
With the recent changes in Eastern Europe, the arrival of this book from Czechoslovakia is hardly surprising. It deals with a subject which has already received much attention, namely the chemical changes that occur during food processing. To me, the book reflects the mainland European approach to Food Science which seems to split the subject into Food Chemistry and Food Technology where the chemistry is very chemical and isolated from the technology.

The detail of the chemical reactions would be acceptable to chemists but, in parts, too heavy for undergraduate Food Scientists. Although the title suggests that the chemistry might be considered in the context of food processing, there is little attempt to combine the two except for some brief description of flavour changes during processing.

Presentation is good with an abundance of diagrams and tables and an extensive bibliography at the end of each chapter. There are one or two unusual words and phrases which may be due to translation problems and some typographical errors which refer annoyingly to the non-existent page 000.

Overall the book will probably be useful to chemists who want to learn about food science and food scientists who want to learn some chemistry. Because of its detailed chemistry, it is sufficiently different to take its place alongside other standard food chemistry texts.

A. J. Taylor


Dr Gil is the Principal Veterinarian of Meat Inspection of the Lisbon City Council, Portugal, and Dr Durao is the Head Professor of Morbid Anatomy in Lisbon Veterinary School. These authors have produced a series of 834 pictures of lesions found, over 25 years, at ante- and post-mortem examinations in the slaughterhouse. The authors claim that the photographs cover most pathological conditions likely to occur in day to day meat inspection.

The book starts with a small section on symptoms to be seen at ante-mortem inspection and then the photographs are split up into pathological conditions seen within the various systems of the body. The first is the skin
and the appendages followed by the digestive system, the circulatory system, the haemopoietic organs, the respiratory system, the urinary system, the genitalia, the nervous system, the endocrine glands and the eye.

As an appendix to the book there is a drawing of the lymphatic system of the carcase of the bovine illustrating the drainage of the superficial lymphatic glands.

On p. 142 there are some notes giving the signs that are noted at post-mortem inspection in cases of septicaemic carcases and on p. 200 there is a note about the criteria for the post-mortem inspection of diseases of the pericardium, heart and blood vessels. These notes are very useful for a meat inspector and it is a pity that these general notes have not been extended to the other systems of the body which are covered in the book.

An aspect recognised by the authors who want to use colour photographs is the difficulty of getting the right colours on the page particularly when there is more than one photograph per page. This has been done very well in this book and the colours are remarkably genuine for the majority of photographs. Inevitably some are not quite as would be seen in the carcase in the slaughterhouse but these do not detract from the general high standard of the photographs.

In some cases it is difficult to appreciate the reason for the decision which is indicated. The first picture is of a group of live cattle some standing, some lying and apparently looking very contented and perfectly normal. However they are classed as a consignment of cattle suffering from exhaustion. Their slaughter was delayed 3 days according to the text and this would seem to be excessively long to allow the cattle, even if they were exhausted, to recover.

Some of the other pictures taken at ante-mortem inspection show some rather bizarre conditions. One picture of a bovine with a basal cell carcinoma of the lower lip is grotesque and one wonders how the animal has survived and been allowed to live with such a lesion.

A particular problem with photographs is that the inspector tends to take the exceptional or the very obvious. Tumours of whatever kind tend to make attractive photographs and there is always a danger that the range of pictures will be unbalanced by concentrating on impressive pictures of tumours. This is a danger to which these authors have succumbed. There are, for instance, 16 pictures of the condition neurofibromatosis (neurofibroma), and I am not convinced that this condition is seen so frequently as to justify this number of pictures.

For most of the conditions the authors include a section on the decision made on the lesion and the carcase. In the preface Dr Gil points out that the decisions should not be regarded as absolute certainties but they are general guidelines for the meat inspectors. There is no doubt that when making decisions on several of the conditions pictured in the book the meat
Inspection would want to see more of the carcase than is shown in the photograph and it would have helped if the authors had given more guidance on the reasons for the decision. Picture 409 for instance shows a small fragment of the aorta from a sheep which is more yellow than normal and the diagnosis is made of jaundice. It would have been helpful if the whole carcase had been shown because it is likely that other organs would have been affected and so would have given a better guide to the meat inspector on the general condition of jaundice.

The diagnosis of a tumour has often to be confirmed by histological examination and a few histological sections are shown. However, for many, this is not stated in the text which might leave the student meat inspector to believe that the diagnosis can be made exclusively on the gross pathology.

In most cases differential diagnoses are suggested, but there is no indication as to how the correct diagnosis can be achieved.

An interesting aspect of the book is that there are photographs of diseases which are very rarely, or no longer, seen in the UK. For instance, there is a picture of a calf’s heart with necrotic myocarditis caused by Foot and Mouth disease. This is the so-called ‘tiger heart’ which has obviously not been seen by many inspectors in the UK and is an interesting reminder that they have to be on the lookout for these exotic diseases. There are other pictures of the tongues and feet of animals suffering from Foot and Mouth disease and there are also pictures of the lesions in the kidney and the viscera of pigs caused by African Swine Fever. There are good pictures of caseous lymphadenitis and contagious bovine pleuropneumonia.

It is natural in a series of this kind that tuberculosis is shown fairly frequently as it can affect all of the systems of the body. It is a pity that tuberculosis has not been tackled as an entity rather than being scattered throughout the book. There are some inconsistencies between the decisions made for similar tubercular lesions shown in the book. The assessment for tuberculosis can only be really carried out if the whole carcase and organs can be inspected to see whether the condition is generalised or purely restricted to a particular lymph gland or organ.

There is quite an extensive index and this is very useful. Inevitably it is difficult to know how to classify all the conditions and, for instance African Swine Fever of the lung is not classified as that in the index but is under acute oedema and this is a pity, but this is a small fault and in general terms the index is very useful.

I think any person who has carried out any meat inspection over a longish period of time will have a series of photographs which they feel they would like to show to other people carrying out meat inspection. Here, however, we have two authors who have, I suspect, spent a lot of time drawing together the photographs and writing notes on each one and I would suspect that this
was quite a mammoth task. They are to be congratulated on the book but I wonder if it is what the authors' claim 'an invaluable and highly reliable guide to meat inspection'. This is a book which meat inspectors and animal pathologists will love to browse through in their spare minutes and it will prove interesting and fascinating. It may in fact be harmful to the trainee meat inspector who may consider that a specific diagnosis can be made on gross pathological examination of one organ, but certainly for the experienced meat inspector it is a book which they will tend to return to again and again.

A. S. Bremner