

term previously rejected in favour of 'coriosis'. Good advice is then given on adaptation of the freshly-calved cow to dry matter levels, protein and other elements of the feed. Following trials in the author's practice on supplemental biotin published in 2001, there is a guarded recommendation for its addition at 20 mg day⁻¹ to dairy cow rations.

The diagram (p 138) showing how a cow gets up, like others, is overly simplified. Many better diagrams can be found in other textbooks.

The principles of cubicle design and recommended dimensions are well described and illustrated for the farm manager and dairy personnel. Kerb height suggestions follow the well-known Liverpool study that the ideal should not exceed 150–200 cm, despite being contradicted in another study that showed no relationship between kerb height and lameness incidence. Floor surfaces and cubicle cow tracks are well covered, as is the introduction of freshly-calved heifers to the main herd. Perhaps correct use of a backing gate in the collecting yard pre-milking could have been briefly covered.

The last chapter on investigation of a herd lameness problem is pivotal. Accepting that herd records are critical, it would have been good to have illustrated several good examples. This necessitates not only a record of the cow ID but also the date of lameness, diagnosis and treatment. Lameness scores should be entered as suggested in the second chapter (p 27). The veterinary site investigation starts with the vet following the path of a typical herd member from collecting yard through parlour, dispersal yard and cubicles, to the loafing and feed areas. A general recording sheet, and both cubicle and straw yard sheets are shown.

The reader is introduced to the CCI or Comfort Cow Index (the proportion of cows actually lying in the cubicles), PEL ('proportion eligible lying'), and SSI ('Stall Standing Index'). These are followed by brief mention of further aids such as CCTV and web cameras. All three sophisticated indices can only be defined and measured if there is plenty of manpower to do the counting, whether directly or via images (CCTV, web cameras) at frequent intervals. Such time is rarely available in most dairy units.

In contrast, the Lameness Record Summary is feasible, practical and sets herd parameters against herd targets (eg lameness incidence 59%, target < 20%). A time budget from a real investigation is listed, ie the average time spent eating, lying, in the milking parlour etc. The resulting short- and long-term advice for a specific farm is very useful. The text ends with a brief summary of herd investigation, the formulation of a 'health initiative' and monitoring of progress.

Further reading lists seven titles, three being websites. After the limited (27) reference list is a glossary of terms, one of which is very confusing: "ventral = the upper side of the body, ie upwards". The short index lacks terms such as biosecurity, condition scoring, disinfection, sandcrack, TMR, weight-bearing, overgrowth, pedometer, and stress lines, some of which are mentioned in the text. Biosecurity is neglected, and disinfection of foot-trimming equipment is ignored. Both are very relevant to DD.

The author is congratulated on his industry and enthusiasm in putting over his considerable knowledge of the dairy herd. Some parts of the book, hard to follow, could have been improved by a sub-editor. All the colour illustrations appear to stem from the author's camera and are often of poor quality with substandard colour rendition (usually excessive green or yellow), or are superfluous, as on page 152 showing a cow lying awkwardly jammed across a cubicle with an accompanying text "Is the cow trying to tell us something?" A local dairy farmer who read the book pencilled in "I'm stuck!" The problem itself is not discussed.

Dairy personnel will find much of interest on careful reading. Anyone directly involved in dairy cow welfare will be keen to implement some of the author's suggestions. Practising veterinarians should find something to support their own recommendations for optimal production coupled with high welfare standards.

*A David Weaver
Bearsden, Glasgow, UK*

The Goatkeeper's Veterinary Handbook, Fourth Edition

P Dunn (2007). Published by Old Pond Publishing Ltd, 36 White House Road, Ipswich IP1 5LT, UK. 287 pp Hardback (ISBN 978-1-903366-91-2). £17.95.

When the first edition of this book appeared there were no other British veterinary texts on goats and virtually no other titles for the species from most parts of the world with the exception of North America. The success of *The Goatkeeper's Veterinary Book* is reflected in it now achieving its fourth edition. During the 25 years since the first edition, goat numbers in Britain have fluctuated as has their uses. Today there are possibly fewer pet goats but recently milk production and the sale of milk products has been on the increase with many farms now achieving viable commercial enterprises. There are also niche markets for meat although keeping goats for fibre production has decreased. The increased interest in goats has, in its wake, spawned two other veterinary books on goats and their diseases.

Peter Dunn spent part of his initial career at Reading University before moving to France where he and his wife ran a commercial goat herd. This has provided over 15 years of experience in working with the species as well as dealing with the veterinary problems. In the last few years he has divided his time between farming activities and veterinary work in Britain with Defra, from where he has recently retired.

The first edition of *The Goatkeeper's Veterinary Book* was divided into the problems resulting from the growth, production or management of the animals. This is different to the other British goat books available which concentrate more on dealing with the diseases via the organ-system approach. Peter Dunn's framework is a very logical way of dealing with the necessary division of the problems encountered and the same format has been adopted in this fourth edition. Thus, following a general chapter on the principles of health and management, the author concerns himself with the kid. Most other chapters focus on the diseases which occur as a result of

the goats' management ie problems associated with housed goats, feeding, grazing, milking goats, breeding and pregnancy. Finally, there are chapters on other conditions; accidents, emergencies and poisoning. There are appendices on references, physiological data and goat health survey.

The book needs to be considered in terms of the target audience, namely the goatkeeper and not the veterinary surgeon. The book flows, is easy to read and allows knowledge to be gained quickly. It is useful in dealing with the problems which occur in the various management situations. Quite rightly, where the condition occurs in more than one situation, there is a mention in each relevant chapter with a cross reference to the main entry. The only real trouble with the layout is that there is no easy method of obtaining information about the problems relating to particular systems. Thus, it does mean that unless the owner has some indication as to the condition present in his/her animal it becomes difficult to source the correct section or entry. It could be argued that some of this is overcome by the index which is very useful in finding one's way around the book. However the text would be enhanced by the addition of a section (possibly in the form of a list with page references) outlining the main conditions affecting various organs.

Perhaps the most interesting and important section in the book is the chapter on 'Problems associated with grazing'. It would seem that, in France, Peter Dunn has successfully produced a milking goat herd which grazes without apparent major problems. In Britain all larger milking goat herds are generally housed on the basis of their internal parasitic problems. Thus, not all adult goats seem to develop an adequate immunity to the helminths causing parasitic gastroenteritis and so they are vulnerable to challenge. This causes problems because the use of any treatment or preventative measures results in milk withhold time. The reviewer would like to see, in any new edition, more emphasis, information and detail on how the grazing system is managed in general terms and also in the practical control of the problems experienced in goats kept outside.

One of the other major difficulties with goats is the provision of suitable treatment for any conditions diagnosed. There are very few veterinary products licensed for United Kingdom goats. Peter Dunn quotes 11 in the *Compendium of Data Sheets for Animal Medicines* in 2004 although this has reduced to six in the current (2007) edition. Inevitably this means that one is almost always using preparations available for other food-producing

animals and then through the 'cascade system' providing a minimum statutory withdrawal period following administration. This is well covered in the book's introduction but many may not read this although in some diseases entries the lack of a licensed product is mentioned. However it would be useful to have a warning, in some way highlighted, scattered in a few suitable places throughout the text, drawing the readers' attention to the problems and the minimum withdrawal periods.

There are some good illustrations and drawings in the book. It is also good to see so many colour photographs inserted throughout such a moderately-priced book. Although goats are a minor industry in food production they do form a relatively high value product which has a loyal and increasing consumer following. This may not always be reflected in the photographs within the book concerning milking parlours. The industry's increased importance means that some veterinary surgeons do provide a relatively specialised service to some milking herds. This means that many of the advances in treatment and prevention as well as information on the incidence of such conditions are constantly changing. Inevitably this makes it very difficult for any volume to remain state-of-the-art and this is the case with the current book. Certainly looking through the text, some medicines suggested are no longer available and newer alternatives are not mentioned.

Some parts within the text on the importance of disease and their incidence have been discussed over the last few years at Goat Veterinary Society meetings and could well provide useful information to further update future editions of this book. Several of the references used should have been made more recent such as *Veterinary Medicine* now being in its tenth edition rather than indicating the seventh one and John Matthews' book is now in its second edition and has changed its title.

At present *The Goatkeeper's Veterinary Book* can be suggested for use by those managing and keeping goats providing it is realised that it must be used in association with a veterinary surgeon but it cannot be used as a substitute for such veterinary involvement. It is hoped there will be a fifth edition which will include more information on how to manage milking herds at grass and also ensures that the treatments and information used is as up-to-date as possible.

Anthony H Andrews

Acorn House, Welwyn, UK