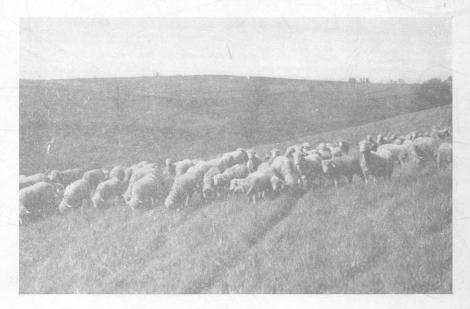
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RAM SELECTION AND EWE CULLING



Ву

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Ram Selection and Ewe Culling

By LAWRENCE A. KAUFFMAN

In the early days of the sheep industry in this state, sheep were kept primarily for wool production. Scant attention was paid to their mutton qualities. At that time, lamb was a delicacy almost unknown; mutton was but seldom eaten and had very little value commercially. As sheep were kept principally for their wool, when they got so old that they no longer produced fleeces at a profit, the usual practice was to slaughter them and render out the tallow.

Most Ohio flocks at that time were of the Merino breed, or at least carried some Merino blood. Their wools were used largely in the manufacture of broadcloth, the finest dress goods of the day. These sheep were producers of wools of exceptional quality and strength, as they were bred largely for fineness of fiber. This craze for quality in the fleeces was carried too far, for it soon resulted in fleeces weighing only from 2 to 4 pounds. The result was that their production was unprofitable and a trend toward heavier fleeces was soon in evidence.

The consumption of lamb and mutton in the United States has never been high, probably due to the fact that, until about 1900, nearly all sheep marketed were old and many of them thin and unpalatable. Since that time lamb consumption has increased, and now around 80 per cent of all sheep going to our terminal markets range from 4 to 12 months of age. This increased demand for lamb and mutton has increased the number of flocks of mutton breeding, and the Merino breeders are striving to produce sheep with good mutton carcasses that will still shear heavily.

On the average throughout the state, about two-thirds of the income from the Merino flocks is derived from the sale of wool and one-third from the sale of lambs. Generally, with the flocks of mutton breeding, this order is reversed; one-third of the income coming from the sale of wool and two-thirds from the sale of lambs. These figures simply serve to emphasize the fact that, regardless of the breeding of the sheep, heavy fleeces and a large percentage of lambs are necessary for the most profit.

It is generally considered to cost from \$3 to \$4 to keep a mature sheep a year in Ohio. The wool, as a rule, is expected to cover the cost of carrying the sheep. Therefore, the ewes carrying the heaviest fleeces will yield the most profit provided they raise

one or more lambs. This applies equally to either the mutton or fine wool breeds. The weight of the fleece and length of staple are materially affected by the kinds of feed used, but after the sheep are properly fed, the greatest improvement that can come must of necessity be in the breeding.

Heavy Fleeces and Good Mutton Quality, Goal of Breeders.— Regardless of whether a man is producing commercial or purebred sheep, he should have an ideal in mind. He should constantly strive, through the weeding out of the poorer individuals in his ewe flock and the selection of his rams, to improve both the wool and



Fig. 1.-"A" type Merino ewe

mutton qualities in his sheep. If he is raising fine-wool sheep he should try to develop his flock to the point where his ewes would raise a lamb and produce a 12- to 14-pound fleece yearly.

Breeders of the down breeds such as the Shropshire, Southdown, and Hampshire, should try to produce fleeces averaging from 9 to 11 pounds in weight and marketable lambs at 5 months of age. To achieve these ends a definite program must be mapped out by the breeder, only his best ewes kept, these mated with purebred rams of good quality, and only the choicest of the ewe lambs saved for breeding.

Breeds of Sheep

Merinos

Since the larger percentage of sheep in Ohio are Merinos or carry Merino blood a discussion of the different types is pertinent here.

The A Type.—The A type Merino has been developed almost entirely for its wool. It is smaller in size than either the B or C type Merino, and is distinguished from them because it has wrinkles over its entire body (see Fig. 1). This breed carries the finest and densest fleece with the most oil of any of the Merinos, but the staple is shorter. Most of them are rather angular in form, with low backs, steep rumps, and sharp shoulders. They have little, if any, place in the development of the commercial flock.

The B Type.—The B type Merino is usually larger than the A, and is more of a mutton type in form, carries a longer but not quite as dense or as fine a fleece, and has less oil. It has heavy folds on the neck, wrinkles in the fore flank and rear flank, and a fan, button, or rosette tail. Figs. 2 and 3 show a ram and ewe of this type.

The C Type.—The C type Merino, also called the Delaine Merino, is smooth bodied. It has a fold or apron on the neck, no wrinkles on the body or in the flanks, and has a smooth tail. The fleece is not as dense or as fine as it is on either the A or B type, but it is longer, carries less oil, and is lighter in the shrink. It comes the nearest to the mutton type of any of the Merinos, and is preferable to the other types in the commercial flock (Fig. 17 shows an ideal specimen of this type).

The Rambouillet.—This breed of sheep is also known as the French Merino. They belong to the Merino family, but are much larger than the American Merino. In them the mutton form has been especially emphasized. In general, they produce wool not quite as fine as the American Merinos in quality, it is usually heavier in the shrink, and of slower growth. There are two commonly recognized types, the B and the C, which are similar in markings to the American Merino. Figs 4 and 5 show a ram and ewe of this breed.

Mutton Breeds

The mutton breeds such as the Southdown, Shropshire, Hampshire, Dorset, Oxford, Cheviot, etc., have been bred for many years for mutton. While the fleece is important, not nearly as much attention has been paid to it as is the case with the Merinos.

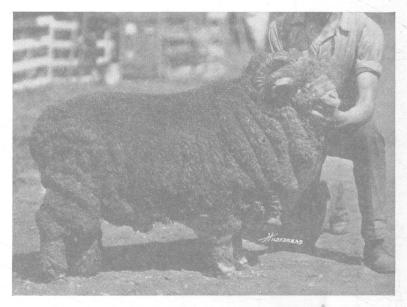


Fig. 2.—"B" type Merino ram

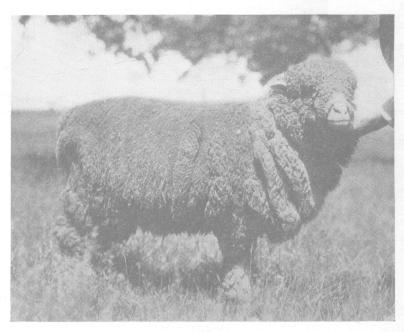


Fig. 3.—"B" type Merino ewe

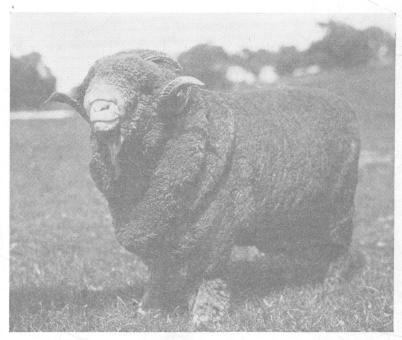


Fig. 4.—Rambouillet ram. This shows a light "B" type



Fig. 5.—"C" type Rambouillet ewe

In general, they are all very similar in body conformation. Size, slight differences in form, coloring of face and legs, and grade of wool serve as distinguishing characteristics. What is said of one breed regarding culling and selection will usually apply to the others.

Wool

Grades of Wool

As mention will be made of the grades of wool occasionally in connection with selection they will be briefly outlined here. In the United States today there are seven standard wool grades based on the diameter of fiber. They are fine, ½ blood, 3/8 blood, 1/4 blood, low 1/4 blood, common, and braid.

An effort is being made to make the modified count system standard in the United States. This system is based on the number of hanks of yarn of 560 yards each that it takes to make one pound. The classification is as follows: 64's up, or fine; 60's, or ½ blood; 56's, or 3% blood; 52's, or ½ blood; 48's or low ¼ blood; 42's, or common; 36's, or braid.

These grades are subdivided into other grades based on their length, quality, and condition. The length of staple determines whether a fleece of a certain grade shall go into the combing, French combing, or clothing grade.

For the fine wools, staple $2\frac{1}{4}$ inches or over in length constitutes the combing grade, under 2 inches and over $1\frac{1}{4}$ inches the French combing, and under $1\frac{1}{4}$ inches the clothing grade. As wools become lower in grade they have to be longer to go into the combing grade. For example, to be classed as a combing wool, $\frac{3}{8}$ blood must be at least $2\frac{1}{2}$ inches in length. Fine combing and Delaine are often used to designate the same grade of wool. Heavy staple is used to designate wool of sufficient length for combing, but very heavy in the shrink.

Explanation of Terms

The terms $\frac{1}{2}$, $\frac{3}{8}$, $\frac{1}{4}$ blood, etc., do not have any reference to the amount of pure blood or Merino blood in a sheep. A purebred Shropshire might carry a $\frac{3}{8}$ or $\frac{1}{4}$ blood fleece. The terms are confusing. They came into existence early in the nineteenth century, when Merinos were used on the native coarse-wooled ewes of this country, and at that time had a significance as to the amount of Merino blood in a sheep. The "count" system, explained above, is the more satisfactory for grading wools.

Selecting the Ram

The problem of selecting a ram is a big one. The shepherd should keep in mind the ewes in his flock, trying to secure a ram strong in the points where his ewes are lacking. It has been said that the ram is half the flock, but he is really more. The ewe transmits her traits, desirable or not, to but one or two lambs each season, while the ram affects every lamb he sires. If he is a poor individual, the entire lamb crop will suffer; if of the right type and prepotent, much improvement can be made in a single generation.

Purebred Ram.—The ram selected for the flock should always be a purebred. Such a ram usually carries greater concentration of

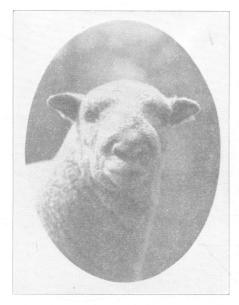


Fig. 6.—This Shropshire ram shows a good head. Note boldness of features. (Courtesy Ohio Agricultural Experiment Station)

desirable characteristics in his blood, and if carefully chosen he should pay back in the increased value of his first crop of lambs more than his cost above a grade.

In 1925, in the sheep exhibit car, sent out by the Ohio State University to county fairs in southeastern Ohio, a comparison of the value of a purebred and a grade sire was shown. The rams were both C type Merinos. The purebred was valued at \$40 and the grade at \$12. This left \$28 difference in cost price in favor of the grade ram. The purebred sheared 25 pounds of combing wool, the grade 15 pounds of

French combing. Valuing the fleece of the purebred at 40c a pound, it brought \$10. The fleece of the grade at 36c brought \$5.40, or a difference of \$4.60 in favor of the purebred.

The rams were bred to grade C type ewes as near alike as it was possible to get them. At 5 months of age the lambs sired by the purebred ram were valued at \$3 more per head than those by the grade ram. They were larger, carried longer, denser fleeces, and were better wooled over face, legs, and belly.

If each ram had sired 30 lambs, those by the purebred would have been worth \$90 more than those by the grade ram the first season. If kept in the breeding flock, their value would have been much greater. Based on the first season, the \$90 increased value of the lambs by the good ram plus \$4.60, the difference in value of his fleece compared to the grade ram's, would have given him a credit of \$94.60. However, the grade ram cost \$28 less, so this must be subtracted, thus giving the purebred a credit of \$66.60. Therefore, one could have afforded to pay \$40 (his cost price) plus \$66.60, or \$106.60 for him, in comparison with the grade ram. When one considers that each ram would probably be used two or three years in the flock, the value of the purebred becomes still more apparent.

"Scrub" Purebreds.—Often one hears the statement, "It costs too much to buy a purebred ram." In the light of the foregoing results one can readily see that a purebred ram possessing the right qualities will disprove that statement and prove profitable in even a very small flock.

A ram should never be bought on pedigree alone, for a pedigree without individuality is worthless. There are scrub purebreds, but there is greater likelihood of getting a ram that will give satisfaction from a purebred flock than from a grade.

Look for Performance.—In buying a ram that has been used in a flock be sure to look over his progeny carefully. This will give you an idea as to his value as a sire. It is not always possible to get a tried ram; in that case inquire as to the performance of his sire and dam, and whenever possible examine them and their offspring carefully.

Show Condition.—It is usually a better practice to select rams that are not in too high "fix" if they are to be used soon for breeding. The use of such a ram usually results in disappointment. They are generally very fat and unless they are "let down" gradually there will likely be few lambs and these not large or vigorous. Such rams should be given plenty of exercise, kept in a cool, shady place and heavy, concentrate feeds such as corn and oil meal gradually replaced, largely by oats and bran. Cabbage and turnips are useful in getting a show ram ready for breeding; good pasture is also very valuable.

This process of "letting down" will vary with the animal, but it usually requires a month or two to get them in good breeding condition, neither poor nor fat, but in moderate flesh. Sale rams are often kept in high condition. Where this is true they should be handled the same as show sheep before breeding. If they are carrying very long fleeces, it is advisable to shear them before turning in with the ewes.

Time to Select Rams.—Usually it is better to select rams early in the spring before they have been shorn, or in late summer, when they are carrying a fair length of fleece. The good breeder tries to have his sheep in presentable shape when offered for sale. Most of them are reputable men, but the purchaser must use not only his eyes but his hands, going over the ram carefully, as sometimes quite serious defects in wool and conformation can be covered by shearing and fitting. In case one knows little about sheep it is usually safer to trust to the honesty and judgment of the breeder than to do his own selecting.

There are several advantages in securing the ram early in the season.

- 1. A larger offering is available from which to make selection.
- 2. Work in late fall is usually pushing, and often any old ram is used rather than spend a day or two hunting a good one.
- 3. The ram will have a chance to become acquainted with his surroundings and will worry less.
- 4. Plenty of time can be taken to getting him into breeding condition.

Characteristics of the Mutton-Type Ram

Size.—The largest rams are not always the most prepotent and often are coarse and off type. Select an individual of about average weight for the breed or slightly above this weight.

Averages for the more common mutton-type breeds in Ohio are as follows: Southdown, 200 pounds; Shropshire, 230 pounds; Hampshire, 275 pounds; Oxford, 290 pounds; Dorset, 275 pounds.

Form.—The body should be deep, wide, low set, and covered evenly with a firm, deep flesh. It should present a symmetrical appearance, being about as wide through the chest as through the back. The ribs should be well sprung, hips smoothly and evenly covered with flesh, with the forearm and thigh broad and thick, the twist deep and full, back straight, loin wide and deep, and rump level.

The legs should be short, straight, and wide apart. The pasterns should be strong with the sheep standing well up on its toes.

The neck should be short and thick, blending smoothly with the shoulders, which should be smooth and compact on top.

The head should be short, wide, and compact, with the mouth and nostrils large, the lips thin, ears of medium size, and the eyes bold, large, and bright. Constitution.—This is evidenced by the width of the chest floor, and the arch or spring of ribs, with the heart girth large.

Style.—The head should be carried erect and the ram should be bold, vigorous, and impressive in appearance.

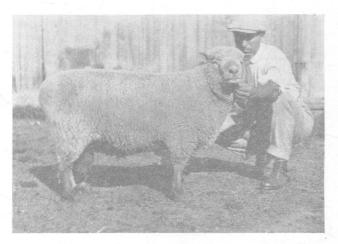


Fig. 7.—Southdown ram, showing good mutton form

Quality.—Quality is shown in the bone, wool, skin, and features. The bone should be large, but not coarse; the skin bright pink in color and free from black spots; the hair on the face and legs, soft to the touch.



Fig. 8.—Hampshire ram, champion Ohio State Fair, 1918. Notice the mutton form

Fleece.—The fleece should be long, fine, even, and dense. It should be uniform in length and diameter of fiber over the entire body. Kemp or coarse hair is objectionable. Black fibers through the fleece are discriminated against, as such wools have a greyish

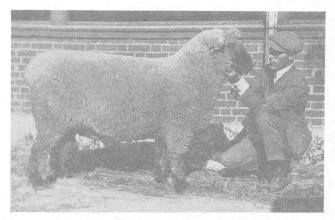


Fig. 9.—Two-year-old Oxford ram, good type

cast and they do not absorb dyes uniformly. In some of the dark-faced breeds black fibers in front of the poll do not constitute a disqualification. On the smaller mutton breeds, $\frac{3}{8}$ blood is typical; on the larger, $\frac{1}{4}$ blood, with some low $\frac{1}{4}$ blood on the Oxfords. Horns or scurs are a disqualification except in the case of the Dorset horned and the Cheviots.

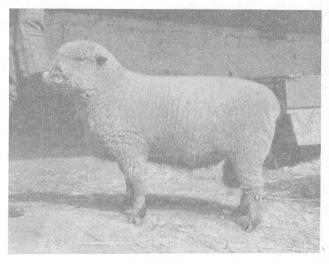


Fig. 10.-A good type Shropshire ram

Characteristics of the Merino Ram

Size of Ram.—Select an individual of about average weight for the breed or slightly above. The largest rams are often coarse and off-type, and are not always the most preponent.

Averages for the most common breeds in Ohio are as follows: Merino, A Type, 140-150 pounds; B Type, 150-160 pounds; C Type, 165-180 pounds; Rambouillet, 235 pounds.

Form.—The requirements as to the form in the Merino are not quite as exacting as in the case with the mutton breeds. They have been bred primarily for wool production, consequently the form has been sacrificed to some extent. There is a tendency toward angularity in the body; low backs, peaked shoulders and steep rumps are altogether too common. A great deal more latitude in form is allowed in the A type Merino than in the B or C type. These latter more nearly approach the true mutton-type in body conformation.

Rams should be selected that are low set, short coupled, deep and broad, with straight backs, and level rumps. The legs should be straight, short, and placed well apart. Where the forelegs are so close together as to give a knock-kneed appearance there is a likelihood that the ram has a weak constitution.

Constitution.—A strong constitution is shown by both a deep and wide chest. The brisket should be wide and carried well forward. A ram with a good constitution will be less subject to disease. He can better throw off the effects of parasitic infestation, and he will last much longer as a breeder than a ram deficient in this respect. His lambs will be larger and more vigorous at birth, and ordinarily will make better feeders.

Style.—Masculinity, strength and boldness should be characteristic of the good stud ram. His head should be carried erect. He should be alert and active, and impressive in appearance.

The Head.—The head should be broad and of medium length, with large mouth and nostrils, and the eyes large, bold, and bright. The poll should be large and well defined, and the horns large, curled in a single twist, set close at the base, and flaring enough to give good clearance at the side of the head. Some breeders like to see the corrugations on the horn fine and uniform in width, as they claim this is usually a sign of a very evenly fleeced ram. While this does not always hold true, in many cases it has proved to be so.

The ears should be moderate in size, thin, and covered with a fine, soft, white, silky hair. The face should also be covered with

such hair where not covered with wool. Hammer-headed, monkey-faced, or parrot-mouthed are terms used by breeders to denote defects in the head or mouth. An undershot or overshot jaw is greatly discriminated against.

Fleece.—Mature B or C type rams should shear from 22 to 30 pounds of wool; more is not uncommon. The B type, because of more grease, will usually shear heavier than the C type. It is not always the heaviest shearing rams that are the best breeders. Some of the best breeding rams will not shear more than 18 to 20 pounds.

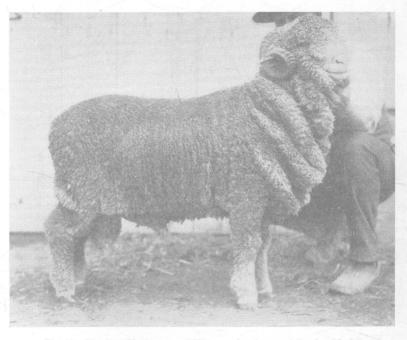


Fig. 11.—Yearling Merino ram, "C" type, showing good depth of body

However, before using such a ram it is wise to investigate the shearing records of his immediate ancestry, or of his progeny if he has been in service, and if they are low he should not be considered.

Uniformity, length, quality, strength, fineness, oil, condition, and character of the fleece should be studied. A fleece that is uniform in diameter of fiber, that is, all of one grade or degree of fineness, is most desirable. This is one of the hardest qualities to secure in a ram, for the fleece will often be fine on the shoulder or side but get coarse over the back, rump, and thighs. The belly and legs should be well covered with wool that runs about the same in length and quality as that on the other parts of the sheep.

In recent years breeders have stressed the covering of the face, many specimens being wooled almost to the tip of the nose. Such a practice is not desirable, for it is usually obtained at the sacrifice of some more important qualities. Such sheep have difficulty in seeing, sore eyes often result, they are usually poorer feeders, and many lambs sired by such rams have the eyelids turned in at birth, which may result in blindness unless given prompt attention. The wool should extend to the eyes or slightly below. Experimental work has proved that the covering of the face has no connection



Fig. 12.—Fleece on a prize-winning ram. A good length of fine, dense, and well-crimped wool is shown in the illustration

with the density or weight of the fleece. The belly and leg covering influences this to a much greater degree.

Coarse hair called "jar" is sometimes found on the head, legs, and through the fleece. These straight, coarse fibers are objectionable, as they lessen the value of the fleece. If present in any considerable number, the ram should not be considered. This should not be confused with the coarser wool on the wrinkles, for the circulation of blood is less there and a stronger fiber results.

The wool should at least reach a combing length ($2\frac{1}{2}$ inches) in 12 months, and should grade Delaine or Heavy staple, preferably

Delaine, but the shrink sometimes causes it to be put in the latter grade. Occasionally, the statement is made that a certain ram runs a little strong in the fiber. This means that the fleece is a little coarse. Some breeders prefer a strong fibered ram as they usually carry a large amount of oil. However, it is advisable at all times to secure a ram with as fine a fiber as it is possible to get without sacrificing length, density, or weight in the fleece. When the time comes that all wools are bought on their merit instead of at a flat rate in the country, there will be fewer of the heavy shrinking wools produced.

The Oil.—The function of the oil, or yolk, in the fleece is to protect the wool fiber. It forms a coating over the fiber which keeps it from drying out and renders it more or less impervious to moisture. The oil may be of several colors, white, yellow, or green, or a modification of these. Most breeders and woolen manufacturers prefer a light buff or straw colored oil. The light colored oil comes next, with the green oil third. There is no question, though, that a good fleece with a green tinted oil is very attractive.

Fineness.—The fineness of the wool fiber is determined not only by the diameter of the fiber, but by the crimps. These also give to it elasticity. If a sheep is out of condition for a time a weak place may develop in the fiber, or the condition known as "fleece grown" or "cotted" result. Climate, soil, feed, age, health, and care all leave their imprint in the character of the fleece.

Age of Ram

A mature, vigorous ram of either the mutton or Merino breeds is recommended. Such a ram may be bred to from 40 to 50 ewes when allowed to run with the flock, or from 80 to 100 if he is placed with the flock for a short time morning and evening. A well developed yearling may be used on a small flock of not more than 35 ewes. He should, however, be allowed with the ewes only for a short time morning and evening.

Lambs sired by mature rams are almost always larger and stronger at birth than are those sired by young rams. A ram lamb should never be used, as he will be likely to get fewer lambs and his growth will be affected. In many cases where lambs 6 to 8 months old have been used heavily, they have proved to be non-breeders later. The few dollars saved in the purchase price are lost in the poorer lamb crop.

Culling the Ewes

There are a number of factors to consider in selecting the ewes for the breeding flock to obtain best results. Unless the flock is large, one or two rams are usually depended upon for the breeding, therefore, the ewes should be uniform in type, breeding, form, and fleece. Careful selection of the ewes will insure a more uniform crop of lambs. The lambs can be handled much more easily than if they varied greatly in size. If they are intended for market, there is much advantage in having them all ready at about the same time, regardless of whether they are to be shipped or sold locally. Then, too, both the fleeces of the lambs and the ewes will be more nearly

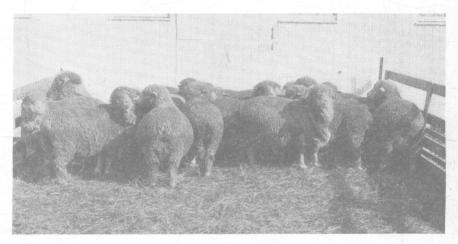


Fig. 13.—A group of "C" type Merino ewes of uniform size. (Courtesy Ohio Agl. Exp. Station)

of the same grade, and can be disposed of to better advantage on the market. Figures 13 and 14 show flocks of uniform size.

Uniformity in the ewe flock will insure a more marked improvement in a shorter time in the lamb flock than would be possible if there were a wide variation in the type of the ewes.

Size.—As in the case of the rams, the ewes should be average in size or slightly above for the breed they represent. A large, well grown ewe will usually have larger lambs and prove a much better suckler than one not so well developed. In many commercial flocks not enough attention is paid to the size of the ewes. In Merino flocks the ewes ought to average from 125 to 140 pounds in weight, while in the mutton breeds Southdowns should weigh 130 to 150 pounds; Shropshires, 150 to 175; Hampshires, 180 to 225; Oxfords 200 to 240; and Dorsets 175 to 200 pounds. Lack of size

may be due to the ewes having been bred too young, to their having been poorly fed, or to an infestation of parasites.

It is not advisable to have Merino ewes lamb before the spring that they are coming 3 years old. The mutton breeds may be bred to lamb at 2 years of age. Having ewes lamb at an earlier age will eventually cut down the size of the sheep. Then, too, there is more danger of loss at birth of the lambs, and more trouble is experienced in getting the young ewes to own their lambs.

Health.—Only healthy, active ewes should be kept for breeding. Listless, unthrifty ewes seldom produce good lambs. A bright pink skin is a good indication of healthiness in the ewe. Parasites such as stomach worms, tape worms, lungworms, etc., will affect the

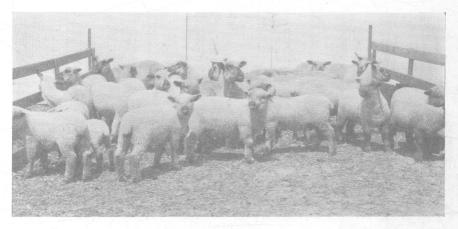


Fig. 14.—Shropshire ewes and lambs. Note uniformity of lambs. (Courtesy Ohio Agl. Exp. Sta.)

ewe's vitality seriously if present in any considerable numbers. Unless the ewe responds to parasite treatments and increased feed, do not keep her in the flock.

Form.—Since the surplus lambs will be sent to market, it is desirable to have the ewes "muttony" in conformation.

They should be broad, deep, and compact, with straight backs, level rumps, wide, deep loins, and be well developed in the leg of mutton.

The legs should be short and well placed beneath the animal. Ewes that are so narrow in front that it looks as if both legs came out of the same hole, or if they are cow-hocked, are usually poor in conformation. A short, broad head with a large mouth and nostrils is considered the sign of a good feeder.

The neck should be short and full, blending smoothly with the

shoulders. The shoulders should be broad, but not open, and well covered over with flesh.

Constitution.—Vitality is of great importance in the breeding ewe, for without it she will not be hardy, and her ability to produce good lambs will be lessened. The chest should be wide, with the brisket wide and extending well forward, and the heart girth large.

If the ewe presents an "up and coming" appearance, you may be sure that she is active and vigorous, and will probably be a good breeder and mother.

Femininity.—Do not select a ewe for a breeder because of her size or form if she is coarse featured, extremely coarse boned, with

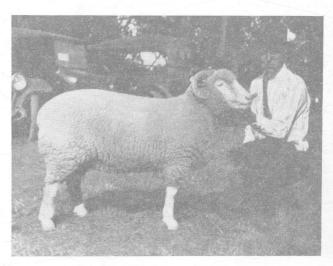


Fig. 15-Yearling Dorset horned ewe

a long, narrow head. Nervous ewes usually make poor mothers. Choose ewes that have a mild, bright eye, a feminine or matronly appearance, and quality as shown in the texture of the hair, the size of the bone, and the refinement of features.

Fleece.—The ewe with a short, coarse, uneven, or weak-fibered fleece should be rejected. Density, length, fineness, and evenness of the fleece should be given due consideration, as these are factors that will influence both the value of the ewe's fleece and those of her lambs. The ewes with dense, compact fleeces are better fitted to withstand cold, wet weather than are those with light, open fleeces.

In choosing mutton type ewes, $\frac{3}{8}$ blood combing should be the standard for the smaller breeds, with $\frac{1}{4}$ blood for the larger breeds

such as Hampshire, Dorset, and Oxford. In many cases breeders of the middle wool sheep could pay more attention to the fleece than they do. Careful selection will show much improvement in a short time in both compactness of the fleece and fineness of fiber. There is a point in improving the fleece, however, beyond which it is not wise to go. Continued selection for fineness of fiber may result in a lack of scale and mutton form in the sheep.

As the C type, or Delaine, will probably prove best for the commercial Merino breeder in Ohio, the ewes should be selected that carry dense, compact fleeces at least $2\frac{1}{2}$ inches in length, and fine enough in the fiber to grade as fine combing. In building up a

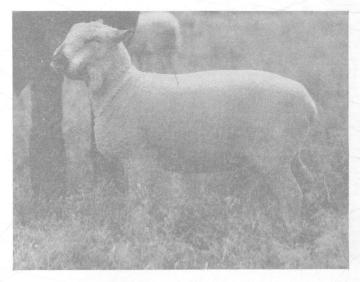


Fig. 16.—Yearling Shropshire ewe out of fleece

flock, it probably would not be wise to keep a ewe that in her prime and with good feed sheared less than 10 pounds in a year. A ewe that is 6 or 7 years old has passed her prime and her fleece will begin to lighten, but if she is producing good lambs she may be retained.

A good commercial fleece should be sought. Breeding for large "muttony" Merinos with a long staple often results in a light, coarse fibered, open fleece with poor spinning qualities. Do not go to extremes, for it does not pay. Selecting for fineness of fiber can be carried so far as to lessen greatly the weight of the fleece and affect the constitution of your sheep. Evenness of the fiber and covering of the belly and legs are of much importance in selecting the breeding ewe.

Soundness.—Ewes of the mutton breeds will usually prove useful as breeders until they are from 5 to 7 years of age, and Merinos from 7 to 9 years. However, there are many exceptions to these limits. Old, broken mouthed ewes require lots of care and attention, fewer of them can be handled, and if a large flock is maintained it is a good policy to let them go while they will still sell fairly well on the market.

The Udder.—The udders and teats need careful examining. Sometimes in shearing, the end of a teat is cut off. If this happens the ewe should not be kept, as the lamb will not only be poorly nourished (as it can nurse from only one side), but udder trouble usually results.

Time to Cull.—If both the ewes and lambs are ear-tagged in the spring, and a record kept of the weight of the ewe's fleece, its grade, and whether she is a good suckler or not, it will help materially when culling time comes. With this information, culling can be done after weaning.

Where ear labels are not used, and no record is kept of the performance of each individual ewe, it is harder to cull accurately unless the flock is small enough so that each ewe is known. If the culling has been put off until after weaning time, the ewes that have been the poorest milkers or have failed to breed will be in the best shape, so that if form, fleece, and condition are used to determine selections there is a chance of selecting the poorer individuals in the flock. Some of the best breeders, because they have suckled well, will be in poorest condition and are liable to be overlooked.

Breeding for a Type

Some question is raised as to whether it is possible to breed a C type Merino with a good mutton form and still maintain fleece weights of around 12 to 14 pounds. It is possible to do this, if care is used in the selection of both ewes and rams. If there is a tendency for the lambs to be lighter fleeced than their dams it will be necessary to use a denser fleeced ram. However, he should not be too heavy in type in comparison with the ewes. It will hardly be necessary to use a ram heavier than a light B in type to maintain fleeces at a good weight. The use of a heavier marked ram would probably lead to more wrinkles and less uniformity in the lambs both in fleece and conformation.

Too violent outcrosses as to type usually produce disappointing results. To produce a B type it would seem logical to cross an A

and a C, as the B is between the two in type. The offspring might be a B type, but there would be no assurance that the type was fixed, for there would be a chance that the offspring might be A's, B's, or C's in type. It would be much better to mate two B's if a B type progeny was wanted, or an A and a B, but in mating your sheep don't range too far from the type you want. Use on C type ewes a C type or light B type ram, and you stand a better chance of getting C type lambs.

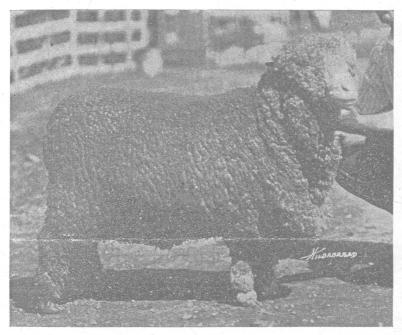


Fig. 17.—"C" type Merino ewe, Champion Ohio State Fair, 1925. This type of Merino is preferable for the commercial flock

In purchasing a ram or ewe of a certain type look into his or her ancestry. If the sires and dams were the same or similar in type for several generations back, there is reason to expect the type to be much better fixed than where the matings are promiscuous.

It is not within the province of every sheep raiser to be a breeder. Breeding is an art, and not every man is gifted in selecting and mating animals that will produce progeny better than its sire or dam. Often no definite program is mapped out by the breeder. He sees what he considers good individuals, and without careful study decides to mate them, not paying as much attention to their ancestry or the concentration of blood lines as he should. Often

results are disappointing and improvement by this method of mating is slow and uncertain.

The producer of grade sheep, by judicious selection of rams and culling of the ewes, selecting a good type and constantly trying to improve it, in a remarkably short time can build up his flock of grades so that they will compare favorably with purebreds in production. Constructive matings, even with grades, will return both pleasure and profit to the sheepman.