



FOREWORD

The commonest large mammals in the world are domestic cattle, sheep, pigs, goats and buffalo, and the commonest bird in the world is the domestic chicken. These, along with bees, silk moths, trout, oysters and many other farmed animals are the subject of this fascinating and revealing book.

The development of civilization has depended on the farmed animals and almost all societies depend on their use today. These creatures supply man with food (meat, milk, eggs, fish) and with basic protection against the elements (furs, hides, wool for clothing). They are used as working animals and beasts of burden. Some, such as certain ducks, geese and other fowl, are bred purely for ornamental reasons, while others provide some of the luxuries of life, from quails' eggs to cashmere.

Animals have been farmed from very early in man's history. The bones of obviously "domesticated" sheep and goats, which can be dated to more than 10,000 years ago, have been found in the remains of settlements in southwest Asia. More recently, the Old Testament, Exodus 26:7-13 (written c. 1000BC) includes a reference to the weaving of fine goat hair into curtains.

Humans often display an affectionate attitude toward animals kept for useful purposes. The docile water buffalo, popularly described as "the living tractor of the East" may be "pensioned off" after 20 years' work to live in retirement as one of the family. Apart from those who work with them or make special studies of them, most people are inclined to take farmed animals for granted. Yet recent research shows that they often display a complexity and sophistication of behavior that commands respect. Members of a herd of 40 cows, for example, will recognize and respond to each other as individuals, and the "contented" but not particularly "intelligent" cow is surprisingly adept at picking up the complex tasks involved in modern automated feeding methods.

The fascination of farmed animals as subjects for closer study becomes abundantly clear from the enthusiasm conveyed by the authors of this book. The informative, in-depth treatment is complemented by the diversity of the illustrations. This combination can only enhance and enrich the reader's perception and understanding of farmed animals.

How this book is organized

Farmed Animals includes articles by specialist authors from six different countries, on the animal species farmed by man throughout the world, and on the methods used in the production of important commodities. Pains have been taken to gather up-to-date statistical data giving a world picture of products and producers, and to present these in readily accessible charts and diagrams.

The rearing of animals for the conversion of animal food to meat, and so on, and some of the procedures involved in the production of these commodities, are discussed in detail in the first article. The theme of the value to man of farmed animals is pursued in each species article in a boxed summary of the world importance of that species. As well as considering what man gains from farmed animals, our obligations to them are also discussed. The necessity to take into account the welfare of each individual animal is emphasized in that part of the article on ethics and animal husbandry (see pages 22-23). Public attitudes toward preserving the variety of animal life are reflected in discussions of the conservation of rare breeds, the ways in which the wild populations, such as fishes and whales, should be treated (see pages 126-139) and in a forward-looking article on farming endangered species (see pages 150-151). Man's ingenuity in using animals to collect food and other materials is illustrated by many intriguing examples relating to hunters and gatherers (pages 146-149).

Space is devoted to the various species in proportion to their importance to man and the diversity of their breeds. Each species is introduced by an opening panel giving details of classification, distribution, physiology, diet and reproduction. In the main articles are details of each animal's biology and a survey of the full breadth of its place in human life. Authors explain what is known of the origin of the animal's domestic populations and the historical development of its role. Where possible, insights are given into the natural pre-adaptations of each for a domestic niche. Separate fact box summaries following the main articles on major species give the history and characteristics of many of the breeds that have resulted from the domestication process. The great diversity of breeds adapted to physical conditions and husbandry practices in the various regions of the world is emphasized in particular.

The recent increases in activities of rare breed societies in many countries, and the proliferation of farm parks, are evidence of the continuing interest of the scientific community and the general public in old and local breeds, as well as those that are the most successful in modern farming.

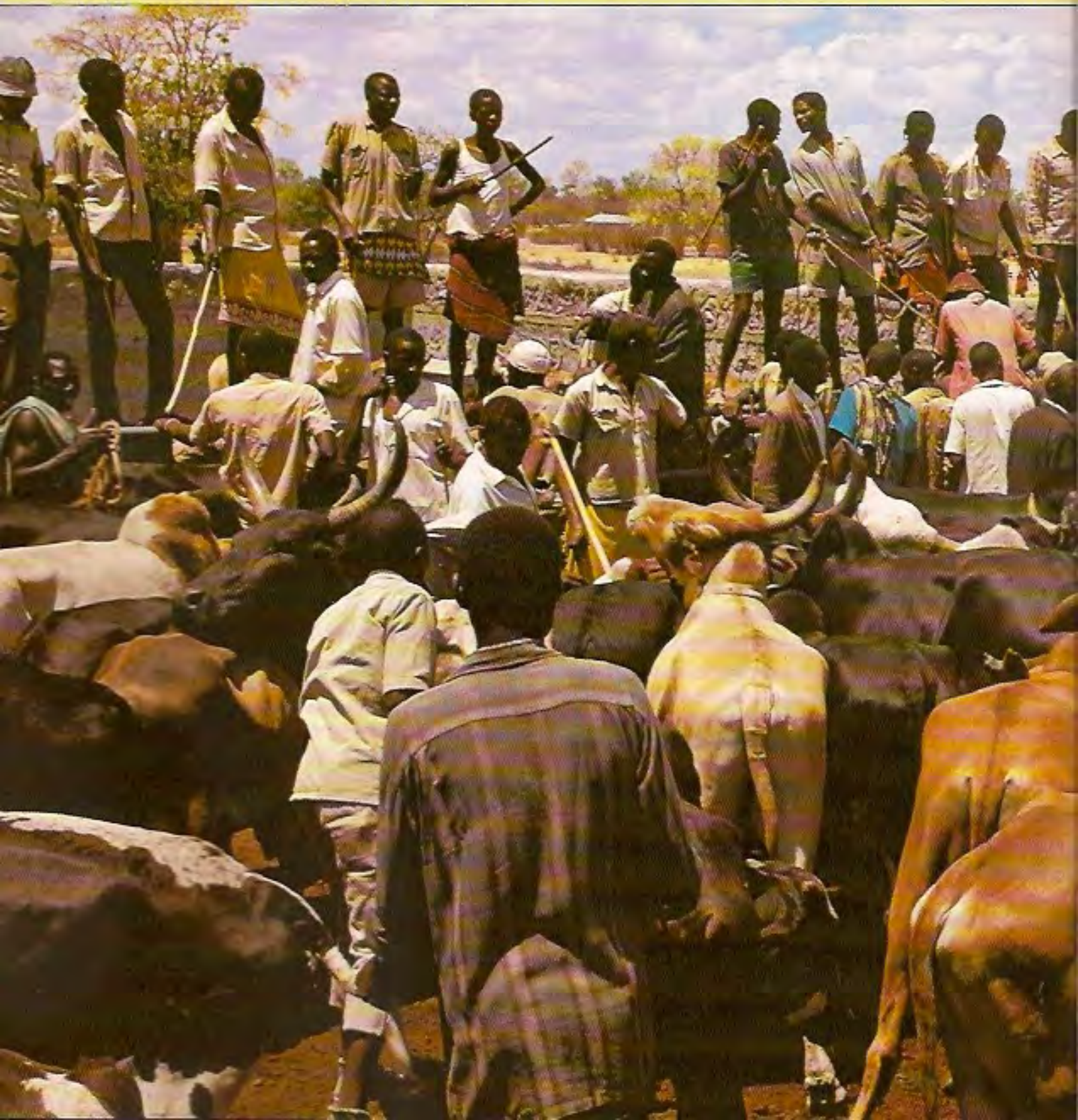
THE PRODUCTS

Farmed animals make a smaller contribution than plants to a hungry world. Less than a quarter by weight of world food production comes from animal products, and food energy present in plants is lost during conversion to animal products. Animals do, however, provide a much higher proportion of the total human protein intake (mainly from meat) and they allow

man to utilize many plants which are not themselves suitable for human consumption. Vast areas of grassland are harvested by farm animals and production of plants in freshwater and in the seas is converted by fish into valuable protein which man consumes. Man also needs animal products for clothing, shoes, bedding and other means of protecting himself from

his environment. The total world production of hide, wool etc used for such purposes is about 10 million tons per annum.

Some 600 million buffalo, cattle, asses and mules etc are used as sources of power, compared to 21 million tractors. Draft animals produce much more energy input to agriculture than do tractors—estimated at nine times as much in 1980.





◀ **World food production** (million tons per annum). Although animal products include water in milk, they provide more protein than crops. Not all crops are for human consumption.

▼ **Cattle market at Dodoma, Tanzania.** These humped zebu cattle, originally from India and Pakistan, are resistant to tropical temperatures and need less water than European cattle. They are widespread in Africa.

