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KARAKUL SHEEP



THIS BULLETIN is issued in response to the many requests received by the department concerning Karakul sheep. It gives the essential information which persons who contemplate raising these animals should have before selecting breeding stock or engaging in the business. Prospective Karakul sheep raisers are advised to study particularly the exacting requirements of the market with respect to the quality of lambskins as described and illustrated.

Washington, D. C.

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KARAKUL SHEEP

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BREED CHARACTERISTICS

THE KARAKUL BREED of sheep is of the fat-tail type, the tail being broad, flat, and tapering rapidly toward the end. The tail is used as a storehouse for fat and enables the sheep to withstand long periods of scant feed. The head is peculiarly characteristic of the breed, the face being black and narrow, the skull much rounded, with Roman nose and thin, black, pendulous ears. The legs as well as the face and ears are covered with short, fine, lustrous, black hair. The ewes are generally hornless but the rams usually have long, spiral, outspreading horns. (Fig. 1.)

The wool is coarse and long and varies in color from black through various shades of brown to light gray. Practically all lambs are black at birth and continue that color until they are yearlings, after which the wool gradually becomes a lighter shade. However, this change of color is not uniform in all animals, some remaining rather dark in maturity, whereas others become very light. The title-page illustration shows a purebred Karakul ewe and lamb. Note the tight curl of the lamb's coat, which has a high luster. This is the type of skin desired for fur.

The breed is noted for its hardiness and is able to exist and do well under very adverse conditions. In their native home, Bokhara, a country in west-central Asia, the sheep are kept in the mountains through the summer and are driven to the lowlands for wintering when the mountains are covered with snow. Although the Karakul is found in its greatest purity in Bokhara, especially in the Karakul Valley, animals with a large percentage of Karakul blood are found in various other countries extending westward to the Caspian Sea, and also in that section of southern Russia adjacent to the Black and Caspian Seas.

IMPORTATIONS OF KARAKUL SHEEP

Three importations of Karakul sheep from Bokhara, consisting of 34 rams and 33 ewes, were brought into the United States in 1909, 1913, and 1914. The offspring of these sheep are now widely scattered throughout the United States and Canada, the greatest numbers of both grades and purebreds in the United States being in Texas, New York, Michigan, Colorado, and South Dakota.

CLASSES OF LAMBSKINS

This breed is particularly prized for the production of lambskins, utilized as fur, which may be roughly divided into three classes, commercially known as broad-tail, Persian, and caracul. Of these three classes the broad-tail is the most valuable, but the percentage of this type of skin produced is very small. It is produced usually by lambs prematurely born, although cases are reported of this type of fur being produced by lambs born at full fetal development. It is a flat, lightweight fur with a water-wave pattern which is very lustrous and beautiful. The fact that practically all lambs, from which this most valuable type of lamb fur is taken, would be a total loss in the production of other breeds is one of the important advantages in the



FIGURE 1.—Good type of Karakul ram. The coarse, wavy, lustrous fleece is typical of the best individuals of the breed

production of this breed of sheep. Broad-tail skins are used almost entirely for making ladies' coats. (Fig. 2.)

"Persian lamb" is a type of skin produced by lambs of the Karakul breed which are from 3 to 10 days of age. It is necessary to watch the skins carefully, because the curl opens rapidly after the fifth day and while the value increases with the size as long as the curl remains tight, it is essential that the pelt be removed before the quality of the fur is reduced. This is as late in some cases as the tenth day after birth. So far as is known, no artificial means has been developed of increasing the curl or in any way changing the pattern after birth. This type of fur (fig. 3) is used in the making of ladies' coats and in the trimming of coats of other materials for both men and women.

"Caracul" is a trade name given to a lustrous, open type of fur (fig. 4), which shows a wavy or moiré pattern and is entirely free

from close curls. These skins are usually light in weight and are very desirable for the manufacture of ladies' coats. They occur naturally in black as well as various shades of brown and tan. The tendency to lighter shades is an individual characteristic of the type of sheep producing this kind of fur. The skins are best when removed at an age not exceeding 2 weeks, but they do not deteriorate

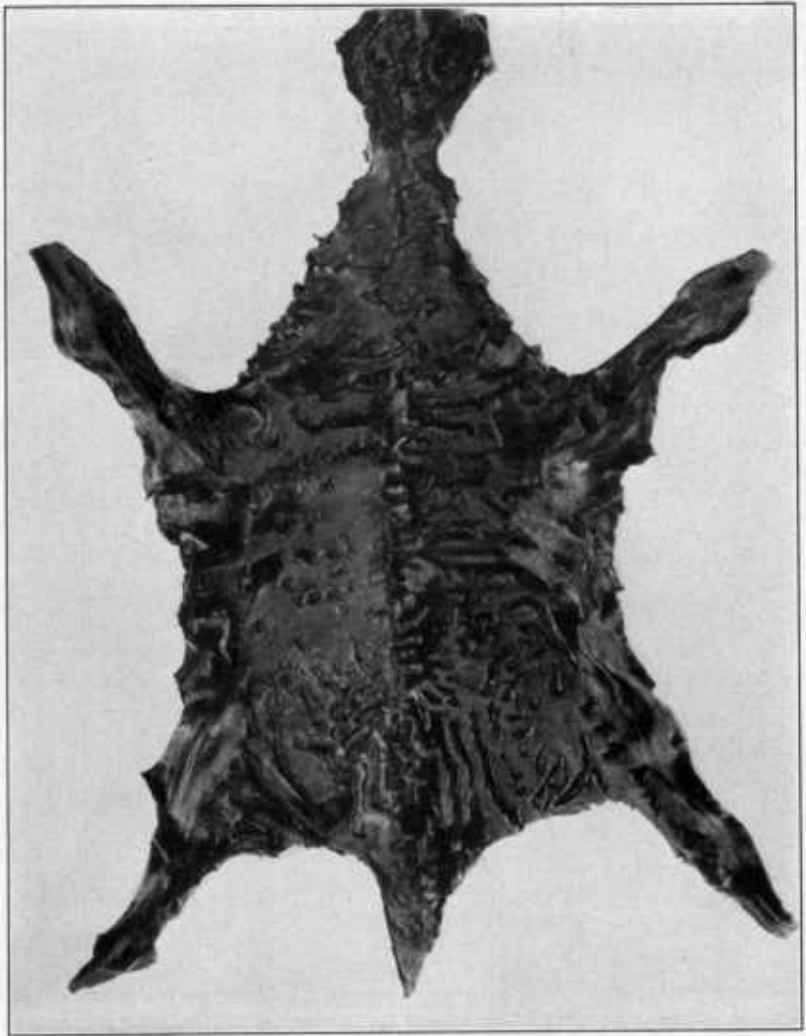


FIGURE 2.—Skins classed as "broad-tail." These skins should be extremely lustrous and of light weight

with age so rapidly as either the broad-tail or the Persian type. They can be used for fur as long as the luster is retained, which may be as long as two months. The term "caracul" means this type of fur and not the Karakul breed of sheep, in spite of the similarity of the names and the fact that caracul fur is produced by lambs of the Karakul breed.

Various methods have been used in curing the raw skins for shipment. Some are dried in the shade, some pickled, and others are treated with a mixture of barley meal and salt while the fur is sprinkled with flour or sand to keep the curl from opening up. They should never be doubled or salted, as this may cause the skin to break. In packing, the fur sides of the skins should always be placed together to avoid injury by the contact of the raw skin with the fur.

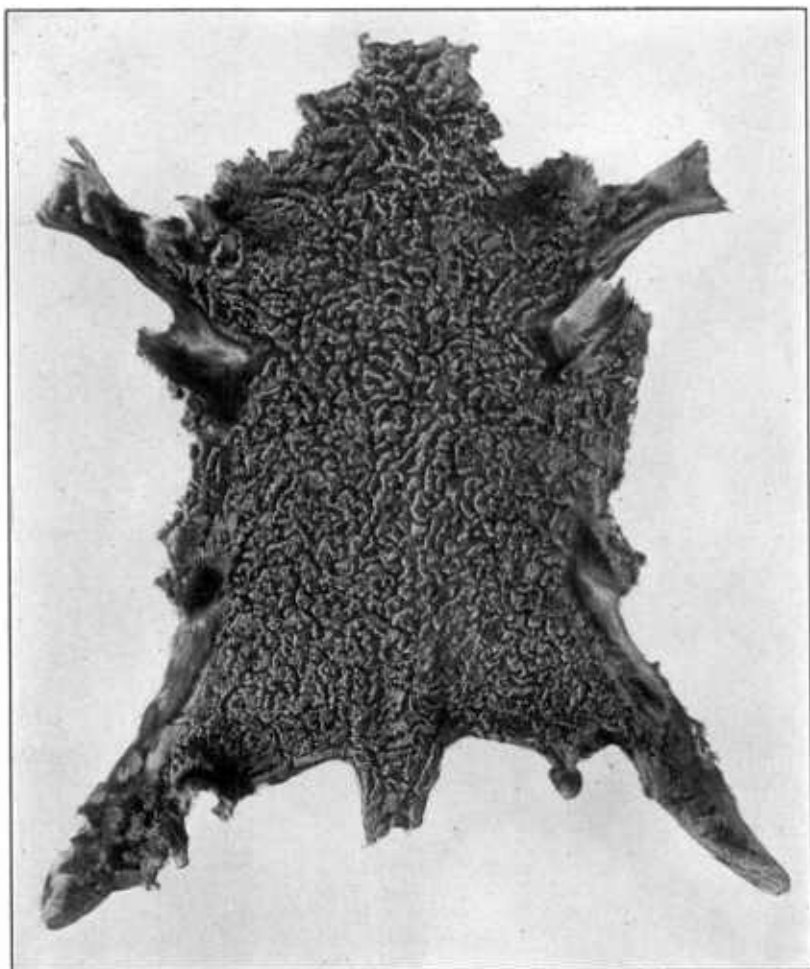


FIGURE 3.—Persian lambskin. This type of fur is more open, with looser curls, than broad-tail. Its value is determined largely by uniformity of pattern and lustrous appearance

KARAKUL WOOL

The wool which is sheared from Karakul sheep is lustrous but coarse and varies in color from a light gray through various shades of brown to black. The wool ranges in length from 8 to 12 inches, and the fleece weights usually range from 7 to 9 pounds. This wool can be made into beautiful rugs and carpets and is also used in the

manufacture of blankets and automobile robes. However, the uses of this kind of wool are rather limited when compared with the finer grades, and when handled through regular marketing channels Karakul wool sells at from one-half to three-fourths the price received for good-quality, white wool produced by the breeds of sheep that are more thoroughly established in the United States.

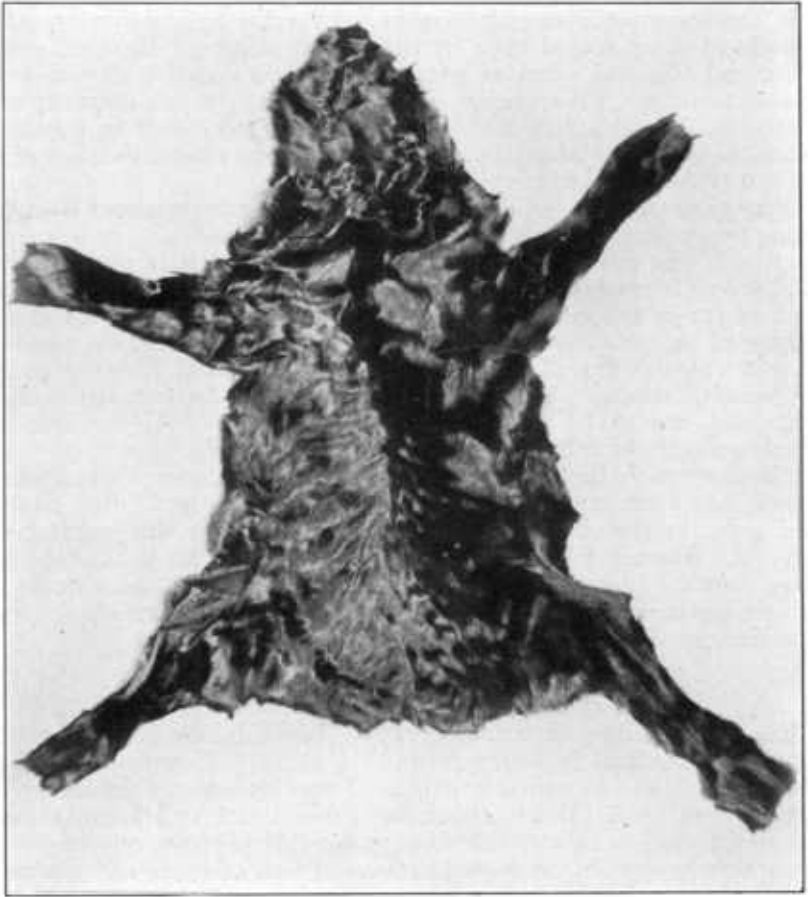


FIGURE 4.—Skin classed as "caracul." The value of this type of fur depends on the character of the wave and the luster it shows. The most valuable skins are light weight, with a pronounced, satiny sheen

CHARACTERISTICS OF THE MEAT

The Karakul breed has not been developed extensively as a meat-producing animal. While the lambs are hardy and grow out well, they are rather angular in conformation and are not so well developed in those portions of the carcass that yield the more expensive cuts of meat as are the specialized mutton breeds. Nevertheless, the meat is wholesome, and the wether lambs can be marketed to defray partially the expense of production while grading up the ewe flock to a point where the pelts of the lambs will be more valuable as fur than the lambs would be for meat if grown to marketable size.

UTILIZATION OF THE BREEDING STOCK

The number of Karakul sheep that have been imported into the United States is very limited, and it is impossible to make further direct importations from the countries of which the breed is native, because of legal restrictions made necessary by the presence of certain serious animal diseases in those countries. The Karakul sheep already on hand in this country can be multiplied, however, by breeding, and their qualities may be extended further by grading up other breeds to the Karakul type by the use of purebred Karakul rams. Purebred Karakul ewes, of course, should be mated with purebred Karakul rams. This purity of breeding can be maintained, and at the same time a ram that is bred to a limited extent to purebred Karakul ewes may also be mated with a rather extensive number of ewes of other more available American types.

Five successive crosses of the female offspring to purebred Karakul rams result in sheep that are thirty-one-thirty-seconds, or approximately 97 per cent, pure Karakul breeding. But it is not expected that ewes of even this high grade will be as valuable for the production of fur as the best imported stock. However, since some of the imported animals have not proved to be satisfactory for the production of valuable fur, it is doubtful whether imported Karakul sheep, on which little or no definite information can be obtained before shipment, would be better than, or even as valuable as selected grade animals of a high percentage of choice, pure breeding.

Crossing with Rambouillet, Merino, Lincoln, Cotswold, and other breeds has been practiced to a limited extent in the United States, and good, marketable skins have been produced by this grading-up process. Though further information on the results is limited, the true Karakul type is evidently prepotent in the best individuals of known parentage, which trace in pure blood lines through the sire and dam to some of the best imported animals.

CROSSBREEDING AND GRADING UP

In crossbreeding experiments with Karakuls, conducted by the Bureau of Animal Industry from 1911 to 1914, Cotswold, Cheviot, and Merino ewes, as well as a number of woolless ewes of the Barbados breed, were used. While Black-faced Highland and Lincoln ewes are understood to be very satisfactory for this purpose, crossing with these breeds was not conducted because of lack of space and satisfactory breeding stock.

Of eight skins taken from lambs produced by Cotswold ewes to the service of Karakul rams, three were valued at \$1 each in the raw state, although all were black and showed considerable curl. This same statement as to color and curl can be made of practically all first-cross lambs sired by Karakul rams. A skin may be black and curly and yet have little value because of the lack of luster and poor style of curl.

Six skins were procured from lambs produced by Cheviot ewes bred to Karakul rams. One was valued at \$3 and one at \$1. The others were not of sufficient value as fur to pay the charge of 50 cents each for "dressing," a trade name given to the process of preparing these skins for use as fur.

Of five skins from lambs of Merino ewes sired by Karakul rams, none had sufficient fur value to repay the charge of dressing. These skins were particularly poor in luster and the character of curl was still poorer than in the other crosses mentioned above. (Fig. 5.)

The better of the two rams used in the above-mentioned crosses was mated with Barbados ewes from which 59 lambs were produced.

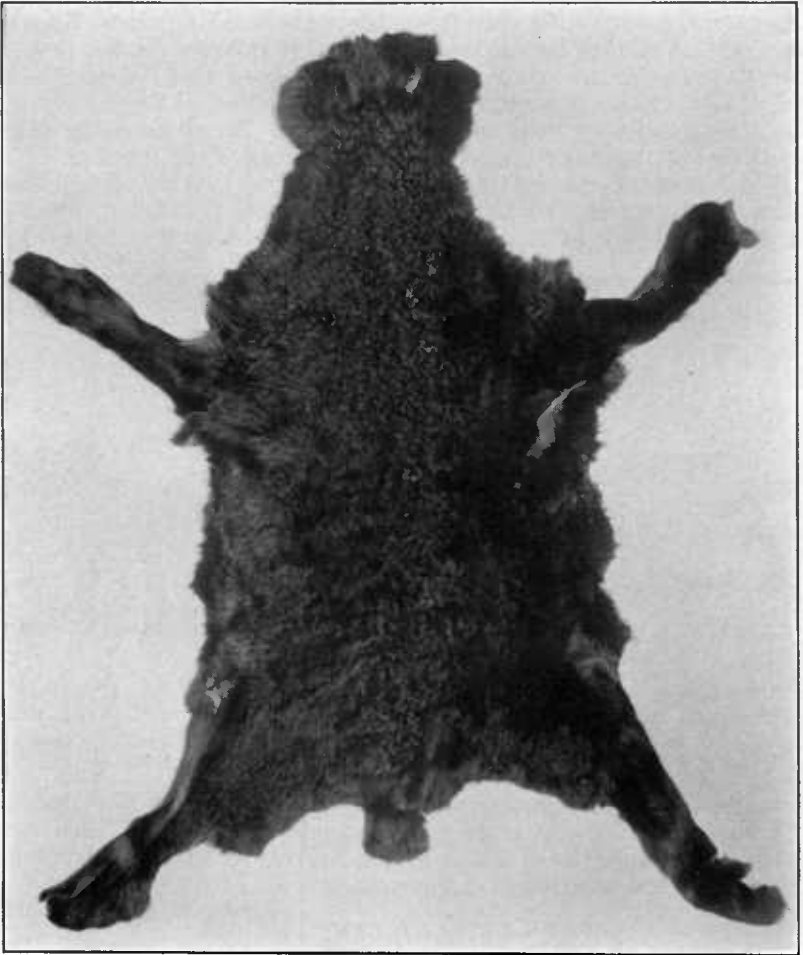


FIGURE 5.—Skin from first-class Karakul-Merino lamb—black, but poor in character of curl and luster. This skin has no fur value

Barbados sheep have short, rather stiff, hairy coats, and it was thought that these ewes might be suitable for use with the Karakul rams. From these 59 first-cross lambs 33 ewes were kept for experimental breeding. None of the skins produced by the remainder had any fur value, although the quality was much the same as that of the 33 ewes kept. (Fig. 6.)

It was thought that, even though the first-cross Karakul-Barbados did not yield skins valuable for fur, they might be valuable as breeding stock in grading up to Karakul blood by the successive use of Karakul rams.

In the spring of 1913, 15 of these first-cross ewe lambs were bred to a second, imported Karakul ram. These ewes produced 18 lambs the following August, of which 7 rams and 1 ewe were killed. Their skins ranged in value from \$1 to \$10 (based on October, 1913, prices), averaging \$4.70 each. Sixteen Karakul-Barbados ewes, the same lot as those bred in the spring, were bred in the fall of 1913 to a third Karakul ram and produced 25 lambs in the following spring. There is apparently much difference in the prepotency in individual Karakul rams, as the second lot of lambs was much inferior to the first lot from the same ewes. Nine rams and one ewe of this lot were killed and of the 10 skins produced the best 2 were valued at \$3 and \$1 each. The others had very little or no value as fur. In all cases the prices mentioned are appraised, after dressing, by New York furriers.

While seasonal climatic conditions and feed may have had some effect on the quality of the skins produced by this lot of ewes in the two successive lambings, much of the variation was believed to

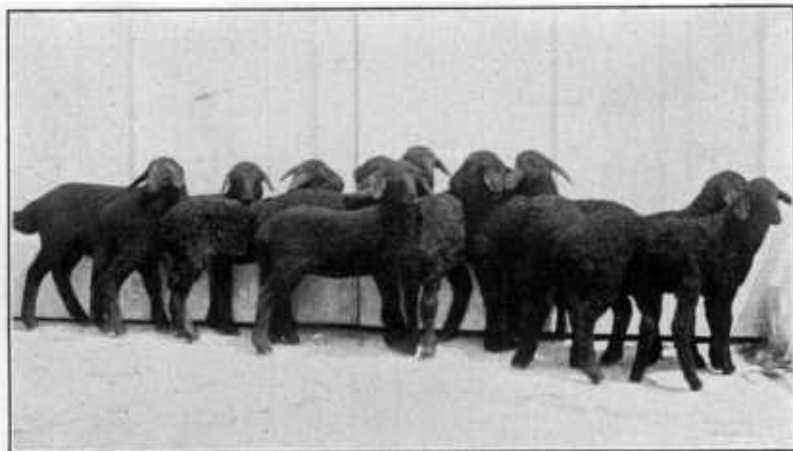


FIGURE 6.—Crossbred Karakul-Barbados ewe lambs, showing loose curls and lack of luster, which are typical of the first-cross lambs and are undesirable for fur

be traceable to the greater prepotency of the sire of the first lot to transmit the fur characteristics to his offspring. These ewes were to have been bred again in the spring of 1915 but were destroyed in a fire, which ended the experiment.

GRADE KARAKUL RAMS AS SIRE

The scarcity of purebred Karakul rams and the high value placed on them has led to the use of grade rams in many cases. Since a half-blood ram has a dark fleece and shows some waviness of his fleece even when mature, he will often appear to be valuable as a sire, especially to those inexperienced in this type of sheep production. Although, as stated, such rams, when bred to longwool ewes, may sire lambs which are black and curly, the skins of these lambs are not necessarily valuable as fur.

In April, 1914, four lambs sired by crossbred Karakul-Barbados rams were produced by ewes of the same breeding as the rams. These lambs were of the same general appearance as the first-cross Karakul-Barbados lambs which had no value for fur purposes.

In the same spring seven Karakul-Barbados first-cross ewes were bred to a three-quarter-Karakul-one-quarter-Barbados ram which had at birth a skin valued at \$10. As a result of these matings 10 lambs were produced which theoretically were five-eighths Karakul blood, but none of these lambs had skins of fur value.

The results of these experiments provided further evidence that little could reasonably be expected in the production of valuable fur from the interbreeding of grade Karakul rams and ewes. Some benefit, however, may be derived from the use of these grade rams by the infusion of Karakul blood into flocks of other breeds, for foundation stock to be graded up later for fur production by the use of purebred Karakul rams. While there is little or no possibility of producing marketable furs from the mating of grade Karakul rams with grade Karakul ewes, the use of selected purebred Karakul rams for this purpose shows much promise of success. The results of these tests and the personal knowledge which the writer has of results obtained by breeders, in grading up flocks carrying a preponderance of Karakul blood, indicate that a type of sheep can be developed which will be entirely satisfactory for the production of marketable skins. Success in the development of such a type of sheep will depend on the continued use of the best purebred Karakul rams now available in this country on successive generations of choice, grade Karakul ewes.

The various organizations in the United States which have been maintaining separate registers for Karakul sheep have now combined to form a strong national organization under the name "Karakul Fur Sheep Registry," in which all animals tracing in all ancestry to imported stock may be recorded. A. G. Granger, Kadoka, S. Dak., is secretary of this registry association.

SUMMARY

The chief importance of Karakul sheep is the production of lamb-skins suitable for fur.

Three importations of Karakul sheep were made into the United States from their native country, Bokhara, during the years 1909, 1913, and 1914.

The skins from Karakul lambs are divided into three general classes, designated by the trade names broad-tail, Persian, and caracul.

Karakul sheep are limited in number in the United States and direct importations from their native country are prohibited by law, to prevent the introduction of disease.

The greatest use of the Karakul sheep on hand is for grading up by mating, especially by using selected purebred Karakul rams with ewes of the more available American types.

The mating of grade Karakul rams with grade Karakul ewes has been very disappointing in the production of skins suitable for fur.

Matings of purebred Karakul rams with grade Karakul ewes have indicated that some rams produce satisfactory results while others are little better than grades for the production of skins suitable for fur.

The results of experimental work indicate that high-grade Karakul sheep can be developed which are as satisfactory as purebred Karakuls for the production of commercial fur, by mating, for successive generations, select grade ewes with purebred Karakul rams especially prepotent in the transmission of desirable fur characteristics.

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UNITED STATES DEPARTMENT OF AGRICULTURE**

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