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## **Merino Breed Standards and Merino Culling Faults**

### **MERINO BREED STANDARDS**

The South African Merino sheep is bred as the perfect dual-purpose sheep which has adapted to all parts of the country. The Merino is the most numerous sheep breed in the world and Merino farms are run under widely diverse environmental and farming conditions. The adaptability of the Merino is unique. In South Africa Merinos are kept in pastures with soil which varies from highly alkaline in the Overberg region, to extremely acidic soil with a sub-4 pH in the Drakensberg grazing grounds. Merinos have adapted in dry areas of the country with an average annual rainfall of less than 150 mm, to high-rainfall areas receiving more than 800 mm per year. The Merino is inherently hardy and adaptable in areas where temperatures range from -18 °C to more than 40 °C. To adapt to the wide variety of climatic and environmental conditions, several types of Merinos are bred in order to economically produce and reproduce in conditions which vary from the most extensive, dry regions to intensive irrigation farming.

*Breed standards* describe the visual and functional traits of the Merino. For breeding purposes, the animal must comply with minimum standards. Breeders strive to get the respective traits and the combination thereof as close as possible to the ideal animal. Through deliberate selection for desired traits, the excellence of the breed is enhanced.

Judgement and selection of Merinos are done according to subjective judging. Qualified Merino advisers have the knowledge and experience to identify the best animals, and to reject animals which do not comply with minimum breed standards.

#### **Conformation Traits**

For functional efficacy, Merinos must be selected for traits which are a general indication of vigour and high production potential.

The head must be large and strong, with an open face, wide mouth free of spots, strong teeth and wide nostrils; long, curved muzzle; soft, silk-like skin; full quiff falling straight down above the eyes; large lively eyes and large, soft ears. The horns must be strong and must curve unimpeded away from the head. In polled Merinos the skull must have a depression in place of the horn. A knuckle or small hornlike growth may be present in the depression but may not exceed 30 mm. Some rams do not have fully developed horns, nor are they polled; they are called *half-polls*. Half polls may be sold at auctions. Body conformation is the makeup of the neck, forequarter, back, middle and hindquarter of the sheep. The neck must be strongly formed and must blend smoothly into the forequarter. The forequarter must be wide across the shoulder with well-filled flanks; wide, deep chest; and straight, strong forelegs. The middle must be long, wide and deep with a spring of rib and straight top-line. The hindquarter must be wide across the hips, square over the rump with strong, wide legs, well-filled buttocks and ample space for the udder in case of an ewe.

Front and hind legs as well as the hoof joints must be strong. The width between the forelegs is determined by the width of the chest. Hind legs must be straight and widely set apart from each other on sturdy pastern joints. Hard, strong amber hooves are prerequisite.

Merinos must be predominantly free of brown and black colour on the face and tongue, horns, legs and hooves, but pigmentation on the eyelids is prerequisite.

### **Wool Traits**

The type of wool of the sheep is indicated by the fineness (micron –  $\mu$ ). Merinos are well known for excellent quality of wool.

Good quality is the regularity and distinctness of crimp, soft texture and the absence of aberrant fibres across the whole fleece.

Wool oil protects fibres against withering and weathering caused by dust, rain, wind and the sun. The lack of, or excessive, wool oil is a hereditary factor, but is also affected by nutrition. Wool must have adequately fluid oil to lubricate and protect fibres. The colour of wool must be white to slightly cream-coloured.

Fleece mass is a combination of length and density of the wool. Although other factors like fibre thickness and the size or age of the sheep do affect wool production, the combination of thickness and the length of the wool is used for judging fleece mass.

Length can be measured or estimated relatively accurately while thickness can in practice be approximated by the hand-and-eye method. When wool production is judged, attention must also be paid to staple formation and body, as well as the ratio between stomach and ends to fleece wool. The best way to determine wool quantity and production is by measuring for it.

Belly and pieces indicate the fullness of the wool on the sheep since there clearly exist differences in certain traits like staple formation, density and length of the wool on the stomach and ends.

### **Reproduction**

High reproduction is the most important trait as it ensures quicker genetic progress and more income from culls. Many factors influence fertility but for selection purposes, the genitals of rams and ewes have to be checked. The testicles and scrota of the rams as well as the udders and nipples of ewes may not have abnormalities.

### **In General**

Excellence is a summary of all the different units in order to determine the degree of merit or usability of the conformation and wool as a whole. A high degree of merit in one factor cannot compensate for the weakness of another factor.

Breed standards are subjectively determined and are a measure of how a Merino sheep must look like – from the traits of an ideal animal to the minimum standard to qualify for breeding purposes.

## **MERINO CULLING FAULTS**

When factors appear that lead to animals not being able to functionally produce effectively or to be reproduced, such animals must be rejected or culled. These unacceptable traits in Merino sheep are called *Culling faults*. While certain culling faults are not allowed at all (definite culling faults), others are judged by ‘degree of intensity’ so as to determine whether the animal is acceptable. See the list of culling faults below.

Wool faults			
Code	Definite Cull	Degree intensity	Fault / Description
<b>Quality</b>			
W1.1	X		Kemp
W1.2	X		Excessive weathering of fleece
W1.3	X		No quality (handling / crimp)
<b>Variation</b>			
W2.1	X		Wool stronger than 27.1 micron
W2.2	X		Harsh wool (poor quality and feel)
W2.3	X		Excessive variation of fibre fineness within fleece
W2.4	X		Primary fibres / Hairy fleece or breech
<b>Wool oil</b>			
W3.1	X		Sticky yolk / Too much wool oil
W3.2	X		Too little wool oil, harsh wool - poor handling
W3.3	X		Yolk - undesired yellow colour
W3.4	X		<sup>1</sup> Fleece rot / keds
W3.5	X		Lumpy wool
W3.6	X		blowfly infested
<b>Staple</b>			
W4.1	X		Thin, watery, ropy staple formation (LS 1 / 5 / 10)
W4.2		X	Blocky staple (LS 41 / 45 / 50)
W4.3		X	Wool too short for growth period
W4.4		X	Too little wool (CFW index < 70)
<b>Belly &amp; points</b>			
W5.1	X		No belly wool and Creeping belly - No watery/belly type wool above straight line of clean skin from shoulder to groin
<sup>1</sup> Animal not auction worthy			

Reproduction faults			
Code	Definite Cull	Degree intensity	Fault / Description
<b>Udders and teats</b>			
R1.1	X		Inverted teats (male or female)
R1.2	X		Calabash teats
R1.3	X		Spoilt or damaged udder
<b>Reproduction organs</b>			
R2.1	X		Infertile
R2.2	X		Narrowing of sheath (Stenosis)
R2.3	X		Abnormally long scrotum (below hock)
R2.4	X		Split scrotum (> 30 mm)
R2.5	X		Withering of testicles (atrophy) or abnormal enlargement
R2.6	X		One or no testicles
R2.7	X		Inadequate development of testicles (hypoplasia)
R2.8	X		Any abnormality of reproductive organs
R2.9	X		Bisexual (hermaphrodite)

Conformation faults			
Code	Definite Cull	Degree of intensity	Fault / Description
<b>Head</b>			
B1.1	X		Double row of teeth
B1.2	X		Overshot bottom jaw ("visbek")
B1.3	X		Undershot bottom jaw ("papegaaibek")
B1.4	X		"Misbek"
B1.5	X		Skew mouth or face
B1.6	X		<sup>2</sup> Poll - horn bud > 30 mm at base. Horn may not be clipped, sawn or filed. No Half-polls
B1.7	X		Ingrowing / inverted eyelids
B1.8	X		Prominent eye socket with small eyes (pig eyes)
B1.9	X		Mousy ears
B1.10	X		Receding teeth
B1.11	X		Protruding teeth
B1.12	X		Loose teeth
B1.13	X		Narrow horn < 15 mm from head / jaw
B1.14	X		Head without character (dull head)
B1.15	X		Jowls
B1.16	X		Woolly face
<b>Colour</b>			
B2.1	X		Brown or black hair on face
B2.2	X		Brown or black hair on legs (sandy legs)
B2.3	X		Brown primary fibres in lamb fleece
B2.4	X		Brown or black fibres in fleece
B2.5	X		Brown or black fibres on horn buds
B2.6		X	Brown eyelashes
B2.7		X	Black eyelashes
B2.8		X	Brown or black fibres on ears
B2.9		X	Brown or black pigmentation on non-wool parts of head, including ears
B2.10		X	Brown or black pigmentation on hooves. Cull if colour on > 4 of 8 claws or 1 full
B2.11	X		No pigmentation around eyes (albino)
B2.12	X		Excessive brown or black pigmentation around eyes, lips or on tongue
<b>Hind quarters</b>			
B3.1	X		Deformed or buckled hind legs
B3.2	X		Cow hocks (X-hocks).
B3.3	X		Bandy legs (O hocks)
B3.4	X		Sickle hocks
B3.5	X		Upright hocks
B3.6		X	Narrow hind quarters
B3.7		X	Drooping rump
B3.8		X	Shallow hind quarters
<b>Pasterns</b>			
B4.1		X	Sagging front pasterns
B4.2		X	Sagging hind pasterns
B4.3	X		Cleft front and / or back hooves
<b>Fore quarters</b>			
B5.1	X		U-neck
B5.2		X	Sharp / high shoulders
B5.3	X		Loose shoulders

B5.4		X	Narrow chest
B5.5	X		Weak bandy front legs (Hooves turning in or out)
B5.6	X		Bow / O-shaped front legs
B5.7	X		Deformed front legs (X-shaped)
B5.8	X		Devil's grip
<b>General conformation</b>			
B6.1	X		Hollow back / weak topline
B6.2		X	Slab sided body
B6.3		X	Undesirable neck folds / body- /hind pleats
B6.4	X		Too small for age
B6.5	X		Dumpy animal
B6.6	X		Condition - too lean and small compared to group
<b>2 For auctions and shows</b>			