

## DISEASES OF CATTLE A MANUAL OF DIAGNOSIS

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The information in this manual is derived from a cattle diagnostic support computer programme called Bovid. The programme and the manual are cross-referenced to the 1989 seventh edition of the textbook "Veterinary Medicine" by D C Blood and O M Radostits. The manual is divided into 3 parts: a list of clinical syndromes, a list of possible diagnoses for each syndrome and a list of clinical signs for every condition. The user is expected to progress sequentially through each part to arrive at a diagnosis.

There are limitations to the usefulness of this manual which are largely self-imposed by the sub-optimum organisation of the information. The first section has 138 syndromes listed in alphabetical order. The authors accept the constraints of using syndromes instead of clinical signs, but claim that integrating clinical signs to obtain a differential diagnosis list would be impossible. The user is therefore forced to identify a single general syndrome with the possibility of data exclusion. The location of a syndrome within the list can sometimes be difficult to find unless the descriptive term used by the authors is known by the user. Syndromes listed by system may have proved more efficient.

The second section lists conditions which could cause the observed syndrome. These are arranged in descending order of probability. In some cases the list can be enormous — 97 possible causes of acute diarrhoea in yearling cattle are listed. Only the first 15 have been given a probability score. Although not stated in the text, one suspects the probabilities were conceived using Bayes' theorem which has attracted criticism. In addition, the probabilities are only valid for Western Australia and may not be applicable elsewhere. A more general classification into common or rare conditions may have been more useful. An alphabetical arrangement would have permitted condition cross-referencing between syndromes, enabling an inclusive differential diagnosis list to be produced, if more than one syndrome was observed. This would have reduced the amount of data exclusion.

The third section lists clinical signs for over 800 conditions. Each clinical sign has a numerical score which represents the percentage probability that the sign occurs in that diagnosis. The exact meaning of these figures or their origin is not clear from the text. Personal communication with the authors has revealed that the frequencies quoted are point prevalence frequencies, that is, if a veterinarian attended 100 cases, these are the likely frequencies of the clinical signs he/she would expect to see. This assumes a particular stage contact distribution which is not a universal constant and may vary widely depending at which point during the progress of the disease the owner consults the veterinarian. Bovid states that the figures were compiled by a panel of experienced veterinarians and not from case reports. This method can be deceptively inaccurate and caution regarding their reliability may be indicated.

The clinical signs for a condition are arranged randomly which negates cross-referencing between conditions. Listing the clinical signs in descending order of frequency of occurrence would have been an advantage in that the high and low frequency signs could have been expediently identified. Diseases occurring in the tropics are included, but poisonous plants are excluded.

This book suffers from being the by-product of a computer-based programme. Although it is a giant step forward in computer-independent veterinary informatics, it is flawed by the constraints of poor information organisation. The ring binding also makes it susceptible to wear and tear. However, the wealth of information cannot be denied, particularly the clinical sign listings and it is on this basis that I can recommend this book to students and veterinarians involved in the diagnosis of diseases in cattle.

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