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**THE RECORDING AND ANALYSIS OF ANIMAL
HEALTH DATA ON NEW ZEALAND DAIRY FARMS**

**A thesis presented in partial fulfilment
of the requirements for the
Degree of Master of Veterinary Science
at Massey University**

Bryan Joseph McKay

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by Bryan Joseph McKay

Significant progress has been made in the last three decades in reducing the prevalence of animal diseases that cause mortality. However, there is an increasing concern with significant losses associated with diseases that cause a reduction in production efficiency, especially in western countries. In response to this the disciplines of epidemiology and economics are being applied to animal health problems to evaluate causal relationships between contributing factors and health problems, predict the economic benefits of control methods, and prescribe the optimal preventive and/or control measures for these problems.

In order to measure the impact of a disease, one has to be able to identify the effects it has on the animal. This is not a simple task because disease effects a) are not always obvious and pronounced; b) are influenced by factors such as management, environment and others; c) have a temporal dimension which adds to the complexity of evaluating their impacts at different stages in time; d) often manifest themselves as part of a complex involving other diseases. In an attempt to overcome the above problems, and to produce an aid to veterinarians promoting health management services to New Zealand dairy farmers, a computerised information system, DairyMAN, was developed with the specific requirements of the New Zealand dairy scene in mind. This thesis is a report of the development of

the program DairyMAN, the philosophy behind the design structure and field operation of the program. The results of the use of the program to analyze records, and in combination with an advisory service, are reported for a particular farm. Over an 18 month period the return on investment made by the farmer on this service was conservatively estimated at 175%. The author concluded that the program, although still evolving as additional features are added, effectively supports the activities of veterinarians involved in health management services. It also produces a valuable data base on which epidemiological research may be carried out.

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