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**REPEAT BREEDING AMONG ARTIFICIALLY BRED CATTLE  
IN MID COUNTRY SMALL HOLDER AND  
UP COUNTRY LARGE MULTIPLIER FARMS OF  
SRI LANKA**

*This thesis is dedicated to my mother and to my wife Nipuni.*

by

**GAMAMEDA LIYANAGE**

**CHAMATH DILHAN PERERA**

**Thesis**

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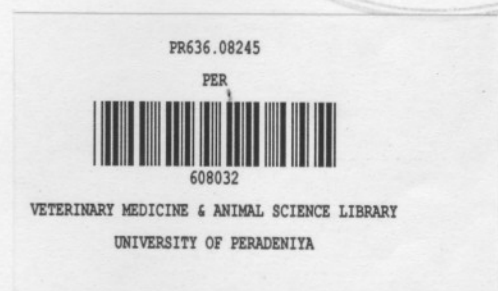
**SRI LANKA**



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## Abstract

The incidence and causes of "repeat breeding" (unable to conceive after 3 successive services) among 1000 randomly selected artificially bred cows from mid country smallholdings in seven veterinary ranges and all the cows in two up country large multiplier farms were studied. They were classified into three categories based on number of services per conception (1=less than 3 services; 2=pregnant but >3 services; and 3=non-pregnant and >3 services).

The occurrences of categories 1,2 and 3 among the cows in smallholder farms were, 81.8%, 3% and 15.2%, respectively while in large farms they were, 88.9%, 4.5% and 6.6% respectively. Categorical data analysis and Duncan's mean comparison showed that cow factors such as breed, body condition score, age and parity, days open (interval from calving to conception in previous pregnancy), previous lactation length and yield, management factors such as herd size, hygienic status of housing, source of labour and management system and farmer factors such as farmers' knowledge and commitment had a significant effect ( $P<0.05$ ) on repeat breeding in small holder farms. However, other factors such as breeding method and nature of last calving in smallholdings and factors such as breed, age and parity and total milk yield per standard 305 day lactation in large farms did not show any significant effect on repeat breeding. Visual, vaginal and rectal findings of repeat breeders suggested that 84.2% in smallholdings and 71.9% in large farms were clinically normal. Among the cows with clinically detectable abnormalities, most were suffering from uterine infections (58.3% in small holdings and 93.7% in large farms) and their major uterine isolate was *Escherichia coli* with highest sensitivity to antibiotic sulfa-trimethoprim and highest resistance to erythromycin.