

Table 2: Prevalence of helminths in indigenous chickens in Botswana.

Helminth	Prevalence (%)
<i>Ascaridia galli</i>	84.6
<i>Heterakis gallinarum</i>	84.6
<i>Raillietina</i> sp.	66.6

Free-ranging fowls are likely to become infected with cestodes through ingestion of their arthropod intermediate hosts. In the present study, *Raillietina* sp. was recovered in relatively small numbers compared to Nigerian indigenous chickens that were reported to harbour more tapeworms than ascarids⁴. Similarly, indigenous chickens from southern Ethiopia were reportedly infected with various types of tapeworms⁹. The presence of cestodes in the chickens in this study suggests the presence of the intermediate host, and warrants treatment with an anticestodal anthelmintic.

It was noteworthy that no *Capillaria* spp., *Syngamus trachea* or *Tetrameres* spp. were recovered. This may have been partly because the chickens were sampled during a dry period when the eggs and their infective larvae are destroyed by the extremely

high ground temperatures. Furthermore, the former 2 species are more prevalent in warm, humid environments. This emphasises the need to sample the chickens during the wet season in order to understand the population dynamics of the parasite.

The results of this study contrast markedly with a report from Zimbabwe² in which numerous tetrameres were found in the proventriculus. These authors also failed to demonstrate the presence of *Capillaria* spp.

Since backyard chickens are a source of meat in rural populations in Botswana, it is imperative to boost the productivity of indigenous chickens through government-financed projects in the rural areas. It is anticipated that deworming the indigenous chicken population would improve weight gain and carcass quality. A government subsidy for anthelmintics included in the FAP (financial assistance package) loan scheme may render this exercise affordable.

ACKNOWLEDGEMENT

This study was financially supported by the Research and Publications Committee of the Botswana College of Agriculture.

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Book review — Boek resensie

Meat science: an introductory text

P D Warriss

2000. CABI Publishing, Wallingford & New York, 312 pp., soft cover, £25 (US\$45). ISBN 0 85199 424 5.

In the preface, the author emphasises that the book is not intended to be a standard reference work, since various books of this nature are available. It is directed at many readers who require a simple overview of the subject. Such potential readers include undergraduate and postgraduate students in food science and technology and animal and veterinary science, as well as technical staff in the meat industry. It may also be of interest to veterinarians and meat inspectors.

With this declaration as background, the contents of the book have been found to comply with the expressed intentions of the author. It admirably outlines the general principles of meat science and provides sufficient references to allow readers to access further detailed information if required.

The 12 chapters of the book can be divided broadly into 3 categories. The first category deals with the concept of animal welfare and the effect of live animal handling on the carcass and meat quality, and adequately describes the slaughter of animals. The chapter on slaughter includes *antemortem* inspection, stunning, slaughter, *post mortem* inspection, carcass dressing and butchery. The second category of subjects includes the concepts of meat consumption and quality. The author states that 'the

reason most people eat meat is that they enjoy eating it, but perhaps like most things we enjoy eating, the ideal is to consume it in moderation and as part of a well-balanced diet'. Eating quality is one of the aspects of general meat quality that can be measured, and taste panelling and sensory evaluation are more objective techniques included in the text. Other aspects of quality that are discussed include processing and packaging and topics such as antioxidants, tenderising, pressure treatment and mechanically-recovered meat. Microbial contamination of meat, meat preservation and ensuring safety are also dealt with.

The third and final category of subjects involve chemical and physical aspects of meat science. These include growth and body composition, post-mortem changes from muscle to meat, chemical composition and structure of the meat and the measurement of composition and physical characteristics of the meat. In conclusion, the book can be recommended because it provides enjoyable and informative reading for those wish to gain a broad overview in the field of meat science.

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