

## ABSTRACT

### **Bovine mastitis on selected farms in Trinidad, West Indies.**

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Information on the prevalence/incidence of clinical and subclinical mastitis, and on a comparison between the California Mastitis Test (CMT) and N-acetyl-B-D-glucosaminidase (NAGase) came from two studies which involved 17 selected dairy herds over a period of 18 months from January, 1995 to June, 1996. In the first study, data consisted of the CMT scores of 9,172 quarter milk samples which were tested over a minimum of 12 consecutive months on a once-in-28-days visit schedule to each farm. Data were also collected of clinical cases and of management practices and production characteristics. Milk samples from 109 clinically infected quarters were bacteriologically examined. Compliance of the farmers with the planned protocol was low. The results from the first study showed that the average monthly prevalence of clinical mastitis was 2.3%, while the mean rate was  $.8997 \pm .709$  ( $\bar{x} \pm$  S.D.) per 305 cow-days. On the

assumption that a CMT score of 1-3 was indicative of subclinical mastitis, the mean monthly prevalence was 69.1%. The loss in milk production from clinical and subclinical mastitis was estimated to be 26.7%. Mean differences in CMT scores among cows within herds, lactation stage, parity and herds were all highly significant ( $p < .0001$ ). There were widespread milking management deficiencies, and improper use of milking machines. The second study entailed the collection of quarter milk samples (1,356) at predetermined periods of early, middle, late and/or drying off, for the NAGase assay following the CMT test on each sample. NAGase showed variable but significant ( $p < .01$ ) correlations ( $r = .57$ ) with CMT scores. Stage of lactation and the cows within farms had a highly significant effect ( $p < .0001$ ) on NAGase levels. The results did not suggest that NAGase could not be used as a rapid screening diagnostic test for subclinical mastitis. However, this area is worthy of further investigation.

**Keywords:** Mastitis, N-acetyl-B-D-glucosaminidase activity, Selected Farms.