

Animal Welfare in Extensive Production Systems

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This book is a volume in *The Animal Welfare Series* edited by Xavier Manteca. At a time when most articles in the press are centred on ‘factory’ or ‘intensive’ farming it is good to see a book being published that addresses the welfare of animals in extensive systems. There is a danger, particularly in the media, to always set up extensive production systems as the epitome of good welfare or naturalness. I use the word ‘production’ purposely as, indeed, the reason for farming is production of animal-derived products whether it be food, hides, hair, dung etc. As the editors set out in the preface, the impact of grazing animals on water and feed is a vital part of our understanding of sustainability. With 50% of the total land surface in the world considered to be rangelands it is surprising that the subject of welfare of the animals that are grazing on it has not been more widely considered. The two editors set out in the opening chapter their thesis that by using the widely quoted FAWC Five Freedoms it can be argued that extensive systems, in environments that are constantly changing, may in certain instances provide a greater challenge to animal welfare than the widely studied ‘captive’ systems. The subsequent chapters closely follow the use of the Five Freedoms and present evidence and arguments against the background of those principles.

The book considers the specific challenges and the adaptations or coping strategies that have been developed, either by the animals themselves or in their management, to cope with the one constant — the ever-changing environment of the rangelands. This is a book in which the authors of the various chapters look worldwide and review the literature on that basis, thus camel thermoregulation sits alongside discussion of the same topic in goats or water buffalo. The fact that Angus heifers show a higher rectal temperature than native Colombian Romosinuano heifers is given as an example of adaptation or, alternatively, a welfare stress that can be imposed.

The discussion on water balance in chapter three highlights the importance, in extensive systems, of making similar husbandry checks as made in indoor or more controlled grazing systems. Riverbeds can dry up just as water tanks can lose their supply and the impact on the animal is the same. The importance of the individual is also highlighted in that water turnover, ie the proportion of body water that is used each day, can vary for an individual animal and the effect of the type of grazing can have a marked effect on water needs, eg sheep grazing halophytic shrubs. The fourth chapter makes the point that it is the distribution of water and foodstuffs that will dictate where and how far animals will range. Again, the value of using native breeds adapted for the particular rangelands is emphasised and examples are given.

The vast number of references as, for example, in chapter 5 on toxic plants, sometimes makes reading the text hard, as the flow can be lost, but the positive aspect of having the world literature reviewed should be seen as a benefit for the reader. The pictures of predators that come immediately before the chapter on predation, chapter 6, are a welcome distraction from the reams of references preceding it. At a time when the UK is considering the reintroduction of the lynx it is timely to read this chapter and note the bureaucratic mechanisms that underpin any claim for predation by livestock owners.

Health and extensive livestock systems is the subject of the seventh chapter and the implications of moving animals from an extensive to an intensive system of production or indeed *vice versa* are explored. Breeds and strains are now specifically adapted to particular livestock systems and this is most clearly illustrated in the dairy cow. The importance of the stockman and education is stressed in this chapter, especially in instances where any change in system is envisaged.

The penultimate chapter deals with neo-natal mortality and illustrates, perhaps, one of the most significant differences as regards rearing systems whereby mortality figures act as a telling reminder of the ‘natural’ losses that would not be tolerated in indoor systems. Where there is a more closely monitored or contained extensive system the figures can bear comparison with indoor systems but the effect of temperature extremes, wind, snow and rain — when added to predation — bear witness to the difficulties surrounding the end of gestation and the economics of extensive methods of husbandry. The authors make the point that the pressure on land use for human habitation is pushing the available space for extensive rearing of animals to the more marginal areas which then gives rise to greater concerns regarding the welfare of the livestock being raised in such areas particularly if the stocking density is not matched by the quality of the grazing.

The final chapter focuses on transport and considers the problems of moving live animals from where they are reared to where they are consumed. The ease and ready availability of unsophisticated means for transport of live animals, (compared with the requirements for the movement of carcasses) means that animals are all too often transported long distances in poor conditions. The book considers some of the problems and indeed disasters that have been all too commonly accepted as a normal risk of extensive rearing, but which are now the subject of increasing popular concern.

Throughout the book, the authors repeatedly suggest areas in which research is lacking and make the point that often there are inadequate data to make proper comparisons between indoor ‘protected’ environment rearing systems and extensive outdoor systems.

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