

## Groups

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### ***Contemporary group***

Sheep Ireland needs to know if there have been systematic differences between groups of animals within a year. These may be due to different management such as feeding groups for multiple-bearing ewes or a different operator scoring animals for dagginess, for example. These treatment differences can often be accounted for in Sheep Ireland's statistical genetic evaluation process by assigning animals to different groups. You can think of them as "groups" on the basis of whether they were run together and treated the same, or not, during the period when differences in the recorded trait developed.

Animals are assigned to a group from group 1 upwards (depending on the number of groups). It is as simple as ensuring that ewes or lambs that are treated differently are given a different group number.

Key points related to groups:

- Groups should be as 'genetically random' as you can make them – e.g. by all means lamb singles separate from multiples, but have ewes that went to a mix of sires in each lambing group. If all ewes in group 1 are mated to sire A, while all ewes in group 2 went to sire B, Sheep Ireland will not be able to say how much of any difference in the performance of lambs born to these ewes is due to the group effect or to the sire effect.
- It is best to try and keep management within ewe/ lamb groups the same i.e. treat all animals in the same group the same way.
- Animals should be assigned to groups for each trait at the time the trait recording event is being carried out. This might be at lambing (e.g. lambing ease scoring) for ewes that have been fed differently during pregnancy. It may be at 6 month weighing for lambs that have been fed differently post weaning.
- Examples of grouping have been provided below.

**Some examples:**

The best way to think of contemporary groups is in terms of the trait that is affected by the management difference between groups. There are some management differences that affect certain traits but not others.

**Pre-lambing**Some ewes are housed and some are left out over winter

This is a treatment that is likely to have an effect on several traits. It is important that housing versus not housing of ewes is taken into account at several trait recording events. At lambing those ewes housed should be assigned to a group separate from those left outdoors. This will ensure that any climate effects (indoor versus outdoor) on lamb birth weight are considered. This treatment is likely to also have an effect at a dag scoring event and a feet scoring event, as the conditions ewes are exposed to that influence these two traits are different between housed and not housed animals.

Triplet bearing ewes are fed more

It actually doesn't matter if all triplet bearing ewes are fed more than single and/or twin bearing ewes. Sheep Ireland's genetic evaluation process will already treat single, twin and triplet bearing ewes as separate contemporary groups. It would be worth defining contemporary groups in the triplet bearing ewes if some ewes had been fed more than others.

Let's consider a lambing ease scoring event on triplet bearing ewes which were fed differently (maybe some of the triplet ewes looked a bit light so got meal for middle 6 weeks of pregnancy); at this lambing ease scoring event the ewes that had been fed meal and not fed meal would be put in separate groups. With the same thinking as above this treatment has no influence on feet scoring for footrot.

**Pre weaning:**Lambs born as triplets and reared as triplets are kept in a separate field for extra feeding

It actually doesn't matter if all triplet lambs are fed more because all the triplets are fed the same, and this will be picked up in the fact that they are triplets. It would be worth defining contemporary groups if some triplet were fed more than others (as in above example with triplet bearing ewes).

Let's consider a weighing event at weaning where all triplet lambs had been fed extra in a different field; at this event point the lambs will be weighed but no triplet lambs will have an advantage over any other triplet lambs because they have all been fed the same. Indeed there may be an advantage for the triplet lambs, due to the treatment, over the single and twin lambs (if the singles and twins are not fed more) but this grouping will be taken care of by the division of singles/ twins from triplets (in rearing ranks).

At weaning half the lambs are weighed straight off the field, while the other half are left in the yard for several hours.

This is a short term treatment difference between lambs that has an influence on the weight of the lambs. Therefore this type of treatment warrants the assigning of lambs to groups, as simple as assigning those lambs weighed off the field and those left to “empty” to separate groups. Obviously this treatment will not have an effect on a weighing event later or a foot scoring event.

**Post weaning:**

Twin and single reared lambs are divided in three lines (big, medium, and small) and each group fed differently (big lambs fed grass, medium lambs 200g of meal/ day, and small lambs 500g meal/ day)

We now have three groups of lambs (potentially all with some singles and some twins in them) that have different feeding treatments.

Let’s consider a weighing event at 6 months of age; at this event point all the lambs will be weighed and some will have an advantage over any other lambs because they have been fed differently; at this weighing event the lambs with different treatments would be put into separate groups. It is important to remember that the groupings are made based on the treatment, not the fact that the lambs are small, medium, and big.

All lambs are mixed regardless of birth rank but strong lambs are shorn, and weaker lambs are fed meal

There are 3 groups that lambs can be assigned to, based on two different treatments; feeding and shearing.

- 1) Shorn and not fed meal (strong lambs)
- 2) Unshorn and not fed meal
- 3) Unshorn and fed meal (weaker lambs)

Let’s consider a weighing event example of these lambs post weaning. Both feeding and shorn status affect weight gain and therefore all combinations of the two management practices need to be taken into account and contemporary groups defined (as listed above) at weighing events after these two treatments.

The relevance of these groupings depends on the trait being assessed. It is likely that both shorn status and feeding differences (affecting consistency of faeces) would have an effect on dag scoring, so if for example dag scoring is carried out at 4 months of age, and these treatments had been applied at weaning (3 months of age) then these same groups could be used at dag scoring.

Some lambs are on grass, some lambs are on grass and meal, and dirty lambs are crutched

Again, the relevance of these treatments depends on the trait being assessed, and there are several different treatments here.

Let's consider a weighing event (6 month weight); at this weighing event if some lambs have been on meal then they have a management difference from those that haven't, and should be grouped for this weighing. However the dirty lambs shouldn't be grouped separately from the crutched ones at the weighing event because the crutching treatment will not significantly affect weight. On the other hand if a dag scoring event is carried out then the lambs should be divided into groups based on whether they are crutched or not, at dag scoring. Hence:

- Grass fed lambs should be defined as one group separate from grass and meal fed lambs at weighing
- Crutched lambs should be defined as a separate group from uncrutched lambs at dag scoring

### One person foot scores half the ewe mob and another person scores the other half

We need to take into account differences in the scoring of animals between operators. While both operators will be using the same dag scoring scale, they may have slightly different ways of using this scale. In this situation lambs should be assigned to 2 groups depending on who assessed the daginess. Obviously, if one person assessed all dag scores at a later event then no groupings would be required.