16. Accuracy of 30-Days Interval Method to Estimate Lactation Yield of Crossbred Cows (Fresian X Arsi) at Agarfa, Bale

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Abstracts: To test the accuracy of 30-days' time interval method in comparison with 15 45-day time interval method of milk recording to estimate the lactation yield and to measure the effect of genetic group. Parity and season of calving on the accuracy, 1120 lactation records of Fresian X Arsi cows were utilized. The lactation yield was estimated for lactation length of 210-305 days. The accuracy was measured in terms of absolute difference and percentage difference between actual and estimated yield. The study revealed that 15, 30 and 45 days' time interval can estimate lactation yield. Accurately to extent of less than five percentages bias irrespective of genetic group (50 percent, 75 percent and 87.5 percent Fresian X Arsi) and parity. The season of calving significantly ($P \leq 0.05$) affected the percentage difference in 15 day interval method and not in 30- day and 45-day time interval method. The lactation yield estimated by 15-day TIM was marginally more accurate with high R^2 value (99.62%) and lower root error mean square compared to 30 and 45 day TIM. The regression analysis indicated that the actual yield of 9th period (121-135) in 15-day 5th period in 121-150 days) in 30 day and 3rd period (91-135) in 45-day time interval method predicted reliable estimate of 305-day yield. The step wise regression analysis of various combination of test period actual yield elucidated that combination of more than three periods of recording can be used in estimation of lactation yield in crossbred cows irrespective of season of calving and parity. However, further research is required based on larger data generated by different native dam and exotic sire breeds.