
CONTENTS

INTRODUCTION: PASTORAL SYSTEMS WORLDWIDE	1
Overview	1
Classifying pastoral systems	1
Pastoral species	3
Pastoral enterprises	4
History and origins of pastoralism	9
Sources of information on pastoralism	10
The discourse of pastoralism	11
GRAZING AND NUTRITION	13
Rangelands: opportunistic use of patchy resources	13
Silvopastoral systems	15
Supplementary feeding	16
BREEDING AND REPRODUCTION	19
Breeding and reproduction in pastoral herds	19
Hi-tech <i>ex-situ</i> strategies	20
ANIMAL HEALTH	21
Pastoralists and the health of their animals	21
Traditional remedies	22
Trypanosomiasis and the campaigns to eradicate tsetse	22
WHAT DO PASTORALISTS PRODUCE AND HOW DO THEY MARKET IT?	25
Dairy products	25
Meat preservation	27
Hides, skins and other products	27
Work animals	28
Selling pastoral products	28
Worldwide demand for protein	30
Globalization of the trade in livestock products	31
Evaluating productivity	31
THE MANAGEMENT AND MITIGATION OF VULNERABILITY	33
Migration	33
Changing herd composition	33
Predation	34
Theft	34

SOCIAL AND CULTURAL INSTITUTIONS OF PASTORALISM	35
Social structures	35
Role of women in pastoral society	35
Pastoral identities	36
Land tenure and the common property resources debate	36
PASTORALISM AND THE STATE	37
The edge eats the centre	37
Pastoralists and national borders	37
PASTORAL POPULATIONS AND RANGELANDS	39
Competition with foragers	39
Pastoralists and the environment	40
Competing uses of the world's rangelands	42
BIODIVERSITY	47
Maintaining livestock biodiversity	47
Maintaining rangeland biodiversity	49
IMPROVING THE LIVELIHOODS OF PASTORALIST FAMILIES AND COMMUNITIES	51
Disaster management	51
Recovery strategies	54
WHO SHOULD ADDRESS THESE POLICIES AND ISSUES?	61
Pastoralists in the national, the regional and the global perspectives	61
Key reorientation of the policy towards pastoralists	61
Who should be doing what?	63
CONCLUSION AND RECOMMENDATIONS	65
Why has pastoralism survived?	65
Key trends in twentieth-century pastoralism	65
Where is pastoralism headed?	65
ANNEXES	67
I. The origin of pastoral species	67
II. Pastoralism with monogastric species	68
III. Worldwide tables of pastoral peoples	69
BIBLIOGRAPHY	73
Electronic resources	92
BOXES	
1 The desert in Jordan: a parking lot for herds?	16
2 The Raika and their camels	29
3 Measuring output over time	31
4 Overgrazing in Africa's high-altitude grasslands	40
5 Keeping Chukchi reindeer herds in check	41
6 Persuading the Navajo to sell	42
7 The expansion of microlivestock in Nigeria	48

TABLES

1	Regional zonation of pastoral systems	2
2	Main pastoral species and management systems worldwide	3
3	Estimated areas of the world's rangelands	13
4	Classes of grasslands	13
5	Mongolian dairy products	25
6	Dairy products by species	26
7	Livestock products by species	27
8	Working animals by species	28
9	Actual and projected meat consumption by region	30
10	Source of increases in world meat supply	30
11	Kenya rangeland livestock and wildlife population estimates: 1970s-1990s	44
12	Factors accelerating the erosion of livestock biodiversity	48
13	Key factors shaping twentieth-century pastoralism	66