

to which I purpose to devote this paper, and, although they will, in travelling this country, receive opinions somewhat contradictory to those which I express herein, I give them my own personal experience for what it is worth, and trust that any guidance which I may afford may prove of some little benefit to our fellow-colonists on the other side of the waters.

The following breeds of long-woolled sheep have been chiefly used in this colony for the purposes of cross-breeding: Leicester (English and Border), Lincolns, Romneys, Cotswolds, Southdowns, Hampshire Downs, and Shropshire Downs. I do not purpose going into the question at any length as to the respective merits for freezing purposes of any of these breeds, pure or close up to the pure, but I purpose chiefly to confine my remarks to the question as to which is most suited for producing a prime half-bred sheep bred from the merino ewe.

In arriving at a conclusion as to what is the best and most suitable sheep to use for the somewhat small-carcased merino sheep, we must take into consideration the question as to which of the pure breeds possesses the qualifications necessary for the successful breeding from the smaller female: these qualifications must of necessity consist in the main of small head, small bone, and a good fleece of wool. The Southdowns are perhaps the smallest in frame; the Shropshire Downs are also useful enough sheep to use for the first cross; but both of these Downs, being light-fleeced, produce in the first cross such light-clipping sheep as to make the use of these rams very inadvisable for breeding for export. These two classes of black-faces are very suitable for use for breeding early lambs, and they have been used with considerable success in this direction, by putting them to white-faced long-woolled ewes. In breeding, however, from the merino, the fleece from these sheep is so extremely light and unprofitable as to decide the question against their use for purposes of growing mutton and wool conjointly.

Hampshire Downs are heavier in the fleece than either of the other sheep, and they also have a somewhat less defined type of wool than the white-faced long-wools, and the advantages which they afford are not equal to those which can be secured from other breeds.

The Lincoln, Romney, and Cotswold are, in my opinion, too strong in the head and heavy in the bone to justify their use with merino ewes. Experience points to the inadvisability of using these heavy-carcased sheep for first crosses, as the difficulty of lambing is so great, and the loss arising therefrom very heavy.

Maiden merino ewes ought on no account to be put to long-woolled rams of any kind.

I now come to deal with the Leicester breed, of which there are "English" and the "Border." The English Leicester is in many respects a very excellent sheep, and one which carries a fairly heavy and useful fleece of wool, while it also possesses considerable merit in the shape of being fine in the bone. They, however, lack the perfect butcher's carcase of the Border; and, seeing that carcase is one of the first considerations in cross-breeding, I altogether lean to the Border Leicester as being the best long-woolled sheep to use for crossing with merino ewes. They possess a fine quality of head, fine bone, excellent constitution, the best of carcasses, and a fair weight of good-stapled wool. This class of sheep has been used very much in New Zealand for crossing purposes, and I think it deserves, and fully deserves, the reputation it has secured. The first-cross sheep from this breed is, when properly fed and matured, the best for the frozen-meat trade. If these sheep are well-nourished and well done to when hoggets they can be turned off fat good weights and excellent mutton at about twenty to twenty-two months; if they are not well done to when lambs, they require to be about two and a half years old before they are fit for export. With this cross excessive weights are not at all common, and they can be always reckoned on to come up to the prime standard of weights—say, 55lb. to 70lb. They are ready feeders, and are sheep that can be kept on their feet, not being liable to foot-rot, and they carry a fleece of wool on the average about 2lb. heavier than the merino, and of a quality which has for years past realised higher prices in London than merino grown alongside of it.

Altogether the Leicester cross is, to my mind, the finest sheep for freezing purposes, and I have no hesitation in affirming that our Australian neighbours will find the Border Leicester the most suitable sheep for crossing their merino flocks with. It is a very hardy cross, and we find that it will depasture and thrive on native grasses at high altitudes quite as well as the merino will. They are not, of course, quite as hardy as merinos, but if the country which they are running on is at all fairly grassed they thrive very well. On the ordinary average run of New Zealand tussock country they will do as well as merinos. If any breed beyond the first cross is desired, the heavier-fleeced sheep are desirable, and for breeding three-quarter-breds no doubt can exist about the advisability of using these heavier-fleeced sheep, such as Lincoln, Romney, and Cotswold, as against the Leicester.

For some years a number of sheep-breeders in New Zealand have been experimenting with a view to the production of a sheep as a separate type resembling the first cross. I know of several breeders who for years have been closely following this, and I myself have been interested, and have paid considerable attention to it. If we can only secure as a separate and distinct type a sheep somewhat resembling the first cross between the long-wool and the merino, we will secure something which will be of great advantage not only to this colony, but also to the other colonies. The establishment of a permanent and distinct breed of any new type is of necessity a matter of some importance, and must occupy a very considerable period in its accomplishment.

In dealing with a cross-bred sheep which is the outcome of two such violent extremes as the merino and long-wool, much difficulty, and more than ordinary difficulty, must be experienced, owing to the very extreme component parts of the blend. This must of necessity tend towards frequent throwing-back to the original strain, on one side or the other, and I do not anticipate that the permanent establishment of the half-bred sheep in the colony as a distinct type will be as easily secured as the half-bred sheep which is now bred in the south of Scotland, and which originally came from Cheviot and Leicester. Most of the gentlemen attending this Conference will doubtless have heard that some breeders in the south of Scotland claim to have established a half-bred Cheviot-Leicester sheep as a distinct and separate breed. When in the Home-country last year I had an oppor-