CHANGES IN BOVINE MAMMARY ENZYME ACTIVITIES AND MILK COMPOSITION

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PREFACE

Concurrent study of mammary biochemical parameters and changes in the composition of the secreted product allows an examination of possible causal relations and is fundamental in identifying sites of action of physiological factors influencing the secretory activity of the gland. Changes in biochemical parameters accompanying various physiological states are now well documented for rodent species, e.g. Baldwin & Milligan (1966), but the relationships these bear with trans-lactation changes in the composition of milk have not been studied. The bovine provides ample material of sufficient diversity to characterise changes in milk composition and the species importance as a food producer justifies any attempt to determine how milk production is controlled and seek possibilities of artificial regulation.

Prerequisite to such a study is a technique for repeatedly obtaining tissue from lactating udders without seriously influencing future production. The present experiment was undertaken to develop such a sampling method and use it in a first attempt to study milk production at the synthetic level throughout whole lactations in dairy cattle.

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