



Contemporary Groups & Genetic Linkage

Animals that have been treated in a similar way - e.g. born over a relatively short period of time, on the same farm and fed and managed similarly - are known as “contemporaries”.

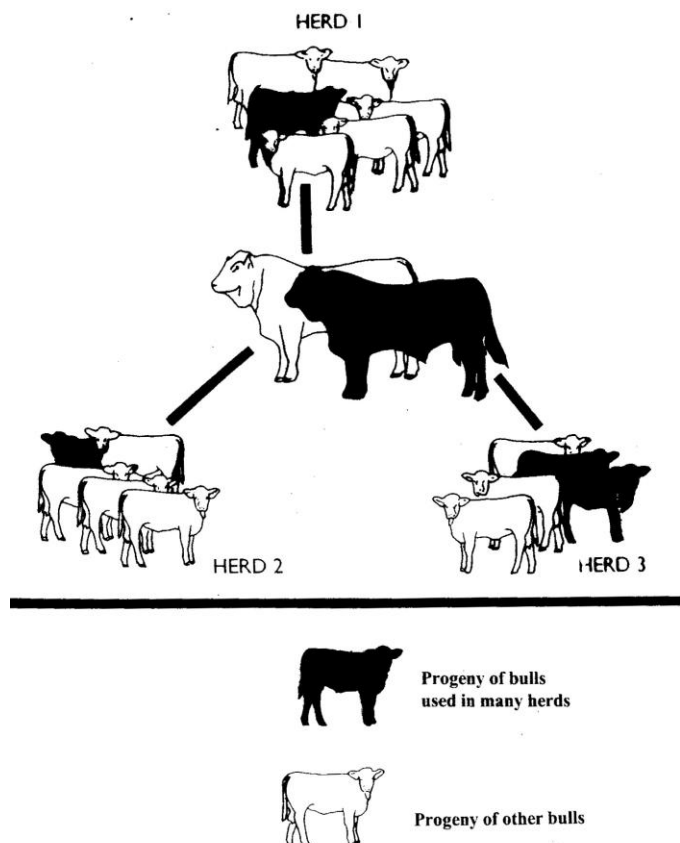
Recognising relative performance within ‘contemporary groups’ is a unique feature of the BLUP analysis and is one of the main reasons why animals can be compared across many different herds. In short, if related animals perform well in all the different contemporary groups where they are measured (albeit the average performance of all these groups will be different) the consistency of their performance will be recognised by the BLUP analysis and they will typically have better EBVs than animals that are less consistent.

In this context, the importance of ‘genetic linkage’ between herds is clear. Genetic linkage between herds exists when those herds contain animals that are related. To be able to examine the performance of animals within contemporary groups across a number of herds, it is important that there is genetic linkage between the contemporary groups in different recorded herds.

A common example where linkage is created is where an AI sire has produced calves in a number of different herds. The performance of his progeny provides a benchmark against which the progeny of bulls can be compared.

There are occasions when breeders should consider structuring their breeding strategy to improve their linkage to other recorded herds.

These/



The use of an AI sire to create genetic linkage between herds

These include:

1. Where a new, imported sire is being used in a herd
2. When a new breeder starts recording and little is known about the genetic merit of their cows
3. The recording of breeds that are not widely recorded

Formation of Contemporary Groups

When breeders submit performance data for analysis it is coded to indicate how the animals have been managed and reared. Contemporary groups are then created in the BLUP analysis in a flexible manner...

- They are created **within** each herd rather than across herds
- Animals are assigned to separate contemporary groups for **each trait**, as some animals will only have been recorded for a limited range of traits
- Contemporary groups are formed **flexibly**, so clusters of calves that are born together in a herd end up in the same group. The specified range for this is limited to 3 months.
- Contemporary groups may be **merged** if there are less than five animals in a group and the animals are all born within 6 months of one another.
- Post weaning management can be quite different for each sex, so the contemporary groups created for 400 day weight, muscle depth and fat depth are split according to sex (so long as there are at least five animals in the group).

As new information is collected between evaluations some cattle may move into a different contemporary group. This can sometimes have a big impact on their EBVs.

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