16th ANNUAL CONFERENCE

10th - 14th MARCH, 1991

PROGRAMME AND BOOK OF ABSTRACTS

LIVESTOCK PRODUCTION AND RURAL DEVELOPMENT FOR BETTER LIFE IN THE NINETIES

CONGREGATION HALL, CITY CAMPUS
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ESTIMATION OF 305-DAY YIELD FROM TOTAL MILK YIELDS IN BUNAJI AND FRIESIAN-BUNAJI CROSSES

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Lactation data of 207 cows comprising 91 Bunaji and 116 Friesian x Bunaji crosses milking for over 305 days were collected and analysed on the basis of the following variables: Average daily yield (ADY), actual 305-day yield (305-Y), total yield (TY) and lactation length (LL). The objective was to fit a suitable equation that would estimate 305-day yield from TY and to develop estimation factors.

The linear regression equations for estimating 305-day yield from TY are \( Y = 185.229 + 0.804TY \) \((R^2 = 0.971)\) and \( Y = 366.176 + 0.775TY \) \((R^2 = 0.827)\) for Bunaji and Friesian x Bunaji cows respectively. Various combinations of TY, ADY and LL were used in multiple regressions to estimate 305-day yield with \( R^2 \) values of over 90%. Factors for the estimation of weight records at birth, and at 3, 6, 9 and 12 months of age for half Friesian-Bunaji cows that calved over a twenty-three year (1967-1989) were computed. Least squares means ± S.E. of LL, TLY, 305DY, DDRY, AFC and CI were 250.563 ± 5.8 days, 1988.695 ± 108.7 kg, 2420.756 ± 93.8 kg, 102.333 ± 2.5 days, 35.638 ± 2.3 months and 390.312 ± 3.7 days, respectively. Parity, season and year of calving significantly affected LL, TLY \((P<0.01)\) and 305DY \((P<0.05)\), but not CI. DDRY was only affected by season of calving \((P<0.01)\). Year of birth was highly significant \((P<0.01)\) in affecting body weights at all ages, while month of birth was not. Season of birth was significant \((P<0.05)\) for birth weight and body weights at 3 and 6 months of age.