THE SELECTION OF RAMS FOR STUDS AND FLOCKS.

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The above is a subject that for generations has been occupying the minds of sheep breeders. The selection of unsuitable rams has been the cause of ruining some otherwise very excellent flocks. On the other hand, judicious selection must be credited the wonderful improvement in Merino sheep during the last century. A little over a hundred years ago sheep in Australia cut an average of about three pounds of wool after twelve months' growth. To-day any sheep farmer has every reason to be dissatisfied if his flock cuts less than an average of eight pounds of clear, good yielding wool. Indeed, a great many flocks, both here and in Australia, yield very much more. The three great means of improvement are: good management, the use of suitable rams, and the systematic culling of all undesirable ewes. Departure from any of these dooms to failure any attempt to improve the flock.

Constitution and frame are the first essentials in the selection of rams, both for stud and flock purposes.

Frame.—The frame should be large, with a good, straight, broad back and wide, well-sprung deep ribs, showing a roomy belly. The chances are that a ram with a roomy belly will breed ewes with an abundance of milk and able to develop their lambs well during the gestation period. There should be an absence of small girth round the heart section or devil's grip behind the shoulders, as this does not give the heart and lungs sufficient scope to do their work properly—thus affecting the constitution of the sheep. The neck should be thick and well set into the shoulders; avoid a ewe neck. The hindquarter should be broad and straight—not goose-rumped; this is a sign of good mutton qualities.

Legs.—The legs should be straight. A cow-hocked or sickle-hocked, or knocked-kneed, ram should be avoided in all circumstances. These are hereditary faults, and a whole flock can be ruined by the use of such rams. Besides, the rams themselves cannot walk properly to search for their food.

Feet.—The necessity of good feet is also obvious.

Bone.—The bone of the leg should be thick, showing a great deal of quality. Do not mistake wool on the legs for a thick bone. The thin-boned ram should be avoided; he seldom has constitution. The very thin bone (speekies bene) is usually a sign of one or two things: excessive in-and-in breeding or a very weak constitution.

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Testicles.—There should be two fairly large testicles of more or less even size.

Head, Horns, and Face.—The head, horns, and face of a ram are the things which carry more weight with the Merino lover than anything else. The reason is that these three things combined are usually indicative of character, temperament, constitution, and in fact everything which the sheepman loves.

Breeders and buyers are warned against rams with woolly faces: besides being ugly, the woolly-faced sheep gives a great deal of trouble, especially in country where there is an abundance of grass-seeds (steek gras) or undulating country with holes or precipices.
The open face of the Wanganella sheep is one of the characteristics that make it such a popular type. Some Tasmanian breeders have, to a very great extent, succeeded in breeding sheep with open faces. One finds to-day, however, that some Wanganella breeders have been very careless about the faces, and have lost this most beautiful quality. The writer would not countenance a ram with a closed face, no matter how good he might be in other respects: such a ram is apt to throw a hundred lambs, all—or a great percentage—of which are likely to have the same undesirable defect.

Horns.—Horns are a sign of a good or bad constitution. They should be of a yellowish amber colour, large, thick, and well serrated:

Plain-bodied type of Merino.

the colour is a sign of health, and the serrations one of character in wool (there are many exceptions to this). A thin horn is a sign of a weak constitution. The bend of the horns should not be less than 1½ inch from the jaw; they should not be too wide or too narrow.

Eyes.—These should be large and kind, showing good temperament.

Ears.—Fairly thick and large. Thin, papery ears are a sign of weak constitution.

Mouth.—The teeth in the bottom jaw should fit nicely in to the point of the pad of the top jaw. The long or the short under-jaw (overshot or undershot) should be avoided, as they are very prepotent and hereditary faults, and thus a disqualification. A sheep having either of these faults cannot feed properly.

The first essential of a Merino sheep is to grow wool as against mutton; and it is much easier to put wool on to sheep than to
Experience and observation show that in three or four generations a very useful Merino wool can be acquired by a class of sheep originally a little better than bastards; that is, having a good foundation to build upon as far as constitution goes. But growing wool on a small, weak-constitutioned sheep is a very precarious business; such an animal cannot be expected to carry a heavy pack for twelve months and do well. Of the two evils, rather commence with a good constitution and bad wool.

Parity of Blood.—In all circumstances adhere to sires of recognized pure origin. By a pure strain is meant one which has vindicated and established its prepotency, brought about in the first place by in-and-in breeding, and after that by careful excessive line-breeding through selection within the same families divided only by a few generations.

The progeny of such in-and-in-bred and line-bred animals naturally have the aptitude to reproduce their like to a very great extent. In other words, they have become prepotent; their chance of breeding true is very much greater than that of an animal which is the offspring of a cross of, say, a Merino with an English mutton breed such as the Suffolk. In the latter case, the blood of the Merino may not necessarily be stronger than that of the Suffolk, with the result that such a half-bred or cross-bred animal is likely to throw anything from a Merino to a Suffolk, according to Mendel's theory of dominant-hybrid and recessive characters, which, as a general principle of breeding, can safely be accepted. For this reason it is advisable not to use sires of mixed blood.

The question now arises: when is an animal cross-bred? The writer is certain that on this point many noted breeders and prominent writers will be at variance with him. The following table shows the writer's ideas of grouping of sheep:

<table>
<thead>
<tr>
<th>Breeds</th>
<th>Merino Types</th>
<th>A few Merino Sub-types</th>
<th>A few Merino Strains</th>
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<tbody>
<tr>
<td>Merino</td>
<td>Rambouillet</td>
<td>Bandemar</td>
<td>Sir Charles</td>
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<td></td>
<td>Tasmanian</td>
<td>Wanganella</td>
<td>Magician</td>
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<td>Grassdale</td>
<td>Emperor</td>
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<td>Zuurplaat</td>
<td>Marmon</td>
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<td>Hillsmeer</td>
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<td>Highland-Homo</td>
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<td>Winton</td>
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<td>English Long Wool...</td>
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<td>English Short Breeds</td>
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Now, crossing any of the different sheep under the heading "Breeds" would be an out-and-out cross, and certainly a very undesirable method, unless the object be to raise fat lambs. Crossing of any two Merino types under the second heading would be a type-cross and certainly a method of breeding that has a great many drawbacks and few advantages.
Breeding from different animals under the next heading, “Sub-types,” is a method that has been practised in Australia for the past seventy years, and although much less of it is done amongst studs to-day, the question arises as to which studs can claim absolute purity of blood. Of course, Merino types are the result of line-breeding, and what the type has become has depended solely upon climatic conditions, environment, and the breeder’s ideas. Only a few years ago famous South Australian studs introduced famous sires from New South Wales, such as Donald Dinnie, Dandie Dinmont, Lord Charles, Prince Charlie, etc., with the greatest success. Long before this the foundation of some of the most famous South Australian studs was a mixture of New South Wales and Tasmanian sheep.

An overdeveloped or wrinkly type. Considered excessive even in a sire.

But the management of these studs was in the hands of very skilful flockmasters. The mating together of different types and sub-types is a method practised very successfully in South Africa to-day.

The foregoing remarks regarding the inter-crossing of sub-types also apply to strains, because strains are bred within types.

When is a sheep cross-bred? According to the writer’s idea only when breeds are crossed: for instance, the crossing of Merino and English Long Wool, or any of the members of the family belonging to one of these distinct breeds. But breeding from two distinct members within the Merino breed is no cross, such as Tasmanian and Rambouillet, because the progeny still remains a Merino—call it by any other name you like, such as a type-cross. A racehorse stallion brought from one stud to another, both of which cannot show any blood in common for the last two hundred years, does not breed half-bred horses. Whether this method of crossing different types
of Merinos is advisable and whether it is possible for a farmer to improve his stud by so doing, are dealt with later. The fact remains that the progeny of such type-crosses cannot possibly be as prepotent as that of the ram bred within the same sub-type and strain for about fifty years, and farmers are advised to buy from a pure type or sub-type, if possible. If not procurable, they must get the next best sheep.

Regarding the advisability of crossing of Merino types and sub-types for improvement, there certainly is a difference between the crossing of types in studs and crossing types of flocks. The writer has seen a wonderful improvement in several old Rambouillet studs in South Africa brought about within a few years by the introduction of Wanganella or South Australian rams, which has resulted in great improvement in length, staple formation, and colour. The writer would not, however, advocate the use of such progeny for stud purposes until the new type had been fixed and prepotence established.

The breeder would have to continue using pure-bred sires for a considerable time until his type is fixed. The using of rams of a different family or type from the one the stud-breeder has, necessitates breeding away from his own type and establishing a new one considered nearer to perfection than the one he originally had. It is a slow process, and can only be accomplished by careful selection and mating. On the other hand, if a man has a type of good commercial sheep, there is no reason why he should change it, provided he is able to obtain the desirable sires either within his own type or from one closely related to it.

The question that puzzles many breeders to-day is whether a type-cross of, say, Grassdale and Hillmoor, is desirabke in studs. There is decidedly no reason to do this, seeing that good sires may be obtained from both these studs. On the other hand, as both these studs have established prepotency in regard to plain body, open faces, and good robust constitutions, also good commercial, bold-stapled, shafly wool, and that these are characteristics prepotent in both, why should the resulting progeny not possess the same good qualities, considering that they are prepotent in both their sires and dams? No two studs, however, are exactly alike in every respect, and the progeny will have certain characters not applicable to both, making the stud somewhat uneven. There is, on the other hand, the question of Mendel's reversion when two breeds are crossed; but the writer does not think that this applies in crossing types such as Hillmoor and Grassdale in Merino sheep. If so, the percentage will be very small. He feels certain that a very fine sheep could be evolved through the crossing of such two types, and that a great many big breeders will agree with him. He looks forward to the day when no longer shall the names Wanganella and Tasmanian be known in South Africa, but studs shall be known by the names Hillmoor, Highland Home, Grassdale, Zuurplaats, Bolfontein, Koloniesplaats, etc. For some reason or other, the Tasmanian, as valuable a sheep as any other family we have, has fallen into disfavour with some breeders, and the farmer will scorn to buy Hillmoor rams, "because they are Tasmanians." Emphatically, they are not Tasmanians; taken as a type they could pass as Wanganella type any day. All good breeders have more or less the same ideas as regards the perfect sheep, and have evolved an animal as nearly
like the two types as possible, and such similarity has been made prepotent. The Tasmanian was a small short-legged sheep with very heavy wrinkles and a short, completely covered-up woolly face. The original Wanganella, on the other hand, was a long-legged, thinboned, slab-sided, gaunt-backed sheep very like a springbok, but for his horns. Where are these extremes to-day? Is it not a fact that one could select several hundred Hillmoor ewes, run them on Grassdale veld for twelve months, and defy any man to pick them out from the mob? These two studs, Grassdale and Hillmoor, are taken as instances: there are a great many others of a similar nature.

With regard to flock sheep, many undersized, developed close-faced and short-woolled ewes, are claimed as being descended from the original Tasmanian. In such cases the buying is advised of large-framed, plain-bodied, and long-woolled rams with open faces, irrespective of their type, whether Zuurplants or Hillmoor: the result is sure to be successful. Why struggle to improve such sheep slowly with rams only a little better than themselves, by breeding from rams of practically the same type, when the desired improvement can be brought about within a few generations? Of course, there will be a fairly large percentage of calls for several years before the flock is an even one.

**Quality in Rams.**—When selecting rams for both flock and stud purposes, the farmer must bear in mind that whatever improvement there is to be in the future generations must come from the ram's side. Therefore, in all cases it is advisable to breed up to the rams, which must be of a higher standard than the ewes. If the ewes are lacking in length or quality, it is the farmer's duty to see that these two essentials are not lacking in the rams he selects. Length and
quality are the two most essential things in merino wool. They are being sought after by buyers every day, and they are the two main factors in securing high prices for wool. Another important point is condition or yield of the clip, but this will largely depend upon the treatment given the sheep and the climatic conditions under which they grow their fleece.

**Flocks Mated Collectively; Studs Singly.**

In selecting flock rams the farmer should be very careful to get an even line as far as frame and, especially, wool go. It is a great mistake to use strong-wooled and fine-wooled rams in the same flock, because it results in an uneven clip, and unevenness must be guarded against as much as possible. Stud rams are usually mated singly, and the breeder must be careful not to mate extreme strength with strength which is likely to go too strong and straight in the progeny. Mating fine with fine is dangerous in so far that the progeny will be over-fine and likely to go very short and lean stapled, being light cutters. In selecting both stud and flock rams, the buyer should always aim at the qualities most wanting in his own ewes, and so improve them in this respect.

**Choice between Length and Density.**

One is sometimes asked which of the two, length or density, is most important. All extremes in Merino-wool are harmful. Extreme length must of necessity sacrifice density, and the wool will be long and slack and the backs inclined to fall open when the wool becomes long, thus picking up dust and letting in water. The chances are also that such wool will become very dry, harsh, and mushy in its tip. In this class of sheep good bellies and points are exceptional. Extreme density will always go hand in hand with shortness in staple and wrinkles, and the wool is likely to become very heavy in condition. Acquire the medium in wool, and if there be erring let it be on the side of length, and rather sacrifice a little density. Such wool with good combing length will always sell well, and usually growing length of staple is a less strain on the sheep’s constitution than dense heavy wool. This is important and should be borne in mind when selecting rams.

**Strength or Fineness in Flock Rams—Commercial Wool Essential.**

Strength of wool, with a great deal of quality—that is, well-defined crimp, together with all other good properties found in wool—has in the past been recommended by experts in the selection of rams. There were good reasons for this, amongst others being the fact that the average flock in this country was on the developed side with short, dense, fine wool, and rather heavy in condition. This had to be remedied, and, therefore, the opposite to this was fostered, and it is due very considerably to the strong-wooled craze that the Merino sheep has been improved in South Africa, and we rank to-day amongst the prominent fine-wool producing countries of the world. With it came length, plain body, and a sheep with a very much improved constitution. To-day, buyers often complain about our Merino wool getting too strong. This may be so in individual clips, but, generally
speaking, there is a great deal of room for improvement in regard to length and bulk of fleece. The majority of clips which appear too strong for buyers are those of stud-breeders who are breeding rams for buyers looking for strong wool, and it is to be expected that their own clips should be on the strong side. These few stud-breeders are out to improve the length of the staple in the majority of average and weak flocks. The expert advice for strong wool was not in the first place given with the object of making all the Merino wool in South Africa strong, but to improve the length of staple, and it is well known that strong wool and length go hand in hand, as also do fine and short.

A typically good Merino Head, Horn, Face, and Front.

Then also a great deal depends on the altitude, rainfall, and nature of veld on which the farmer runs his sheep. In Karroo country, in good seasons, it is not difficult to grow a good average length in the flock, although such wool is a medium to fine. In bad seasons, however, such as we are subject to, it is found that the medium or fine wool will be very short and wasty, whereas the strong wool will still be of a good combing length, and plain-bodied sheep carrying strong wool are usually better able to weather the bad times. In grass-veld country, particularly the colder portions, sheep will
usually get finer and shorter in the wool, especially as they get older, whether it be a good season or bad, unless they are specially fed. The object, however, is not to advocate the breeding of strong wool. The ideal wool to breed is one of about 2½ to 3 inches average staple, and to get this the farmer will have to aim at the medium. But on no account must quality be lost sight of. Although the buyer looks for fine wool with a good staple, he prefers a stronger wool with good quality to a fine wool without quality. A few breeders have probably overstepped the bounds of Merino wool by getting too strong a wool, but provided they have not lost quality, it is an easy matter to bring such sheep back; indeed, old age and bad seasons will do so as much as any breeding ingenuity. My advice to farmers, therefore, is: study your climatic conditions; if such you know for certain will tone down the strength of your wool and reduce its length considerably, then go in for strong-woolled rams with plenty of length of staple, the medium-woolled ram with good length should be aimed at in breeding a good commercial wool. The main object of the Merino sheep is the production of fine wool: South Africa is admirably suited for this, and if this is kept in view we can never lose our advantage over other countries that are to-day breeding mutton breeds and long wools and slowly but surely losing their place as fine-wool-producing countries.

The ideal commercial wool is a medium to fine wool, with good combing length and quality. As already stated, one must breed this in suitable areas by breeding for a medium wool with good length, and it will assuredly become finer with environment and old age. In other parts the farmer must go for the strong to medium wool, not forgetting length and quality, and the season will tone it down to medium to fine. The most objectionable wool a producer can put on the market is a strong, coarse, harsh, straight-fibred wool, which is usually a result of indiscriminate breeding for strong wool whilst neglecting quality and texture. The use of fine-woolled rams in studs is sometimes necessary for a specific purpose only, such as bringing back ewes that have exceeded in the strong direction. But in the case of stud ewes each individual ewe is carefully mated, which cannot be done in flocks. It must be clearly understood that reference to strong wool does not mean wool of 54's, 56's, or 58's, which is cross-bred, but a high-class 60's wool showing plenty of character and quality, which is favourably regarded by the trade.

Fifteen years ago when Mr. Ophas Mallinson preached the gospel of strong wool for the improvement of short, fine, lean-stapled flocks, he meant a high-class bulky 60's wool to 64's wool, and not "bull's wool" of 54's quality.

It is hardly fair to blame the experts in cases where the bounds of moderation have been exceeded regarding strong wool.

**Good Flock Rams Better than Bad Studs.**

The farmer must be very careful to keep his flock ewes of a flock type by avoiding the use of bad stud rams among them. The good selected flock ram worth about £10 to £15 is always a better ram for the flock than the £25 or £30 stud ram. Such a stud ram usually has the development of a real stud, such as heavy neck-folds and
wrinkles on the body, but invariably carries a short, dense wool rather fine in the fibre, or otherwise he lacks quality. This style of ram gives the flock development: such sheep are usually bad doers, unless specially treated like studs, and at the same time the breeder departs from the desirable commercial wool. Many farmers ruin their flocks by the use of such rams, thinking that on account of the price they must be better than the £12. 10s. flock ram.

**AGE OF RAMS WHEN SELECTING.**

Sheepmen know the great difficulty of judging the value of a sheep when it is comparatively young. One never can tell accurately what the value of such a sheep is going to be. Some very fine twelve-months' old rams when changing their teeth become culls, whereas others improve. Buying or selling young rams is a gamble and a bad policy from both the seller's and buyer's point of view. Rams should be at least two-teeth before being offered for sale. Even between the two-tooth and four-tooth stage they very often improve or go back.

**DESIRABLE QUALITIES IN FLOCK RAMS.**

The following are the most important features to look for when buying flock rams:

*Frame.*—Plain body, large frame, open face.

*Wool.*—Length and quality.

Buyers are apt to expect too much for an outlay of £10. Do not expect to buy a good stud ram for this sum. Provided the sheep has a large frame, with good legs and no physical faults, carries a good length of wool with any amount of quality, and has a good
sound back, the buyer must be prepared to sacrifice belly and points to a certain extent; of course, if he is particularly keen to improve the belly of his flock he would probably have to sacrifice the top-covering to some extent. But one generally finds that with a plain-bodied, long-woolled flock ram the belly and points are inclined to be weak. Remember again, you cannot buy a good stud ram for £10.

It is not advisable for any buyer of rams to buy a cheaper ram than a £5 one which would mean, in the majority of cases, procuring an uncut hamel, which will not improve the flock.

Group of Poppin Blood or Wanganella Rams: Note the similarity between this type and the present day Tasmanian type.

Yolk.—This is one of the most desirable qualities in wool. If good, it keeps the wool healthy and soft, giving it a bright, lustrous appearance and preventing it from becoming cotty or matty. When buying rams for a warm, dry climate, a buyer must be careful to get a good supply of clean, white, fluid yolk, otherwise his wool will get dry and harsh and mushy in the tips, letting in dust and rain and other weathering conditions. Rather err on the right side and buy rams showing a little too much yolk to your liking, in the form of a small black tip. They will probably lose most of this in a warm, dry climate, especially if their food is not very succulent and rich. On the other hand, a sheep bred in a warm climate will usually develop more yolk when brought to a cold climate. When buying for such a climate then it is only necessary for the rams to have a sufficient
supply of yolk to keep the wool healthy and free. In no circumstances buy rams with a thick, pasty, yellow yolk, because it is a very hard yolk to scour out; it also adds considerable waste weight and freight to your clip, and buyers object to it.

**Disqualifications.**

The following list of disqualifications in rams will be found useful by buyers:

1. Undershot or overshot jaws (short or long bottom jaws).
2. Presence of black wool in the fleece.
3. Kemp (depending on the amount shown).
4. Unsound breeding organs (e.g. one testicle).
5. Very sandy coloured legs.
6. Rams without horns.
7. All four black hoofs.
8. Black streaks through both horns.
10. Cow-hocks or knock-knees.
11. Black eyelids or eyelashes (such rams may throw black or spotted lambs).

Of the above, numbers 1, 3, 5, 7, 10, and 11 will depend upon the extent to which these disqualifications appear.