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THE BREEDING SEASON FOR THE FARM FLOCK OF SHEEP

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The Breeding Season for the Farm Flock of Sheep

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About 85 percent of the income from the average Kentucky farm flock is from lambs. When the lamb crop is short, the income from the flock is correspondingly small. Farmers who have their sheep, both ewes and rams, in good condition for breeding and give them proper care and attention during the breeding season, will find this effort and expense highly justified. It is proposed in this circular to discuss some factors relative to breeding the farm flock and to point out certain practices which conduce to larger, more uniform and more profitable lamb crops.

BREEDING CYCLE

Most ewes produce lambs only once a year. It is possible with some breeds, notably the Dorset, to get two crops of lambs a year, but in the end nothing is to be gained by this practice as the ewes wear out earlier, the lambs usually are inferior and the cost of feed and labor in growing them out for market is comparatively high.

While September and October are the principal breeding months in Kentucky, the season is often extended from early August to November. Most western ewes and certain types of natives can usually be bred in August. The time of the first oestrus, or heat period, is determined principally by the breed of the ewes and climatic conditions. Ewes high in Dorset or fine-wool blood come in heat early, as a rule. Cool nights are conducive to an early oestrus. The condition of the ewes may also be a factor as will be shown later.

The average interval between one heat period and the next is about 16 days, tho this time may vary a day or two either way. The heat periods average about 27 hours in duration, but individual ewes may vary many hours more or less.

The duration of the gestation period in ewes is about 21 weeks tho it may be a few days shorter or longer. The period is shortest in ewes of the early-maturing breeds and longest in the late- or slow-maturing breeds.

Recent investigations on the physiology of reproduction of sheep, notably those of Missouri and Minnesota, have shown that ovulation occurs about the end of the heat period, that the life of both the sperm and the egg is about twenty-four hours and that it requires from five to six hours for the sperm of the ram to pass the genital tract of the ewe to fertilize the ovum. Thus is appears that the best time to breed sheep is in the last five or six hours of the heat. If bred early in the period there is a possibility that the sperm will become exhausted and die before fertilization.

FECUNDITY

There is much difference in the degree of fecundity in ewes of different breeds and in different strains in the same breed. Flocks of Dorsets, Shropshires and Hampshires, for example, normally produce a higher average percentage of lambs in a single season than do Merinos, Rambouillets and Lincolns. A good example of variation of different strains within a breed is found in the Rambouillet. Rambouillet breeders in the farm states where twins are desired have, thru selection, developed flocks of the breed that normally produce a high percentage of twins. Under range conditions, where twins are seldom wanted, ranchmen have selected for single lambs with the result that in many flocks of range Rambouillets the percentage of twins is comparatively small. Yearling ewes produce fewer twins than older ewes.

BARRENNESS

Barrenness while common in ewes is far less frequent than in cows. Possibly the most common cause of barrenness in this State is having ewes in too high condition at breeding time. While it is important that the ewes be in good condition at time of breeding, certain types of ewes often get too fat, especially if they have failed to raise a lamb the previous season. Except valuable purebreds, it generally does not pay to retain in the flock ewes that go thru a breeding season without getting with lamb unless there is some apparent reason for their not breeding. Certainly the ewe that misses two seasons in succession should be disposed of. Barrenness naturally results where infertile rams are used. Annually, some farmers in this State learn long after the breeding season that the rams they used did not "settle" the ewes. It is never wise to depend entirely on an untried ram, regardless of how small the flock, unless close

check is kept on ewes to determine whether or not they are being settled. See Methods of Breeding, page 13.

ABORTION

Abortion is a common cause of ewes failing to produce lambs. It usually results from the ewes being chased by dogs, jumping ditches, crowding thru narrow doors or gates and wading thru heavy mud. Abortion may also result from insufficient or improper nourishment. Outbreaks of abortion apparently of an infectious nature, while not frequent, have been known to occur in sheep in this State but in no case has the causative factor been determined. When aborted ewes are retained in the flock, it is important that they be separated from the other ewes and given reduced feed. Otherwise they may get too fat for breeding the following season. Where the abortion is of an infectious nature, the ewes, of course, should be culled and sold for the block.

PLANNING FOR THE BREEDING SEASON

It is important to plan ahead so as to be ready to breed when the time arrives. If any additions are to be made to the flock, they should be on the farm long enough before breeding time to become

Yearling range ewes in good breeding condition.

accustomed to their new environment and be properly conditioned for breeding. Sheep shipped a long distance, ewes from the West for example, should have several weeks' rest, with good grazing or feed, to overcome the ill effects of the trip. Thin or abnormally

fat sheep may prove disappointing unless the condition is corrected before the breeding season begins. The practice of some farmers of adding either rams or ewes to their flocks just before breeding time, is not commendable. Failure to have the sheep on the farm long enough to properly condition them for the breeding season often results in a late or uneven lamb crop. It is also important to arrange the pasture rotation in such a way as to have some fields of extra good grazing for the sheep just before and during the breeding season.

Culling and Marking. Any ewes with unsoundnesses which might render them unprofitable as breeders should be culled from the flock before turning in the rams. A careful, individual exami-

Four-year-old range ewes in good condition for breeding.

nation should be made of each ewe. Particular attention should be given to the mouth and udder, where most unsoundnesses are found. Broken mouth or "gummer" ewes are seldom profitable as they usually require special care. They generally have to be fed separately from other ewes and on feed especially prepared for them. This extra cost of course may be justified in the case of valuable purebred ewes. To detect udder unsoundnesses before breeding rather than at lambing time will save much trouble and loss. Few things are more provoking to a shepherd on a cold day than for a ewe to be unable to nurse a new-born lamb.

Unless the flock is small enough for the farmer or caretaker to know each sheep individually, some marking system should be used that makes possible the ready identification of any ewe in the flock. This enables the farmer to keep a definite record of each ewe and facilitates the weeding out of unprofitable or poor-breeding ewes in the future. Possibly the most satisfactory method is to ear-label or tattoo the ewes and paint corresponding numbers on their sides.

Paint numbers alone would be satisfactory if paints could be had that were durable enough to last a year and still scour out. Unfortunately, few, if any, paints now on the market meet these requirements. Metal ear labels numbered consecutively can be had in quantities at about 1 cent each, or in small lots at somewhat higher prices. Paint numbers are usually placed on the ewe's side. While these numbers are generally stamped on with irons or blocks made especially for the purpose, they can, in case of close-wool ewes, be put on free hand with a small, stiff brush. The writer has used this free hand method for years.

Before and after "trimming."

Remove wool from dock. Ewes sometimes go unbred because wool or tags around the dock prevent the rams from making satisfactory connection. It is a small task to remove any wool or tags that might interfere with breeding.

Care of the feet. The feet of all sheep should be kept well trimmed so that they can walk naturally and as a precaution against sore feet and foot rot. The feet of rams, when neglected, may get in such a condition as to seriously affect them as breeders. Sheep handled under dry range conditions usually keep their feet worn down smooth. Under farm conditions the horn of the hoof grows more rapidly than it wears and if not trimmed will cause the sheep to walk on the side or heel of the foot and may, in immature sheep, result in crooked legs and bad pasterns. Filth accumulates under the overgrown horn and predisposes the sheep to sore feet or even

foot rot. The feet may be trimmed with a sharp pocket knife. Ordinary pruning shears are often used to remove most of the horn and a knife to finish the job. Under Kentucky conditions it is important to examine the feet at least three times a year and trim

Showing condition of feet before and after trimming.

when needed. This can be done most conveniently when the sheep are corralled for other purposes such as shearing, drenching or culling.

Flushing. It is generally believed that ewes in a gaining condition at breeding time have a larger percentage of twins and a shorter lambing season than if they were not in good condition. The process of getting the ewes into a gaining condition for breeding, by the use of extra feed, is known as "flushing." The most convenient method of flushing is to change the ewes to a good field of grass. Bluegrass is especially good for this purpose, as are mixed grasses,

timothy or rape. There is some doubt as to the value of clover at this time. If a good grazing crop is not available, the same results can be obtained by feeding the ewes at least one-half pound of grain daily. The time required to get the ewes into proper condition for

A purebred flock in good condition for breeding.

breeding depends on their condition and may vary from one to several weeks. The extra feed should be discontinued after breeding. It is a mistake to increase the feed for ewes that are already in high condition at breeding time.

In a normal year, under Kentucky conditions, about 70 percent of lambs are marketed by August 1st. Lambs that are not ready for market by that time should be weaned so that the ewes can be conditioned for breeding in the early fall. Ewes that have suckled well are often thin at weaning time but will put on flesh afterwards. While the ewe should be in good condition at breeding time, it is possible for her to get too fat. A common complaint of Kentucky farmers is that ewes of certain types often get too fat for breeding. This condition usually can be prevented by running the ewes on sparse pasture after weaning, until about two weeks before the breeding season begins.

Special Treatment for Over-fat Ewes. The problem of over-fat ewes is one of considerable importance to many Kentucky sheepmen. Ewes in an over-fat condition are found most frequently among

those strong in blood of the extreme mutton breeds, like the Southdown. While this condition often may be corrected, it is important to prevent it, if possible. Ewes that are likely to get too fat for breeding should be run on sparse pasture from the time the lambs are weaned until close to the breeding season. If it becomes apparent that certain ewes are going to be too fat for breeding they should either be culled and sold for the block or else put in a dry lot and fed only a little hay once a day and given all the water they will drink. It is sometimes necessary to handle over-fat ewes in this way for a month or longer before they are in condition for breeding. Show sheep that have been highly fed should be gradually reduced in flesh.

CONDITIONING THE RAM

The importance of having the ram in proper condition at breeding time is seldom given the consideration it deserves. Best results can be expected only when the ram is active and vigorous during the breeding season. Too many farmers wait until near breeding

A ram of good type but rather high in condition for a successful breeding season.

time to purchase their rams, with the result that the lambing season is often strung out over a long period and some ewes which normally could have been bred do not have lambs. Rams should be purchased long enough in advance of breeding time to become ac-

customed to their new surroundings and conditioned for breeding. Then, too, by buying early there is a better chance for selection and the rams can usually be bought for less money.

It is generally advisable to feed rams some grain for several weeks before breeding begins. Grain feeding for a month or six weeks may be necessary if the rams are in thin condition. The amount of grain, of course, depends upon the condition and size of the ram. It is seldom advisable to begin with more than one-half pound of grain daily. This should be increased gradually to a pound. Large rams, like Hampshires or Dorsets, or rams in thin condition may require one and one-half pounds of grain per head daily. A mixture of 3 parts of oats and 1 part bran is very satisfactory. Grain feeding should continue thru the breeding season.

The show ring of this country, unfortunately, calls for such high fitting of breeding sheep that many valuable rams and ewes are rendered worthless as breeders. Some ram breeders also overfit

Well-developed ram lambs like these may be used on a small number of ewes.

their sale sheep. Rams that carry an excessive amount of fat often prove disappointing as breeders. They are usually sluggish and in some cases fat obstructs the reproductive tubes and stops the flow of semen. While high fitting for show or sale may sometimes render a ram permanently sterile, usually he returns to normal when re-

duced in condition, provided he has not been too long in an over fitted condition. Rams older than yearlings should never be fitted for show, and high fitting, even of yearlings, is never advisable, if they are to be used for breeding. Rams in high condition should be reduced by gradually decreasing their feed and providing plenty of exercise.

Ram in prime condition for breeding.

While overfitting is the most common cause of sterility in rams, lack of exercise, sexual overwork, underfeeding and improper feeding may have the same effect. Rams that are carried thru the summer with a heavy coat of wool are sometimes infertile until after the wool has been removed.

Rams Should be Sheared. Some farmers shear their rams before breeding. Shorn rams are more active and can stand hot weather better. Rams that carry more than a seasonable amount of wool should be sheared, by all means. The practice of some ram producers of leaving most of the wool on their rams so that they will present a larger, thicker appearance at sale time cannot be condemned too severely. Rams of our improved mutton breeds do not stand hot weather any too well, at best, and when the wool is left on during the summer the suffering must be intense. While their

better appearance may cause some inexperienced sheepmen to buy them at higher prices than they otherwise would, the experienced and cautious sheep farmers will not be fooled by the extra wool but will consider the injury that may have been done the rams and will buy only at a reduced price.

METHODS OF BREEDING

The plan of breeding generally followed by Kentucky sheepmen is to let the ram run with the ewes day and night during the breeding season. This system certainly is convenient but it does not conserve the strength of the ram and make it possible for him to breed a large number of ewes. Some farmers allow the rams with the ewes only at night or for an hour each morning and evening. During the breeding season, when not with the flock, the ram should be confined to a lot or a small field out of sight and hearing of the ewes. Rams may be kept together so long as they do not fight. It has been observed that some rams of a nervous disposition, fret and sometimes even refuse to eat when kept away from the ewes during the breeding season. Such rams had better be left with the ewes and taken out once a day only long enough for a feed of grain. Regardless of the system of breeding followed, the ram should be given a daily feed of grain.

Many breeders of purebred sheep and some commercial sheepmen use a kind of "hand coupling" method of breeding in which an inferior ram, known as a "teaser," is used to find the ewes that are in heat. These are then turned into a lot with the breeding ram. An apron is fastened on the "teaser" in such a way as to prevent him from breeding the ewes, and his brisket is painted daily so that he marks the ewes he attempts to breed. The apron may be tied or sewed to the belly wool that has been left, at shearing time, for this purpose.

By painting the brisket of each ram so that he marks the ewes that he serves, all guessing about the time and extent of the lambing season can be eliminated and barren ewes can be detected, taken from the flock and sold. The paint should be applied every day or two and the color changed every sixteen days. In one-ram flocks, this marking system provides a means of detecting infertile rams early in the season. If most of the ewes which the ram marked with the first color are marked again after the color has been changed in sixteen days, the ram should be replaced.

Where more than one flock is made of the ewes during the breeding season, the rams should be alternated since ewes that will not become pregnant to one ram sometimes will settle to another.

Painting the brisket of the ram.

Where the ewes are all in one group during the breeding season and several rams are used, it is a good plan to save back one ram to be used fresh late in the season after the other rams have been removed so as to breed any ewes that may not have been bred or that may have turned.

NUMBER OF EWES PER RAM

Since rams are of different ages and breeds and vary in condition, activity and vigor, it is obvious that no definite rule can be laid down as to the number of ewes one ram should be allowed. A Hampshire ram, for instance, can serve more ewes than a Southdown and a mature ram more than a yearling. Weather conditions and methods of handling the flock during the mating season are factors to be considered in determining the number of ewes to be allotted per ram. In England, where flocks are handled in hurdles and the weather is usually cool at mating time, a much larger number of ewes per ram can be served than in the early lambing sections of America where at the time of year the ewes must be bred for early market lambs the weather is warmer and the system different. A

mature, vigorous, active ram usually is allowed 35 to 40 ewes, under Kentucky conditions, when allowed to run with the flock; a yearling, 25 or 30. The number of ewes per ram can be greatly increased by the "hand coupling" and other methods for conserving the strength of the ram, as previously described, but few of our commercial sheepmen use these systems because of the additional labor involved.

The use of ram lambs, under our conditions, is never advisable except that early, well-developed lambs may be used on a small number of ewes, seldom more than 15, unless the hand coupling method is used. Ram lambs should never be put in flocks where there are older rams. The older rams will fight and annoy the lambs to such an extent that they will be of little service and sometimes even kill them.

BREED FOR EARLY LAMBS

Kentucky is peculiarly suited for the production of lambs that can be marketed in the late spring and early summer. These early lambs usually command better prices than lambs marketed during the late summer and early fall when market receipts are much larger. There are other advantages which should not be overlooked. Early lambs can usually be finished for market before stomach worms and hot weather have checked their growth. Then, too, our late spring and early summer grazing is ideal for the development of lambs. Usually later in the season the grass becomes coarser and is not so palatable or nutritious. While early lambs may require creep feeding until plenty of grass is available, the cost is small compared with the increased value of lambs and the shorter period in which they can be finished for market. While it is true that ewes bred for late lambing can generally be carried thru the winter at somewhat less cost, and green feed will be available for the lambs as soon as they are ready to eat, the advantages of early lambing under Kentucky conditions more than overbalance these disadvantages. Late lambs often cannot be finished for market during the summer season and require grain feeding which, in the end, makes them more expensive than early lambs.