOSE : Protection of small ruminant flock and safeguarding

GENERAL DESCRIPTION : Body is big structured. The harmony among the parts of body is very good. Chest is large and deep, waist is middle-length. Head is middle-sized and its bounding to body is

strong. Ears are triangle-shaped and pendulous. Legs are long and strong, paws are huge and strong. Its colour varies between dirty-white and light-yellow tones. Hairs are short and dense.

BEHAVIOURAL CHARACTERISTICS : It is loyal to its master and submissive especially to children and women. Its maternal instinct is generally good. It uses its strong chest and forelegs when fighting.



BREED CHARACTERISTICS: It is brave, clever, strong, speedy and nimble. Its ability of flock protection is related to its instincts, so it does its duty without the control of shepherd. The most important breed characteristics of Kangal are black mask on its face and spiral shape of its tail. Generally, it is preferred with spur on foot which is known as a genetic defect and it is a disadvantage for Kangal.

BREEDING CONDITIONS : It is adapted to cold and low moist environments. Aim of breeding is protecting livestock from predatory animals, especially from wolves. At the same time, it is bred for safeguarding. Its actual living area is the place where the sheep flocks exist. If it is breeding for standing guard its living area must be so large that it can walk around and has opportunity to run. It is suggested that floor shouldn't be tough.



Body Measurements and Some Characteristics	Male	Female
Wither height, cm	70-75	60-65
Body length, cm	75	70
Birth weight, kg	0.7	0.6
Mature body weight, kg	50	42
Number of offspring per litter	6 - 8	



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AKBAS AKBAŞ

LOCATION : Sivrihisar, Afyon, Eskişehir and Ankara provinces

BREEDING PURPOSE : Protection of small ruminant flock and safeguarding

GENERAL DESCRIPTION : The body is middle-sized. The harmony among the parts of body is so

good. Muscles are well developed, posture is athletic and elegant. Chest is large and deep, dorsal line is straight, waist and hips are narrow. Head is funnel-shaped that it gets slim towards nose. Body is white and the nose and mouth are in black colour. Tail is long; it makes one or two



spiral on the waist. It has two types according to its bristle length; long and short hairs.

BEHAVIOURAL CHARACTERISTICS : It is loyal to its master, it is calm and tender and also its’ protection instinct is very good. It is suspicious about strangers. As it does its duties it makes enemies ineffective by its power, courage, speed and agility.

BREED CHARACTERISTICS : It is brave, strong and clever. It is active at nights but calm and inactive in daytime. It is a guard dog; its characteristics about protecting herd and safeguarding are good. It has no need to be warned to do its duties. It is resistant to harsh conditions. Although it has a big body structure, it does not consume much food.

BREEDING CONDITIONS : It is adapted to terrestrial climate. The one with long hairs is more suitable for breeding under cold conditions compared to the one with short hairs. Generally, it is raised in farms or large gardens. It must be controlled on daytime but it has to walk free at nights.



Body Measurements and Some Characteristics	Male	Female
Wither height, cm	70	65
Body length, cm	55	50
Mature body weight, kg	40-60	35-45
Number of offspring per litter,	6 – 8	
Birth weight, kg	0.5	



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ZAGAR HUNT DOG

ZAĞAR İZCİ KÖPEĞİ

LOCATION : Thrace, eastern part of the Aegean Region and Taurus Mountains

BREEDING PURPOSE :

Hunting, especially rabbit hunting.

GENERAL DESCRIPTION : Body frame is rectangular. In comparison with the body, the head

is a little big and it is long and tapers towards the muzzle. Ears are middle-sized, pendulous, "V" shaped and round at the tips. Shoulders are muscular. Legs are strong and the hindlegs are longer than the forelegs. Paws are middle-sized, thick and round. Tail is long, thick and gets slim



towards the end. The top and side of body, as well as the neck and the head are black. Two brown spots above the eye are preferred by the breeders as a good character sign. Part of the face, the bottom of chest and abdominal region are brown, in light and dark tones. There may be white areas on the chest and legs. The hair is short and dense.

BEHAVIOURAL CHARACTERISTICS : It is loyal to its master and family members. It is very active and its hunting instinct is rather advanced. It rarely attacks to strangers.

BREED CHARACTERISTICS : It is intelligent, loyal and very active. Its sense of smell is very well developed. It chases its prey till it faces hunter. The body structure is proper to run long distances. It is adapted to poor feeding conditions.

BREEDING CONDITIONS : It shouldn't be let loosed except for hunting periods to prevent fighting against other dogs or having accidents. It is adapted to temperate climate, so it must be protected from cold.



Body Measurements and Some Characteristics	Male	Female
Wither height, cm	52	49
Body length, cm	59	55
Birth weight, kg	0.6	0.5
Mature body weight, kg	20	18
Number of offspring per litter	5	



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VAN CAT VAN KEDİSİ

LOCATION : Especially territory of Lake Van, also it is raised in all over Turkey and some regions of the world.

BREEDING PURPOSE :

Special interest and hobby

GENERAL DESCRIPTION : Its body is middle-length, chest is large and deep. Males are bigger

framed compared to the females. Forepart of body is larger than the rear. Parts of the body have harmony. Head is short, cheeks are protrusive, and ears are long and vertical. Tail gets slim towards the end and its position is vertical as the cat is walking. Hind legs are longer than the forelegs. Paws are circular and big. It is divided in three types according to the eye colour. One of the eye





may be in blue colour while the other one is amber or both of them may be blue or yellow. It has two types according to the colour of hairs; it may be completely white colour or it may have yellowish stains on the head, back, legs or ears and tail.

BEHAVIOURAL CHARACTERISTICS : It likes to live with people but it has temper as it gets to be far away from people. It is active, it likes to play games. It has ability of adapting to different environmental conditions. It does not permit other cats to enter into its living area. The instinct of hunting is very good. The females select the males for mating.

BREED CHARACTERISTICS: It is an unusual cat breed that it likes to play with and also swim in water. It is more careful about cleaning compared to other cat breeds.



Body Measurements and Some Characteristics	Male	Female
Wither height, cm	31	27
Body length, cm	38	36
Mature body weight, kg	5	3.5
Number of offspring per litter,	4	
Birth weight, kg	80 - 100	



ANGORA CAT

ANKARA KEDİSİ

LOCATION :

Ankara province and surrounding area

BREEDING PURPOSE :

Special interest and hobby

GENERAL DESCRIPTION : Its body is middle-length and the parts of body have harmony. Bones

are slim, long and covered with strong muscles. Sacrum is higher than shoulders. Head is smaller compared to whole body and triangular shaped. Ears are middle-sized, its bottom is large, its end is pointed, vertical and distance between two ears is long. Body is covered with silky, long, white and bright hairs. Its hairs are longer especially on the



neck and tail. The tail is long and covered with hairs completely. Paws are elegant, small and circular. It is divided in three types according to eye colour. One of the eye may be in blue while the other one is in amber colour or both of them may be in blue or in yellow colour.

BEHAVIOURAL CHARACTERISTICS : It likes to be with family and under its' owner interest. It is faithful and close to its owner only. It is nimble. It can express itself well by its voice and body actions. Its reflex against danger is high and it acts fast. Maternal and hunting instincts are very good. The ones in the rural places tend to be independent. It likes to lie on the place where it used to. It is selective about its food.

BREED CHARACTERISTICS : It is suitable for training, its capacity of learning and ability of hunting are high. It is among clever cat breeds. It keeps its tail horizontal as it is walking even tail may touch to the head. Mane is appeared on the



adults in winter when the hair has become long. Hind legs are a little longer than the forelegs. It has different eye colours. Deafness is more prevalent compared to other cat breeds. So, it needs special keeping and feeding.



Body Measurements and Some Characteristics	Male	Female
Wither height, cm	23	22
Body length, cm	27	24
Mature body weight, kg	3.8	3.4
Number of offspring per litter,	3	
Birth weight, kg	105-120	



BURSA TUMBLER BURSA OYNARI

LOCATION : Mainly in Bursa province and the surroundings

BREEDING PURPOSE : Hobby (Flying performance and colour)

GENERAL DESCRIPTION : It is known as a roller/tumbler pigeon breed. It has a medium- sized body and a long beak. It can fly for long periods of time. It is called as "Karabaş" if the body is black but the tips of wings and all of the tail are white; "Yaşmaklı" if it is white from the edge of lower beak until the end of neck; "Muskalı" if it has white stains from underneath the beak to the throat; "Kalaça" if white feathers stretch from under the eye and grow wider to the crest and then get narrow. Kalaça also has white feathers that start on the back of beak and stretch to the top of head. Black feathers of the neck

shine in purple, violet and dark green, which is named as shawl.

BREED CHARACTERISTICS :

It does not fly in flocks. It claps wings as if it beats the air swiftly and escaping from anything. It becomes calm over its nest and turns somersaults during its flight. The somersaults are tight and hectic. It somersaults backward in wings' axis as well as all tumbler pigeons, so that it turns 3-5 times somersaults backward in rapid, tight rotations. Unlike many other pigeons, it does not respond to luring and shiny objects or noise. Its flying time is long (3-4 hours). The orientation capability is good.

BREEDING CONDITIONS : It is bred in a group including males and females in closed nests throughout the year. The flying time is in the morning and evening.



Karabaş



Yaşmaklı



Muskalı



Kalaça



THRACE ROLLER TRAKYA MAKARACISI

LOCATION : The Thrace Region

BREEDING PURPOSE : Hobby (Flying, roller performance and colour)

GENERAL DESCRIPTION :

It has a medium-sized body and a long beak. It can fly high and for a long time. This pigeon breed is able to roll (tumble) during its flying time. There are five main colours; black, white, red, yellow, blue and 3 sub-colours referred as Nohudi, Zeytini, Çakal.

BREED CHARACTERISTICS : It flies in a flock and then it is seen that it separates within the flock and flies in small kits. It flies high

for long periods of time (3-4 hours) and displays rolling somersaults. By coming after one another, it has a roller performance. The roller performance time is very long. It somersaults backward in wings' axis as well as all roller pigeons. The affection to the nest is remarkable.

BREEDING CONDITIONS :

Males and females are kept together in private nests throughout the year. Flying trainings are in the mornings and evenings in summer when weather is hot and during winter days.



Çakal



Nohudi



Zeytini



ANGORA RABBIT

ANKARA TAVŞANI

LOCATION : Ankara province

BREEDING PURPOSE :

Dual purpose (wool and meat)

GENERAL DESCRIPTION : Body is middle-sized. It is a 'wool rabbit' with long hairs. It has vertical ears with tassels at the end. Head is middle-sized and circular, neck is short. Bones are slim and strong. Feet are slim and long covered with long hairs. Wool is white, long, slim, dense, soft, bright and convenient for weaving.

BEHAVIOURAL CHARACTERISTICS : They are generally calm, when they are kept in cage

together in three or older months age, they may harm each other. In case of stress, it may run or knock down its back feet. It tends to swallow its wool.

BREED CHARACTERISTICS : It is the only breed that thread can be produce from its wool. Because of its wool is light, slim and high heat isolation characteristics, it is used in a wide range air industry to medicine.

BREEDING CONDITIONS : Hot climate affects wool yield negatively therefore cool climate is convenient for its raising.



Body Measurements and Some Characteristics	Male	Female
Mature body weight, kg	3.5-4	4-4.5
Annual Angora yield, g	700-800	1000
Breeding age, month		6
Number of offspring per litter, number		1-6
Number of gestation per year, number		3-4
Birth weight, kg		47-55
Shearing number		4





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