KARAKUL SHEEP

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Origin of the breed

Allegedly the Karakul (sometimes spelled Karakule) originated in Bokhara in Russian Turkestan (Young, 1914). Assuming this is the same as sometimes referred to as Bukhara, it is located in current day Uzbebkistan near Tashkent and Samarkand. Valuable lamb pelts were produced in this region in commercial quantities at least as early as 1000 A.D. According to Adametz, Karakul-like fur was used for trimming the coats of Hittite kings as long ago as 1400 B.C. (Lush, Jones, Dickson, 1930). The name Karakul is thought to derive from the words Kara Kul (meaning Black Lake). The natives of the area did not apply this to the sheep of the area, but a fur buyer who regularly came to the area to buy the pelts transferred the geographical name to the sheep found there. Young (1914) stated that these sheep descended from a type known as Kandakar which was considered extinct at that time. Others refer to other names such as the Arabi, Shiraz or the Zigai as names applied to the sheep or the region from which the Karakul derived. Until this date, a number of related fat-tail type sheep still produce lambs which at birth possess interesting curl patterns to their fleece. The Karakul lamb pelts are commonly known in this country as Persian Lamb. Other terms used to refer to these pelts are Broadtail and Caracul, but these terms were generally applied to different types.

Centers of Karakul Production

Karakul type sheep may be found throughout many arid regions but the major countries where pure Karakuls are found in large numbers are (Demiruren, 1975):

The former Soviet Union
Southern Africa
Afghanistan
Iran
Rumania.

The above areas have all been in turmoil or political reorganization in recent years, and there is no way this could have failed to affect Karakul production through changes in numbers and a shift from pelt production to meat production. Within the former Soviet Union, Karakul production was restricted to the arid steppe region of Uzbekistan, Turkmenia, Tajikistan and Kazakhstan. In Southern Africa, Karakul pelt production is largely restricted to Southwest Africa (Namaibia) as contrasted to the Republic of South Africa. Afghanistan and Iran have long had significant numbers of Karakul or Karakul-type sheep, but in recent decades these have been largely used for meat as contrasted to pelt production. However, the potential exists to switch between these products on an annual basis. All the areas with major populations of Karakul (pelt) production are characterized by harsh arid conditions. This appears to imply

that they are well adapted to these conditions, a trait which they share with other fat-tail types, at least in respect to non fat-tail types. However, another related fact is that in the case of pelt production a marketable product can be obtained without the necessity of the ewes lactating adequately to raise the lambs, thus reducing their feed requirements. This contributes to the concentration of this breed and this industry in these regions. This should not be interpreted to mean that Karakuls are adapted to only arid regions (there may be limited truth to this), but that they are better adapted to these regions than many other types of sheep. Karakul pelt production may or might be combined with milk production since the lamb would have been removed from the ewe. It is likely many Karakul ewes are milked after removal of the lambs at or near birth.

In the decade of the 1980[s] the world population of Karakul was estimated at approximately 31.5 million head, with an annual pelt production on the order of 18 million pelts. It is estimated that pelt production is down at the present time.

The Karakul in the U.S.

It is generally accepted that the first Karakul sheep were brought to the U.S. by Dr. C.C. Young in 1908. These (5 rams and 10 ewes) were brought to Holliday, Texas (near Wichita Falls in Archer county). Subsequent importations were made by Dr. Young in 1913 and 1914. These importations all came from the Russian province of Bokhara. Dr. Young was a physician who immigrated to the U.S. from Russia at the age of 18. His family had raised sheep in Russia. Subsequently, a Mr. Albright of Dundee, Texas (a near neighbor to where Dr. Young's sheep were raised) brought shipments from Bokhara in Russia (Ca. 1919-1920) and later (1929) from Germany. Mr. Albright developed a breed known as the Karalinc from crosses of the Karakul and Lincoln. At least one shipment was received in Canada in the intervening years. With these several shipments from the original centers of production, it appears that the genetics received in the U.S. were perhaps representative of those available on a world basis at that time. Dr. Young wrote extensively about these sheep in the early part of this century and some of these articles can be found in the Journal of Heredity (Vol. V, pp. 170-178, 445-447; Vol. XIII, pp. 229-236). The efforts of these gentlemen and their colleagues of the time in respect to breeding Karakuls were devoted almost entirely to attempting to establish a Persian Lamb pelt industry. Dr. Young's interest and enthusiasm did not long continue, and as early as 1922, his address was shown as Denver, Colorado. Dr. Young is also shown to have been the owner of the Kerman Karakul Sheep Company of Kerman, California. Both the U.S. Department of Agriculture and the Texas Agricultural Experiment Station briefly conducted experiments with Karakul sheep in the early part of this century. Some of the work conducted at the U.S. Department of Agriculture can be found in reports of Potts and Simmons (1930) and Spencer (1941). These studies largely dealt with pelt quality and the possibility of crossing to other breeds to increase numbers and to obtain pelts with value. These crossbreeding efforts tended to involve the Navajo and other coarse wool types. The early research studies with Karakul in Texas was reported by Lush, Jones and Dickson (1930). Some excerpts from this publication might be of interest. "Karakul sheep are hardy, vigorous and long-lived. The ewes are good mothers. They are unusually well adapted to taking care of themselves under harsh conditions such as are most frequently encountered in semi-desert conditions. The wool is coarse and gray or black and will usually sell....(for less)....than Rambouillet wool. The lambs are large and growthy, but if sold for mutton usually encounter

some price discrimination on account of their large fat tails...." In addition, they called attention to limited quantities and lack of uniformity as problems in marketing pelts and wool.

More recent studies at the Texas Agricultural Experiment Station were conducted during the decade of the 1980^{s} and used the Karakul as an example of the larger population of fat-tail sheep. These studies will be reported elsewhere.

In the period from the 20^{s} to the war years of the 40^{s}, there was significant interest in Karakul sheep, but since this time the numbers have markedly decreased. In 1938, a survey (author unknown) was conducted to determine the number and location of Karakul breeders. This survey reported that 93 producers owned 5,328 sheep. The largest number of breeders reporting was from Idaho, but the largest number of sheep were reported in California and Texas. Such surveys conducted by mail rarely provide more than a 25% response. In this survey 93 of 698 questionnaires were returned. Thus, the total numbers present were no doubt much greater than those reported. This is verified by the fact that the largest flock known to be present in the U.S. at that time was not among the respondents. Kellogg (1942) estimated that as many as 12 - 15,000 pelts were produced in the United States in 1940 as compared to 5,696,761 imported. To the writer's knowledge, the largest flock in the U.S. was that belonging to Mr. Lowrey Hagerman near Klines Corner, New Mexico. At one time, this flock consisted of up to 4,000 head. From this number, the flock has decreased to a few hundred, and so far as the writer is aware, is still in existence at this time. This flock has served two significant roles in recent decades. One of these is their use in movies with settings in the Near or Middle East. For this purpose, they would be the best suited of any breed found in the U.S. In another instance, breeding stock from this flock has been exported to other countries, specifically Australia, for potential use in developing flocks of fat-tail sheep to serve the Middle East markets.

Some of the more interesting aspects of Karakul in the U.S. are to be found in the claims of the early promotors of the breed, and it was some of these claims that influenced the author to take another look at these sheep. Some of these claims are quoted below.

"Aside from the Karakul's value as a fur producer, its flesh is one of the greatest delicacies. There is no "sheepy" flavor to the meat, on the contrary, it has a fine "gamey" touch, more like venison or antelope so much appreciated by the epicure" (from F.E. Dawley, Fayetteville, N.Y.).

"Karakul sheep produce for the market very early lambs, the meat of which has a flavor more on the order of venison than mutton, as it does not have the 'sheepy' or 'wooly' flavor so noticeable in most of our domestic sheep" (from Karakul Fur Sheep Co., Inc.).

"They will stand the greatest extremes of heat and cold and will thrive in any country so long as their pasture is well drained.

There are some 500 known varieties of weeds in the U.S. and the Karakul will eat most of them" (from Kerman Karakul Sheep Company).

"The Karakul Desert Sheep (from Dr. C.C. Young, 1920^{s})

1. The Karakul Desert Sheep will produce 'Persian Lamb' and 'Astrakhan Fur' in the first cross with domestic coarse-wooled breeds. The skins of the lambs when two or three days old being used for that purpose. This kind of fur is used for coats, collars, caps and muffs by the most fashionable set of society, and according to the United States Department of Agriculture, we require $14,000,000 worth of such furs annually.

2. According to Armor and Swift Karakul mutton is free from the 'woolly taste' so often objectionable in our domestic breeds, and the lambs mature very quickly, in fact 60-pound lambs in two months are not uncommon.

3. Karakul ewes compare favorably with milk goats and the milk is richer in fat than goat's milk. The fat globules are very fine and easily absorbed. For ages the Karakul has been the cow of the Kara Kum Desert of Central Asia, and the famous 'Brinza' cheese possesses the most delicious flavor.

4. The wool of the mature sheep is very coarse and ideally adapted for coarse textiles, rugs and felt and 21 pounds of 31-inch long staple (?) is the most any Karakul has ever produced, but being free of the fat and dirt of the fleece of our domestic sheep this is an enormous yield. Under proper grading and when of sufficient length Karakul wool brings a higher price than does the wool of our domestic breeds.

5. The Karakul Desert Sheep, which for centuries have had to compete with the camel and the burro, will thrive and accumulate fat on pastures that would starve our domestic breeds. Short-lived weeds and the Saxsaul brush closely resembling the Chemisa of San Luis Obispo County is all these animals have had to feed on. During the entire summer we grazed our sheep in Fresno on alkali weeds and they did well, and such brush as Chemisa, rabbit brush, trefoil, tree lupine and silver lupine is relished by them. The Karakul sheep will enable us to reclaim millions of acres of land practically valueless today.

6. In point of hardiness no domestic animals in America can compete with the Karakul except the burro and the Mexican goat. Our farmers are anxiously seeking for the most effective means by which to destroy Johnson grass, Bermuda grass, Morning Glory, Thistles, etc., will find the Karakul of inestimable value."

The following quotes are from *Karakul Fur Bearing Sheep,* Kerman Karakul Sheep Co. (1920[5]).

"Being free of the woolly taste of our native sheep the fat which is the butter of Central Asia, is ideal for cooking purposes (p. 2)."

"Our experience has been that on crosses between Asiatic Karakul Broadtail Sheep and one or two other domestic varieties, lambs were obtained which at the proper age weigh 90 to 105 lbs., and have the most delicious flavor as well as the heaviest yield of mutton "(p. 4, Armour & Company, October 3, 1911).

"We find, primarily, that they are good yielders, and the lambs at an early age are of such weight as to make them economical both for the consumer and the seller; more than that, they seem devoid of the strong mutton flavor that is often objectionable, and on the other hand, are rich in meat flavor and are good eating down to the end of the tail" (p. 4, Armour & Company, October 3, 1911).

"In answer to your recent inquiry regarding the 45 head yearling Karalinc wethers, bred by you and purchased by our Company, wish to say that these sheep were very satisfactory and the trade was well pleased with them. Some of our trade objected to the large fat tails; however, we consider this objection of very little importance.

The yield of mutton was 19.44%, (?) which is good considering the heavy fleeces they had.

The quality of meat was excellent, of fine texture, good flavor, evenly grained with fat and evenly covered (with the exception of tail) with fat. Their fleeces are more desirable than

It would seem to us that this breed, owing to being good producers of both high grade mutton and wool, and naturally hardy and adaptable to Texas climate, should prove popular with Texas sheep men" (p. 4, Swift & Company, August 3, 1914.)

"We killed the Karalinc lambs we purchased from you yesterday. These are indeed a very good quality lamb, giving a good yield and making a very attractive carcass. Armour & Company have done a good deal of experimenting with this breed of lambs through our best hotel trade. We are advised that the lambs are particularly desirable, on account of being void of the mutton on musty taste. They seem to take on fat evenly, and are, in fact, considered a choice product by the exclusive trade, which demands the best. Armour & company are always interested in the development of fancy food products, and believe this breed of lambs are numbered among the best" (p. 5).

"It gives me pleasure to state that the Karakel lamb which I ate in your house, at the time you entertained U.S. Senator Sheppard, seemed to be free from the usual sheep taste characteristic of our native breeds, and I enjoyed eating it" (p. 6, J.H. Nations, December 7, 1915).

"In the tests that came under my observation, the Karakul strain always told, and the grade lambs possessed more weight and vitality. I certainly consider Karakul sheep the proper animal to raise in the Rio Grande Valley, and I believe it to be the means of producing hardier and heavier hybrids, than our native sheep" (p. 6, The State Department of Agriculture of Texas, December 7, 1915).

Many of these claims must hold interest for all sheep producers if they can be verified. The one claim relating to eating quality of the meat should be of unique interest in view of the low level of consumption of lamb meat in this country, and this was one of the major reasons for the author's interest in these sheep. This claim is supported by many others on an international basis at the present time, but has yet to be proven in controlled studies.

What is the future of Karakul sheep in the U.S.?

At one time the writer was concerned that this genetic resource might be lost in this country. However, in recent years there appears to have been some resurgence of interest in this breed. Each producer who is involved with the breed no doubt has their own reasons for doing so. However, some of the writer's own thoughts in this matter will be discussed briefly.

There are a number of ethnic or national groups in the U.S. which place a premium on the meat of fat-tail sheep. This is no doubt due to actual or presumed superior eating qualities of the meat or to an emotional attachment to a type of sheep which is representative of their homelands. Statements can be found to the fact that Mohammedans regard this type of sheep as sacred or unique to their religion and culture. Thus, there should be some opportunities to market Karakul meat to this group in the U.S.

The carpet wools produced by the breed should be in some demand for the handicraft trade. However, at the time that Texas A&M University owned Karakul sheep, marketing of the wool presented problems.

It seems unlikely that producers in the U.S. will be able to generate the numbers and quality of pelts to access or to impact world trade or international markets in pelts. The genetic resource to produce desirable pelts can most likely be found in this country, but numbers and uniformity of pelt quality will likely continue to present problems. The best possibility to exploit the pelts may also be found in handicraft or specialty trade. If a pelt

industry could be successfully established, it would offer a potential alternative use of much of the arid lands of the west, and also offers one mechanism to evade the large losses of lambs to predators. Predation is higher on lambs than mature sheep.

There is growing interest in this country in producing milk from sheep for fabrication and replacing some unique and expensive imported products. In the writer's opinion, Karakul sheep represent one of the best milking breeds available in this country at present. Also, there would be some biological advantages from combining milk and pelt production.

The production of Karakuls for both novelty and research interests will hopefully be adequate to maintain this genetic resource in this country even in the absence of a major commercialization of the breed.

References

Demiruren, A.S. 1975. The Present State of the World Karakul Sheep Industry and Future Prospects. The Third International Symposium on Karakul Sheep Breeding. Samarkand, USSR. pp. 5-23.

Kellogg, C.E. 1942. Market Data on the 1941 Persian Lamb Skins from the Federal Flock. National Fur News. April, 1942.

Lush, J.L., J.M. Jones and R.E. Dickson. 1930. Karakul Sheep. Texas Agricultural Expt. Station Bulletin 405.

Potts, G.G. 1930. Karakul Sheep. USDA Farmers Bulletin. 1632.

Schott, R.G. and V.L. Simmons. 1941. Selecting a Karakul Ram. The California Wool Grower. December, 1941.

Spencer, D.A. 1942. Karakul Sheep Breeding Experiments at the Beltsville Research Center, Belts, MD. National Fur News. May, 1942.

Young, C.C. 1914. Breeding Karakul Sheep. Journal of Heredity. V: 170-178.

Young, C.C. 1914. Origin of Karakul Sheep. Journal of Heredity. V: 445-448.

Young, C.C. 1922. Practical Tests in Karakul Sheep Breeding. Journal of Heredity. XIII: