FALKIRK SCIENTIFIC FOUNDATION

Falkirk Index South Africa Ltd.

Sheep Dissection Trial 13/07/2007 Graaff-Reinet, ZA

The purpose of this trial was to determine the physical dimension of the most optimal animal by dissection under commercial parameters. To reaffirm previous dissections that was examined in New Zealand in 1998 and Australia in 2005. This data which was extracted in a controlled environment and measured to reestablish and underwrite the fundamentals of the unique animal selection process functioned by Falkirk Index New Zealand Ltd and associated entities Falkirk Index Australia Ltd and Falkirk Index South Africa Ltd.

The selected animals were chosen from a commercial flock of known genetics which represented progressive genetic development. The Falkirk Index System was applied to a group of 4^{th} and 6^{th} Dorper ewes that had failed to achieve certain reproductive standards and were being prepared by the owner for a commercial slaughter process.

These animals represented Elite, Standard and Sub Standard categories of genetic excellence and functionality as determined by the Falkirk Index System. They were transported to the local Abattoirs, slaughtered and dressed to normal industry standards. Liveweights and various carcass weights were measured to assess slaughter percentage and shrinkage factors.

Professional butchers deboned each carcass to commercial expectation of retrievable salable product. Each cut was trimmed precisely to specification to provide uniformity between individual carcasses. Primal cuts, second cuts and trim were defined in addition to bone and fat.

Weights and measures were managed on a professional basis to exact instruct. The function and recording of this information was conducted by an individual witnessed by three industry participants. Photographic evidence was gathered of carcass and cut form.

Information was collated to produce the appended files. The initial file defines six animals in detail from live analysis, carcass evaluation to dissection by way of product retrieved in terms of the percentage of carcass mass (weight). Product was priced to commercial reality as per the week of 13/ 07/2007.

The significant finding when comparing animals of a similar liveweight as illustrated by Animal ID's K6222, K6215 and 470 which represented the Falkirk categories of Elite, Standard and Sub Standard in order was the differing ratio of bone-fat-meat relative to mass (weight). Also the percentage of primal product identified. This data when transcribed to retail value (consumer) and carcass value (producer) provides very clear indicators of genetic and financial worth of an animal.

More importantly when comparing the two Elite animals K6164 and K6222 with differing liveweight (7kg) this would infer a greater maintenance cost for a flock of ewes at 62kg as compared to a flock at 55kg. The fact that both carcass forms weighed the same illustrates a productivity factor particularly food conversion efficiency. In financial terms the genetic ability is captured and reflected not in the producer return but definitely in retail value.

The prime indicator of retail value is therefore key in identifying the most cost effective unit within the complete production chain. This enhances each entity involved from the producer to the consumer.

Moreover, this analysis confirms the ability of the Falkirk Index System of animal selection to determine the appropriate and more optimal animal prior to entering breeding programs by identifying and eliminating genetic wastage (ID470) and refocusing breeders and commercial producers upon High Standard and Elite genetics.

Ian Walsh
Principal Director
Falkirk

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Johan Blom	Observer / Witness
Jean Retief	Observer / Witness
Tertius Retief	Observer / Witness
Piet de Klerk	Observer / Witness

The above personnel contributed integral function in finalizing this significant research to confirm the commercial pathway from selective genetic material through optimal production to consumer expectation. Financial expectations can be aliened through carcass composition to the functionality of defined livestock.

End.