PELVIC AREA IN SIMMENTALERS FOR THE PREDICTION OF CALVING DIFFICULTY

(Summarised by W Volschenk from a study submitted by
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for his M.Sc. Agric - Animal Science Degree. U.0. F.S.)

Dystocia, defined as difficult parturition or a delivery requiring more assistance than desirable, has been a problem in the beef industry for many a year which needs to be addressed. A student of the U.O.F.S. Mr Eddie Marais, recently completed his Masters Degree on this subject.

The aim of this study was to establish a possible relationship between certain external body measurements and pelvic area for the prediction of calving difficulty. In most previous studies done on this subject results indicated that calf birth weight and pelvic area of the cow are the two traits closely correlated with dystocia. The prediction of pelvic area would therefore be advantages in the prediction of dystocia. Thus, traits that are correlated with pelvic area were investigated in order to create a model for the prediction of calving difficulty,

Mr Marais found that internal pelvic width (PW) horizontal distance between the shafts of the iluim at the widest point is highly correlated with pelvic area, Through this he concluded that it was necessary to determine the correlation between PW and the various external measurements. The four variables to predict PW were also found, viz. widths of hooks. thigh joint to pin, age and hook to ground. These were built into a formula to predict pelvic area. By using pelvic height, which was found to be highly correlated with pelvic area, a ratio was formulated and by using the formula to predict pelvic area, the calf birth weight that the cow can deliver without difficulty can be predicted.

Mr Marais study clearly illustrated thar calf birth weight next to pelvic area, were the two largest contributors to dystocia. The formula for the prediction of pelvic area can be used to create a selection norm to increase pelvic area in the Simmentaler breed. Results obtained in his study illustrated that cows wich larger pelvic areas had less or no calving difficulcies and that they could deliver calves of higher birth weight without difficulty.

Pelvic area is highly heritable and therefore allows the selection of bulls to be used with cows to ensure that calving difficufty is kept to the minimum. Bulls with large pelvic areas can increase pelvic size of heifer offspring. Large frame bulls should not be used to serve cows with small pelvic areas. According to Mr Marais, heifers and cows can thus be selected for large pelvic areas to reduce the influence of dystocia.

The sludy was conducted in the herds of the Whispering Willows stud, Mr Basie Erasmus. Ian Hartingh. Dries Niemandt. Johan Kluyts and Dr. Evan Kadish.