

SALIENT FEATURES AND ECONOMIC OPPORTUNITY LOSSES OF SMALL HOLDER DAIRY FARMS IN SELECTED LOCATIONS IN CENTRAL PROVINCE OF SRI LANKA

T.K. ABAYARATNE¹, I.S. ABEYGUNAWARDENA² AND H. ABEYGUNAWARDENA¹.

¹Department of Farm Animal Production & Health, ²Department of Basic Veterinary Science, Faculty of Veterinary Medicine & Animal Science, University of Peradeniya, Peradeniya.

Dairy farming is a supplementary income generating activity among nearly one fifth of rural households in most parts of rural Sri Lanka. Most rural poverty alleviation programs too have targeted dairy farming as a sustainable rural agricultural enterprise. Yet, the dairy farmers complain that dairying is not profitable and hence they are not very responsive to the conventional extension efforts that are directed to promote dissemination of new technologies. Encouraged by the success of farming system research and development (R&D) approach, a novel approach is being taken to promote the adoption of new technologies by rural households. In this approach the farmers are shown the potential and actual income (difference is termed as economic opportunity loss) from their operation and it is hypothesized that when the beneficiaries see the potential economic benefits, the adaptation rate of new technologies would be enhanced. As a prelude to launch a long-term R&D program, a survey of a cluster of farm holdings was conducted with the objective of characterizing the farming system and estimating economic opportunity losses. A sample of 88 farm holdings was purposively selected from six veterinary ranges (Galewela, Matale, Teldeniya, Thalatuoya, Wattegama and Yatinuwara). Information on land extent, family size, primary occupation, farm settings, housing, feeding, herd composition, genotypic variation, production levels, reproductive performance, management systems, marketing channels and income and expenditure was collected. To estimate the economic opportunity losses, four parameters, namely, i) age at first calving (AFC), ii) calving interval (CI) iii) average milk production per cow per day (MP/D) and iv) lactation lengths (LL) were used. Data were analyzed using a software package developed by FAO/ IAEA. The estimated values of the four parameters were compared with the targets established for the said parameters.

The average farm holding is characterized by i) 4.49±1.40 family size, ii) 2.01±2.82 acres of land area, iii) 4.72±2.81 animals per herd, iv) 9.49±6.94 liters of milk production per farm, v) *Bos taurus* genotypes (with >75 percentage of *Bos taurus* blood), vi) 5.82±2.31 liters of milk yield per day per cow, vii) 32.24±7.18 months of age at first calving, viii) 15.18±5.09 months of calving interval and ix) 286.96±136.53 days of lactation length. On the average a liter of milk is sold at Rs. 14.41±3.89 at the farm gate and the average household earns an income of Rs. 5698.35±3908.26 per month from farm operation. Almost all farm holdings are mixed crop-livestock enterprises, but 52% of them considered livestock as their primary income generating activity. Majority of the holdings rear animals semi-intensively (56%) while the other (44%) practice intensive management systems.

The targets established for cattle for AFC, CI, LL and MP/d were 30 months, 15 months, 305 days and 10 liters, respectively. The economic opportunity estimates indicated that the average farm holding has the opportunity to improve his income by Rs. 200.00 per day by i) decreasing AFC (Rs. 14.50), ii) reducing CI (Rs. 10.48), iii) increasing LL (Rs. 53.71) and iv) increasing MP/D (Rs. 121.41)