

BOOK AND CD-ROM REVIEWS

Improving Health and Welfare in Animal Production

Edited by Harry J Blokhuis, E Dinand Ekkel and Beat Wechsler (2000). Proceedings of sessions of the EAAP Commission on Animal Management and Health, The Hague, The Netherlands, 21–24 August. EAAP publication No 102. Published by Wageningen Pers: PO Box 42, 6700AA Wageningen, The Netherlands. 132 pp. Paperback (ISBN 90741 34866).

This book contains 15 selected papers from the 51st Annual Meeting of the European Association for Animal Production (EAAP) held in August 2000 at The Hague, The Netherlands. The papers are an interesting mixture of experimental studies, evaluation of welfare assessment techniques and discussion of novel approaches to welfare assessment.

The series of papers highlights the great range of approaches to welfare assessment at the group level in different countries. On initial reading, the authors seem to be writing from different perspectives; however, there are some commonalities in approach. For example, the authors certainly agree that many indicators are required and that collection of data at the farm level is important for informing decisions. Furthermore, these assessments are an essential adjunct to controlled experimental studies evaluating husbandry systems.

It is clear that the purpose of the assessment system dictates the technique used. For example, an assessment system that needs to be used as a management tool will rely upon animal-based welfare indicators. However, a licensing system that determines the acceptability of either a husbandry system or an individual farm for legislative requirements or quality-assurance claims is likely to have a heavy reliance upon resource-based assessments.

Several papers advocate the incorporation of welfare indicators into the management systems of producers. For example, one paper discusses the merits of animal- and system-based welfare indicators that can be used to support management decision-making for dairy cattle, and another advocates incorporation of these measures into existing herd health and production management programmes. The potential use of HACCP (Hazard Analysis Critical Control Points) principles is discussed with reference to dairy production and pig housing systems.

Many papers discuss the role of a consumer-driven demand for assurances on animal welfare. Other papers highlight the role of welfare assessment in the legislative process involved in authorising novel production systems either for laying hens in Sweden or for organic farms in Austria. An unusual example of a fully automated decision-making tool is a robotic milking machine that is designed to predict clinical mastitis.

Welfare assessment systems that produce a single numerical value such as the TGI (Tiergerechtheitsindex; Animal Needs Index) are also discussed. In particular, the processes for, and problems associated with, the development of single unitary values of welfare by weighting different welfare parameters are explored. Other papers examine the consistency of welfare scoring systems between observers and between different assessment systems. Another paper advocates analysis of the welfare impact of components of sow husbandry systems rather than a simplistic assessment of the whole system.

The remaining papers are conventional controlled experimental studies that evaluate the impact of certain aspects of husbandry on animal welfare using established behaviour, health and production parameters. These include the evaluation of the effect of fibrous food on reducing feeding motivation in pregnant gilts, the influence of floor surface and space on abnormal (dog-sitting) rising behaviour and carpal joint lesions in bulls, the welfare and

production impact of farrowing pen systems, and finally, the behavioural effects of straw-based housing systems.

The preface declares that this book is published “in order to provide a lasting contribution to the development of future, society- and consumer-accepted housing systems for domestic animals”. Even though many papers are essentially discussions of work in progress, they do highlight the range of potential mechanisms for assessing and improving farm animal welfare. Animal welfare assessment at the group level is at a relatively early stage, and this collection of papers gives an insight into the work that is likely to be produced in the future.

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Robotic Milking

Edited by H Hogeveen and A Meijering (2000). Proceedings of the international symposium, Lelystad, The Netherlands, 17–19 August. Published by Wageningen Pers: PO Box 42, 6700AA Wageningen, The Netherlands. 309 pp. Hardback (ISBN 9074134874).

The recent development of technology to enable teat cups to be automatically attached to a cow has led to the commercial production of fully automated milking units, or milking robots. Such units are now being evaluated world-wide, but especially in Europe. To many lay people, robotic milking of dairy cows will seem an anathema when considering their welfare. However, this is not the message from a new book dedicated solely to robotic milking, especially if one compares the system to the manually operated milking systems in operation on most farms. The book contains 62 papers from a conference held in Lelystad, The Netherlands, in August 2000. The contributions are of varied length and are contained in five sections: milking technique, milk quality, husbandry systems, economics, and health/welfare considerations. There is an author index but regrettably no subject index.

Amongst much technical detail on the performance of robotic milking systems, the book describes the latest research on many aspects of robotic milking that affect the welfare of cows. These include the daily milking frequency and the vacuum and pulsation characteristics, which are standardised for all cows in conventional milking parlours but which can potentially be tailored to the needs of individual cows in robotic milking systems. Given that in some European countries one third of dairy farmers are likely to switch to robotic milking within the next 10–15 years, according to a chapter by Justesen and Dam Rasmussen, the technique clearly has the potential to have a major impact on the welfare of dairy cows. Currently, just over 500 farms are using the system, most of these in Europe, and the next ten years will determine whether the technology has universal application or whether it will be restricted to quite specific circumstances. The technology is most likely to be adopted in areas with small family farms, scarce availability of low-cost hired labour, and an ageing population of farmers wishing to reduce their labour input. Such conditions exist in much of Europe and North America, where there are strong economies in sectors other than agriculture, and Reinemann and Jackson-Smith argue that the technology could help to preserve the family farm in these regions. Large industrial operations are unlikely to adopt the technology widely because a purely economic assessment would not favour their use.

Theoretically, stockpeople should have extra time to look after their cows in a robotic milking system, which, it is estimated, reduces labour requirements for milking by 30 per cent. They are still required to fetch cows that do not want to be milked, to attach the cluster