UNIVERSITY OF HOHENHEIM

Institute of

Animal Production in the Tropics and Subtropics

Prof. Dr. Anne Valle Zárate

Master Thesis

Validation of indigenous assessment of milk performance of different Rendille camel types in northern Kenya

By

Fredrick Onyango Aloo

Stuttgart – Hohenheim, Germany

September, 2003

This study was sponsored by the Eiselen-Foundation, Ulm

7 SUMMARY

The purpose of this study was to assess under field conditions whether three main identified Rendille camel types (Dabach, Godan and Coitte) differ by validating the indigenous milk performance estimation with direct measurements. The study was carried out in four different locations in Marsabit district of northern Kenya between the months of March to May 2003. Settlements were selected purposively in each location.

Interviews were conducted with 172 camel keepers who kept lactating camels at that moment. Data was collected from a total of 115 Dabach, 107 Godan and 77 Coitte camels. Two methods of milk assessment were conducted in parallel, In the first method direct milk measurements were taken for each camel type at their various lactation months 1 to 12. Milk measurements were only taken once per individual came. However there were replicates for the lactation months and the camel type. In the second method, recalled milk measurements were recorded for the same camels in method 1 and this wholly depended on the ability of the camel keeper to recall the previous milk offtakes. Questionnaires were conducted on camel types, lactation month, herd group, condition of the pasture, parity, whether satisfied, access to salts, condition of the camel, condition of the calf, frequency of watering and age of the camel.

The mean measured evening milk offtakes for camel types were significantly different ($p<0.05$). Dabach camel type produced 0.96 litres (±0.037) while the mean evening milk yield for Godan camel type was 0.85 (±0.038) and Coitte camel type 0.69 (±0.046) litres. The mean recalled evening milk offtake for Dabach camel type was 1.15 (±0.031) litres, while mean evening milk offtake for Godan was 0.86 (±0.030) litres and Coitte camel type 0.70 (±0.040) litres. The mean recalled daily milk offtake for Dabach camel type was 1.95 (±0.04) litres while for Godan camel type it was 1.49 (±0.041) litres and Coitte 1.26 (±0.55) litres.

The mean lactation yield, for a period of 12 months for each camel type as estimated from measured milk amounts was 688 litres for Dabach, 619 litres for Godan and 511 litres for Coitte. The highest lactation yield from measured amounts was recorded in the fourth month for Dabach and Godan camel types and in the fifth month for Coitte. While lactation yield calculated from recalled amounts was 702 litres for Dabach, 537 litres for Godan and 454 litres for Coitte. The highest lactation yield from recalled amounts was recorded in the third month for Dabach camel type, fourth month for Godan and Coitte camel type. The lactation curves of the camel types for both milk measured and recalled amounts, within the camel types were significantly different ($p<0.05$).

According to both methods Dabach camels produced the highest amount of milk followed by Godan and Coitte respectively. The results were consistent with the reports from the pastoralists in the feedback discussions.

Hence indigenous performance estimation turned out to be very useful, as with relatively reliable information over a long period could be generated. The

combination with scientific methods is promising in a holistic approach since no single method would exhaustively provide an accurate milk performance.