

The Economic Value of Mastitis Resistance in Dairy Cattle in Kenya

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Abstract : Dairy cattle production plays an important role in the Kenyan economy. However, high incidences of mastitis is a major setback to the productivity in this industry. The current dairy cattle breeding objective in Kenya does not include mastitis resistance, mainly because the economic value of mastitis resistance has not been determined. Therefore this study aimed at estimating the economic value of mastitis resistance in dairy cattle in Kenya. Initial input parameters were obtained from literature on dairy cattle production systems in the tropics. Selection index methodology was used to derive the economic value of mastitis resistance. Somatic cell count (SCC) was used an indicator trait for mastitis resistance. The economic value was estimated relative to milk yield (MY). Economic values were assigned to SCC in a selection index such that the overall gain in the breeding goal trait was maximized. The option of estimating the economic value for SCC by equating the response in the trait of interest to its index response was considered. The economic value of mastitis resistance was US \$23.64 while maximum response to selection for MY was US \$66.01. The findings of this study provide vital information that is a pre-requisite for the inclusion of mastitis resistance in the current dairy cattle breeding goal in Kenya.

Keywords : somatic cell count, milk quality, payment system, breeding goal

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