# THE RUMP - SQUARE OR SLOPING?

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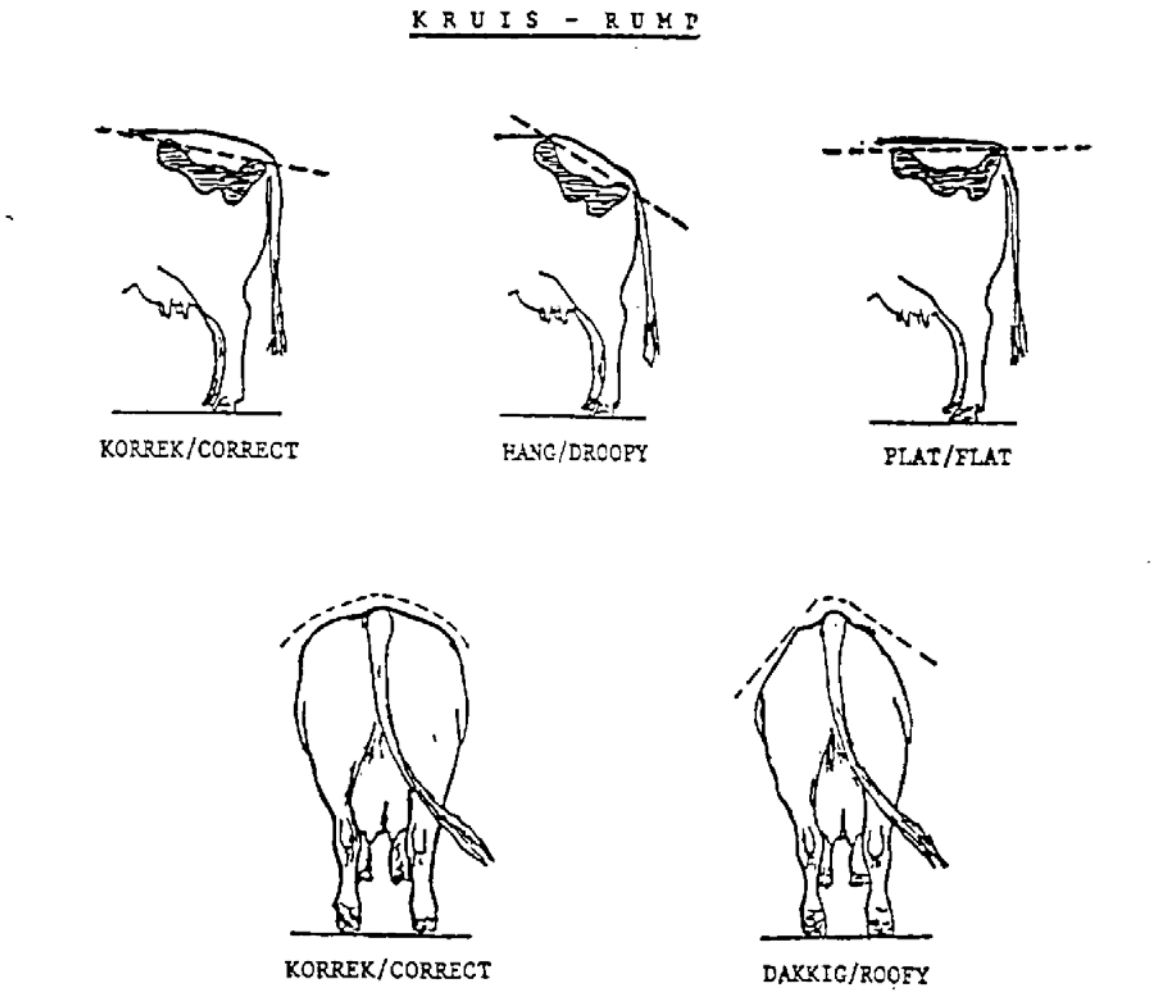
Already in 1950 the Simmentaler Cattle Society of Southern Africa introduced an inspection system where visual appraisal by qualified inspectors is one of the prerequisites for registratlion. This system plays a very important role in the selection of Simmentals adaptable to a complete different environment and management than that of Europe. This inspection is done according to a "Standard of Excellence" which is mainly based on characteristics with functional merit. One of the disqualifications for registration is a FLAT, DROOPING OR ROOFY rump shape.




The "droopy" and "roofy" rumps don't occur too often and are not under discussion here. However, discrimination against animals with a flat, level or square rump plays an important role in our breeding aim.

## Why do we discriminate against this?

Calving ease is, next to fertility, the most important aspect in countries where extensive farming conditions prevail. Cows must calve "outside in the bush" and you only see the calf when tl is a few clays old. There are a lot of causes for calving difficulty or "dystocia" and we maintain that one of the,factors is squareness of rump. Why?

If we look at Zebu types and antelopes, all known for their calving ease, we find a' sloping rump where the pinbones are lower than the hipbones. (Mc Farlane, 1976) describes this as follows:

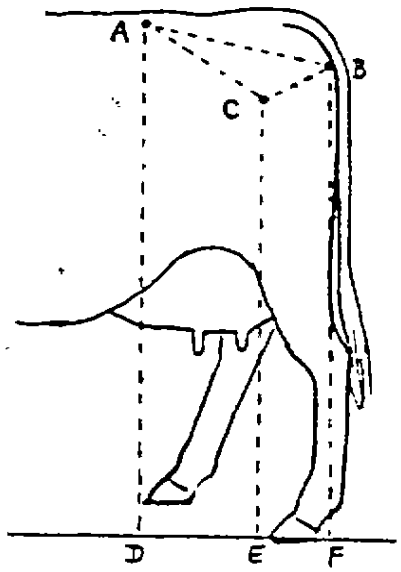
"When one selects for high pinbones, the whole of the pelvic girdle is actually belng rotated about the thurl (the region between the pinbone and the hip joint) in an upwards and backwards direction. Now if you will look

at the classic outline from the side of the animal - and think about it very carefully - it will become evident that, as you raise the pinbones at the rear of the hindquarters, you automatically narrow the vertical opening that the cow has for calving - you lessen the distance between the pelvic floor and the base of the tail. This is one of the prime factors in dystocia which has led to considerable problems in a number of breeds."

**(Maree, 1983), an Animal Scientist and Ve, states:**

"The sacrum in Zebu breeds slope more than in most European beef breeds and in especially the Friesland. Squareness of the rump is due to a more horizontal setting of the sacrum so that the root of the tail is as high as the ileo-sacral attachment. This raises the pin bones and consquently the hips. Over many generations most European beef breeds and particularly the Friesland, have been selected for these features. In Zebu the sacrum and pins and hips have been allowed to Slope. The pelvic outlet consequently moved downwards with lengthening of the ischio-sacral ligaments. The potential of the sacrum and ileo-sacral attachment to allow movement during labour, is therefore considerably enhanced, which is a most important factor in ease of calving. A sloping rump allows for wider opening of the pelvic outlet at calving. Lowered pin bones and a lower position of the thurls, enlarge the pelvic outlet and facilitate calving."

Mr Louis Peens, a student from the University of Pretoria, took the pelvic measurements on the following sketch from 627 Friesland Cows (11 herds) with a dystocia record and investigated the association between these measurements with the dystocia records of the cows. He found the following:




A: Hipbone
B: Pinbone (Tuber Ischii)
C: Thurls

| | % dystocia |
|---|---|
| Slope of the line A to B = 7 to 12° (flat) | 45% |
| Slope of the line A to B = 20 to 24° (not flat) | 12% |
| Angle of the line A-B and BC < 15° | 56% |
| Angle of the line A-B and BC > 15° | 19% |
| Difference in height between AD and CE < 14 cm | 49% |
| Difference in height between AD and CE > 19 cm | 19% |

From a meat production point of view some believe that squarely rumped cattle are better muscled than those with a sloping rump. (Harmse, 1976) and (Butterfield, 1977) proved very clearly that this is not the case.

Another interesting aspect we found is that a square rump is normally associated with straight hocks or post leggedness.

**References:**

Butterfield, R. (1977) What is a meat animal? Beef Cattle Science Handbook, Vol. H: 77, Agriservices Foundation, California.

Harmse, J. (1976) Unpublished data M.Sc. (Agric) thesi S, Uni versi ty of Pretoria.

Maree, C (1983) University of Pretoria, South Africa. Personal communication.

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