

# Table of Contents



<b>Chapter 1: INTRODUCTION</b> .....	5
<b>Chapter 2: SYSTEMS OF BEEF CATTLE</b>	
PRODUCTION .....	8
Cow-Calf Phase.....	8
Backgrounding Phase .....	9
Finishing/Feedlot Phase.....	10
The Purebred Herd.....	10
<b>Chapter 3: BEEF CATTLE SELECTION</b> .....	11
Major Performance Traits .....	11
Selection Methods .....	13
Performance Records.....	16
Expected Progeny Differences (EPDs).....	17
Genetic Testing .....	24
<b>Chapter 4: ANIMAL BREEDING</b> .....	25
Basis for Genetic Improvement .....	25
Mating Systems.....	26
Crossbreeding Systems .....	27
Genetics and the Environment.....	30
<b>Chapter 5: BEEF CATTLE NUTRITION</b> .....	31
Essential Nutrients .....	31
Water .....	31
Protein .....	31
Carbohydrates and Fats.....	31
Minerals for Beef Cattle.....	31
Vitamins for Beef Cattle.....	32
Balancing Rations .....	33
<b>Chapter 6: BEEF CATTLE FEEDING</b> .....	36
Feeding the Cow Herd.....	36
Special Nutrient Deficiencies .....	39
Feeds Produced in Arkansas.....	39
<b>Chapter 7: FORAGES FOR BEEF CATTLE</b> .....	40
Matching Pastures With Seasonal Forage Requirements of Cattle .....	40
Planning the Grazing Season .....	42
Grazing System Planning Calendar.....	46
Pasture and Hay Forage Inventory Sheet.....	47
<b>Chapter 8: BEEF CATTLE MANAGEMENT</b>	
PRACTICES .....	48
Management of Breeding Animals .....	48
Artificial Insemination of Beef Cows.....	49
Estrous Synchronization in Cattle .....	49
Embryo Transplantation .....	50
Body Condition Scoring .....	50
Management at Calving .....	51
Managing the Calf Crop .....	52
Feed Additives .....	54
<b>Chapter 9: KEYS TO SUCCESS IN STOCKER PROGRAMS</b> .....	56
Economics of Stocker Enterprises .....	56
Effects of Health on Performance and Profitability .....	57
Types of Stocker/Backgrounding Programs .....	58
Summary and Conclusions.....	60
<b>Chapter 10: HERD HEALTH</b> .....	61
The Beginning Herd.....	61
Herd Health Program .....	61
Suggested Herd Health Practices.....	61
Treatment of Stocker Calves .....	62
Common Diseases .....	63
Cattle Vaccinations .....	64
Health Calendar and Cattle Vaccinations.....	66
<b>Chapter 11: WORKING AND FEEDING</b>	
FACILITIES .....	68
Working Facilities.....	68
Feeding Equipment .....	72
<b>Chapter 12: MARKETING</b> .....	73
Marketing Alternatives .....	73
Future Price Outlook .....	74
Current Market Information.....	75
Market Value .....	75
Management Factors Affecting Market Price.....	77
Marketing Purebred Cattle .....	78
Market Regulations .....	78
<b>Chapter 13: FARM MANAGEMENT FACTORS</b> .....	79
Finance .....	79
Income Taxes .....	79
Budgeting .....	80
Feeder Cattle Budgeting .....	80
<b>APPENDIX</b> .....	84

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the University of Arkansas System Division of Agriculture – Cooperative Extension Service is implied.