



## Sheep Breeding System

Every sheep breeder follows some type of system to breed offspring. Here are some insights into the commonly used methods within the Valais Blacknose Sheep community.

### Pure Breeding

Pure breeding is the mating of rams and ewes of the same breed. A purebred flock can be managed as a single flock because all ewes and rams are usually of the same breed. The goal of purebred sheep breeding is to provide superior genetics (seedstock) which are marketed as rams and ewes to other seedstock breeders. Within pure breeding, there are also other types of mating systems:

### Outbreeding

Outbreeding is the mating of animals of the same breed, but which have no closer relationship than at least 4 to 6 generations. Outbreeding is the recommended breeding practice for most purebred sheep breeders.

### Linebreeding

Linebreeding is a system of breeding in which the degree of relationship is less intense than in inbreeding and is usually directed towards keeping offspring related to a highly prized ancestor. Typically, it involves arranging matings so that one or more relatives occur more than once in a pedigree, however, the degree of relationship is not closer than half-brother half-sister matings or cousin matings, etc. A lamb is considered linebred if it is more than 50% of a line's genetic makeup. Line breeding is a mild form of inbreeding.

If you are unsure about your bloodline genetics and want to check animal suitability prior to purchasing stock or breeding season, Grassroots offer a free kinship service.

### Kinship

Kinship analysis can be used to help individual farmers interested in conservation to select males for their flocks or herds. Kinship is a probability calculation and uses the 8-generation pedigree of both prospective parents to calculate the inbreeding coefficient of the prospective offspring. It is therefore an indication of how closely related two animals are to one another.

**PLEASE NOTE:** Many Valais pedigrees are only 4 or 5 generations long and some animals have missing parts of their pedigree which can skew the kinship results. Where this is the case kinship figures may appear to be much lower than they would be if Grassroots had access to the full pedigree information. Please handle with care.

Please remember kinship is only one way of selecting breeding stock, being a sound healthy animal and a good example of the breed should always take precedence.