1998 SURVEY OF BEEF AND FORAGE PRACTICES USED BY BEEF CATTLEMEN IN SOUTH-CENTRAL FLORIDA

Information in this document was gathered in a 1998 survey of beef producers in nine counties (Polk, Hillsborough, Pasco, Manatee, Sarasota, Hardee, Okeechobee, Highlands and DeSoto) in south-central Florida. A similar survey was conducted in these counties in 1986 and 1990. Comparisons to surveys conducted in 1986 and 1990 are made throughout this document. The information contained in this document was gathered in a specific location and may not reflect the beef cattle situation for other areas of Florida.

ABOUT THE BEEF OPERATIONS

Kinds of Beef Operations - In the 1998 survey 84% of the beef operations in the nine counties were commercial. Six percent were purebred operations, and 10% were a combination of the two types. There are no important changes from the 1986 and 1990 surveys.

Plans for the Next Five Years - In the 1998 survey 55% of the beef operators in the nine counties planned to maintain and 30% planned to increase the size of the operation. Eight percent would reduce herd size and 6% would quit. Similar results were obtained in the 1986 and 1990 surveys.

Plan for next five years	1986	1990	1998
Increase size of operation	23[1]	35	30
Reduce size of operation	8	4	8
Maintain size of operation	60	58	56
Get out of beef business	9	3	6

[1]Data are in percent.

Profitability - In the 1998 survey only 23% indicated that they were making a profit, 38% was breaking even, and 40% was losing money. This question was not asked in previous surveys.

Importance of Profitability - In the 1998 survey 59% of the producers felt it was very important for their beef operation to make a profit. Thirty-nine percent felt it was somewhat important, and 2% indicated it was not important for their beef operation to make a profit. The 1998 survey data are basically the same as that in obtained in the1986 and 1990 surveys.

Business Structure of Farm/Ranch - In the 1998 survey more farms and ranches were family owned (45%) than any other form of business structure. Individual ownership (41%) was the next most popular form of business structure. These data were similar to that obtained in the two previous surveys.

Employment Status of Owner - In the 1998 survey 54% of owners had jobs other than the beef

business. Of those that had other jobs, sixty-nine percent worked full time. These data were not greatly different from the 1986 and 1990 surveys.

Income Derived from Cattle Operation - In the 1998 survey 57% of producers surveyed derived less than 25% of their total income from the operation. Only 11% and 10% derived more than 50% and 75%, respectively, from the operation.

Years Owners Have Been in the Cattle Business - In the 1998 survey 20% of owners had been in the cattle business for 10 years or less. Seventeen percent had been in business from 11 through 20 years. Thirty-six percent had been in business from 21 through 40 years, and 27 percent had been in business for over 40 years.

REPRODUCTION

Numbers of Cows Bred - In the 1998 survey 25% of the producers owned 50 or fewer cows, 41% owned fewer than 100 cows, 48% owned 101 to 1000 cows, and 11% owned more than 1000 cows.

Average number of cows and heifers per ranch was 596 and 108, respectively. The average stocking rate was 3.7 acres per animal (total of cows and heifers).

Number of Cows Per Bull - In the 1998 survey producers indicated they used one bull for every 23 cows and for every 15 heifers. Number of cows per bull was 21 in 1986 and 24 in the1990 surveys. The breed of Bulls used with the cows and heifers in the 1998 survey, and with cows for the 1990 survey are shown below. This information was not obtained in the 1986 survey.

Breed of bull	Cows 1990	Cows 1998	Heifers 1998
Angus	7[1]	17	43
Hereford	27	16	9
Brahman	9	10	3
Brangus	12	17	26
Braford	17	11	8
Beefmaster	11	7	4
Charolais	1	10	3
Other	16	12	4

[1]Data are in percent.

Number of Bull Breeds Used - In the 1998 survey 50% of producers use one breed of bulls, 26% used two breeds, 13% used 3 breeds and 11% used 4 to 6 breeds. In the 1986 survey, 44% of the producers surveyed used only 1 breed, 30% used 2 breeds and 26% used three or more.

Selecting Bulls - In the 1998 survey the information producers used to select replacement bulls, ranked 1 through 3, are shown in the following table. This is compared to unranked selection parameters obtained in the 1990 survey.

Selection parameter	1990 survey	Rank of importance, 1998 survey		
		1	2	3
Weaning weight	45[1]	14	8	9
Yearling weight	39	2	7	7
Sire summary	37	5	6	6
Visual appearance	na[2]	51	17	17
Pedigree	38	7	9	5
Expected progeny difference (EPD)	na	11	19	7
Scrotal circumference	37	2	13	16
Libido score	21	1	4	1
Price	na	5	13	24
Carcass information	na	1	2	4
Herd ratio	na	2	0	1
Other	28	2	3	3

[1]Data are in percent. [2]Information not asked for.

Breeding Season Information - In the 1998 survey 69% of producers used a breeding season, compared to only 43 and 44% in the 1986 and 1990 surveys, respectively. Of producers who used a breeding season, 93% put their bulls out in the fall and winter.

Month bulls placed with cows	Percent
November	7
December	21
January	32
February	20
March	13

Eighty-four percent of producers using a breeding season removed bulls in spring and summer.

Month bulls removed	Percent
March	8
April	9
May	15
June	20
July	16
August	16

Three producers used two breeding seasons with separate herds. The first starting in December or January, and the second starting in March or April.

How Often are Bulls Semen Tested - In the 1998 survey 38% of producers tested their bulls annually. This compared to 46% and 39% in the 1986 and 1990 surveys, respectively.

Breeding soundness test	1986	1990	1998
Tested bulls annually	46[1]	39	38
Tested every 2 or 3 years	25	28	17
Tested when purchased	15	12	22
Never tested	10	20	21

[1]Data are in percent.

Tested for Trichomoniasis - In the 1998 survey 25% of the producers checked for trichomoniasis. In the 1990 survey, 22% of the ranching operations checked for trichomoniasis.

Use of Artificial Insemination - In the 1998 survey only 4% of producers use AI. Of those that artificially inseminated cows, 67% used syncro-mate B, 40% used prostaglandin, and 20% used a combination of the two to synchronize cows. None used MGA.

Pregnancy Checking the Cow Herd - In the 1998 survey 34% of producers palpated all cows and 23% palpated only dry cows. Comparison to previous surveys are shown in the following table.

Cows palpated	1986	1990	1998
Palpated all cows	16[1]	30	34
Palpated only dry cows	28	38	23

[1]Data are in percent.

In the 1998 survey of those that palpated for pregnancy 46% did it themselves, 55% used a veterinarian and 7% used other sources. Comparisons with previous surveys are:

Who palpates	1986	1990	1998
Owner or employee	42[1]	48	46
Veterinarian	51	55	55
Other	na[2]	5	7

[1]Data are in percent. [2]Information not asked for.

In the 1998 survey pregnancy rates were 81% for virgin heifers, 77% for first-calf cows, and 84% for mature cows. In the 1990 survey average pregnancy rates were 83% for virgin heifers, 82% for first-calf heifers, and 90% for mature cows. This question was not asked in the 1986 survey.
Obtaining Replacement Heifers - In the 1998 survey 90% of producers raised their own

replacement heifers. Twenty-four percent purchased bred heifers and 19% purchased open heifers. This question was not asked in previous surveys.

Calving Heifers for First Time - In the 1998 survey 40% of producers calved heifers first at 2 year of age and 43% calved first at 3 years of age. Thirteen percent indicated they calved at both 2 and 3 years of age, and option apparently not asked in previous surveys. Comparison to previous surveys are presented in the following table.

Heifer age at first calving	1986	1990	1998
At 2 years of age	46[1]	42	40
At 3 years of age	49	55	43
At 2 and 3 years of age	--	--	13
Other	5	3	4

[1]Data are in percent.

The average weight of heifers when bred was 731 pounds in the 1998 survey. This average weight at breeding was 695 pounds in the 1990 survey. Fifty-one percent of producers exposed heifers to bulls prior to the mature cow herd.

Management of Replacements - In the 1998 survey, 65% percent of producers managed replacements separate from the cow herd. Of these producers that managed replacements separately, 89% did so for weaned heifers, 62% did so for first-calf cows, and 13% did so for second-calf cows. In the 1986 and 1990 surveys, respectively, 57% and 62% of the producers said they kept replacement heifers separated from the cow herd.

Culling the Cow Herd - In the 1998 survey the average annual culling rate was 9%. Average culling rate was 8% in the 1990 survey.

Factors Limiting Reproduction -In the 1998 survey 63% of producers said nutrition was the most important factor limiting reproduction. This result was similar to data obtained in 1986 and 1990.

Factor limiting reproduction	1986	1990	1998
Genetics	na[2]	13	17
Parasites	25[1]	9	12
Nutrition	50	61	63
Repro diseases	11	10	4
Other	14	7	4

[1]Data are in percent. [2]Information not asked for.

MARKETING

Weight and Age of Calves at Weaning - In the 1998 survey producers indicated the when marketed at weaning average weight of calves was 458 pounds and 7.8 months of age. Comparisons to the two previous surveys are shown in the following table.

Weaning variable	1986	1990	1998
Avg. weight at weaning, lb	451	444	458
Avg. age at weaning, mo.	7.4	7.8	7.8

Weight and Age of Calves When Marketed Other Than at Weaning - In the 1998 survey producers indicated that when marketed at some time after weaning, calves weighed 445 pounds and were 8.6 months of age. Comparison to previous surveys are presented in the following table.

Postweaning variable	1986	1990	1998
Avg. weight when sold, lbs	470	484	445
Avg. age at when sold, mo.	10.3	8.3	8.6

Marketing Methods - In the 1998 survey 87% of producers marketed calves through auction barns. This was similar to the 1986 and 1990 survey data. Other methods used and comparisons to past surveys are shown in the following table.

Marketing route	1986	1990	1998
Auction barns	85[1]	86	87
Order buyers	16	13	25
Video auction	na[2]	3	11
Board sales	2	4	1
Private treaty	25	21	28
Retained ownership	na	na	12
Participate in alliance	na	na	2

[1]Data are in percent. [2]Information not asked for.

Calf Management Procedures Performed - In the 1998 survey 82% of producers castrated calves before weaning. Other management procedures and the frequency of use are shown below. This information was not obtained in the 1986 and 1990 surveys.

Castration	82
Implant	49
Deworm	77
Teach to drink from trough	37
Teach to eat from trough	32
Dehorn genetically	37
Dehorn physically	51
Vaccinate for respiratory diseases	45

[1]Data are in percent.

PRODUCTION

Identifying Cows and Calves - In the 1998 survey 64% of producers identified the cow and 32% identified the calf. Comparison to past surveys were:

Animal identified	1986	1990	1998
Each cow	57[1]	72	64
Her calf	40	43	32

[1]Data are in percent.

Beef Herd Records - In the 1998 survey 68% of producers indicated they kept beef herd records. This compared to 34% in the 1986 and 25% in the 1990 survey.

In the 1998 survey, of producers who kept records, 83% kept financial and 57% kept production records. Fifty percent of those who kept financial records indicate they used them for business analysis and 45% of producers who kept production records used them to select and cull the cow herd. In the 1990 survey, 88% of the ranchers who kept production records used them to cull cows and 73% used them to select replacement heifers.

HERD HEALTH

Controlling External Parasites - In the 1998 survey 99% of producers said they used methods to control external parasites. These percentages were 94% in the 1986 and 95% in the 1990 surveys. The measures used to control external parasites, and comparisons with previous surveys are:

Control method	1986	1990	1998
Eartags	19[1]	24	28
Pour-on	30	55	88
Spray	58	65	52
Back-rub	11	11	16
Dust bag	29	23	12
Medicated feed	9	4	4
Other	9	4	5

[1]Data are in percent.

Controlling Internal Parasites - The following table shows the class of animals dewormed according to the 1998 survey, and comparisons to previous surveys:

Class of animals dewormed	1986	1990	1998
Cows	85[1]	93	94
Calves	77	80	80
Bulls	88	95	95
Replacement heifers	na[2]	93	88

[1]Data are in percent. [2]Information not asked for.

Controlling Internal Parasites - The following table shows the method of treatment for internal parasites according to the 1998 survey and comparisons to previous surveys:

Deworming method	1986	1990	1998
Injectable	39[1]	56	67
Pour-on	na[2]	26	73
Drench	25	28	38
Mineral feed	7	12	4
Paste or gel	48	27	16
Medicated block	na	5	4
Bolus	4	4	2

[1]Data are in percent. [2]Information not asked for.

Controlling Liver Flukes - In the 1998 survey 65% of producers treated for liver flukes. This

compared to 41% in 1986 and 49% in the 1990 surveys.

Vaccinations - According to the 1998 survey the following vaccinations were given to the cow herd. These data are compared to the 1990 survey.

Vaccine type	1990	1998
Brucellosis	90[1]	67
Lepto	43	62
Vibrio	40	62
Blackleg	57	66
Pinkeye	14	9
Tetanus	15	16
Trichomoniasis	5	20
Haemophiles somnus	13	18
Red water	24	30
Pasteurella	12	24
E. coli	5	10
IBR, PI3, BVD and BRSV	25	48

[1]Data are in percent.

NUTRITION

Winter Forage Use - In the 1998 survey the forages used in the winter and comparisons to previous surveys are shown in the following table.

Winter forage source	1986	1990	1998
Native range	54[1]	66	75
Hay	81	80	74
Silage	2	2	5
Winter pasture	30	35	32
Stockpiled forage	39	38	48

[1]Data are in percent.

Supplements Fed During the Winter - In the 1998 survey the supplements fed during the winter and comparison to past surveys are listed in the following table:

Type of supplement	1986	1990	1998
Molasses	53[1]	50	64
Molasses slurry	na[2]	5	11
Range cubes	21	31	29
Protein mineral	41	38	31
Dry mixed feed	na	na	11
Dry citrus pulp	na	na	14
Wet citrus pulp	na	na	6
Salt/protein mix	na	33	28
Protein block	32	33	28
Wheat midds	na	na	0
Soy hulls	na	na	1
Poultry litter	na	na	1
Culled oranges and grapefruit	na	na	9
No supplement	4	1	2
Other	6	5	5

[1]Data are in percent. [2]Information not asked for.

Analysis of Forage - In the 1998 survey 19% of producers surveyed said they have had hay and/or silage analyzed. This compared to 10% in the 1986 and 15% in the 1990 surveys.

In the 1998 survey 16% of producers indicated they had pasture grasses analyzed for quality. This question was not asked in previous surveys.

Hay Ammoniation - In the 1998 survey 82% of procedures indicated they were aware that hay could be ammoniated to improve quality. Six percent indicated that they had ammoniated hay.

Use of Cow Condition as a Management Tool - In the 1998 survey 69% of producers surveyed use cow condition to decide when to start or stop supplementing. Sixty percent use cow condition to determine how much supplement to feed.

When Winter Supplement is Fed - The following table shows when supplementation is initiated and when it is discontinued according to the 1998 survey.

Month when supplement is started		Month when supplement is discontinued	
September	3[1]	February	4
October	13	March	46
November	28	April	30
December	32	May	10
January	11	June	3
February	1		
First frost	6		
All year	7		

[1]Data are in percent.

FORAGE PRODUCTION

Pasture Information - For the 1998 survey average land use is shown in the following table. Thirty-five percent of the producers leased pasture at an average cost of $10.68 per acre.

Total acres used	2580
Acres improved	1212
Acres semi-improved	262
Acres native	1008
Acres hay	98

Types of Grasses - For the 1998 survey grasses used on ranches and comparison to previous surveys are shown below. Acreage of grasses was obtained in the 1998 survey and average acres per ranch are shown. In the 1998 survey bahiagrass was 83% of the total improved pasture acreage, Limpograss (hemarthria) 8%, stargrass 5%, bermudagrass 2%, and other grasses 2%.

Grass	1986	1990	1998	
	Percent	Percent	Percent	Acres[1]
Bahiagrass	87	92	93	1180
Limpograss/hemarthria	12	14	25	410
Bermudagrass	28	32	24	100
Stargrass	19	21	23	290
Rhodesgrass	na[2]	0	18	80
Pangolagrass	44	46	11	210
Ryegrass	23	31	21	100
Suerte	na	na	3	55

[1]Acreage on ranches that had planted these grasses. [2]Information not asked for.

Types of Legumes - For the 1998 survey types of legumes used on ranches and comparisons to past surveys are shown in the following table. The average acreage for each legume on ranches where they were planted is shown for the1998 survey.

Legume	1986	1990	1998	
	Percent	Percent	Percent	Acres[1]
Aeschynomene	21	57	18	750
Aeschynomene evenia	na[2]	na	8	965
Hairy indigo	14	32	10	265
Alyce clover	15	24	5	100
Carpon desmodium	na	4	5	1335
Savanna stylo	na	na	5	25
Perennial peanut	na	1	3	25
White clover	16	40	11	88

[1]Acreage on ranches that had planted these legumes. [2]Information not asked for.

Rotational Grazing - In the 1998 survey 79% of producers used rotational grazing. This compared to 72% in the 1990 survey.

Hay Production - Ranchers produced an average of 535 rolls of hay on 98 acres of forage grown for hay.

Most Important Factor in Determining Fertilization Program - In the 1998 survey the most important factors in determining the pasture fertilization program are shown below. This question was not asked in previous surveys.

Item	Percent
Previous experience	68
University recommendations	5
Fertilizer dealer	6
Soil test	21

Liming Pastures - In the 1998 survey 63% percent of producers said they limed bahiagrass, 59% limed other grasses, and 73% limed hay. The frequency in which they applied lime is presented in the following table.

Frequency of liming	Bahiagrass	Other grasses	Hay
According to soil test	27[1]	28	33
Annually	18	11	21
Every 2 years	11	8	9
Every 3 years	15	14	12
Every 4 or more years	28	34	24

[1]Data are in percent.

Fertilizing Bahiagrass - In the 1998 survey 82% of producers fertilized bahiagrass. Of those that fertilized bahiagrass the following formulas were used:

Type of fertilizer	Percent
Mixed (N-P-K)	57
Ammonium nitrate	11
Ammonium sulfate	29

In the 1998 survey, of those producers who used a mixed formula the average analysis was 17-5-9 (N-P_2O_5-K_2O) applied at an average rate of 295 pounds per acre. Producers who use a mixed fertilizer on bahia grass applied it to only 64% of their bahiagrass pasture annually.

In the 1986 and 1990 surveys, respectively, 76 and 78% of producers indicated that they fertilized improved pasture. Information specific to bahiagrass and other grasses was not asked for.

In the 1998 survey, producers that used a mixed formula applied 51 lb of N, 15 lb of P_2O_5, and 27 lb of K_2O per acre. This compared to 54 lb of N, 24 lb of P_2O_5, and 31 lb of K_2O applied per acre in 1986. There has been a substantial reduction in the application of phosphorus containing fertilizer nutrients in 1998 in comparison to the 1986 survey.

Fertilizing Other Grasses and Hay Crops - In the 1998 survey 69% of producers fertilized other grasses and 84% of those that fertilized other grasses used a mixed formula. Eighty-five percent fertilized hay crop and 91% of these used a mixed formula.

Use of Organic Waste for Fertilizer - In the 1998 survey 11% of producers indicated they used organic waste for fertilizer.

Incidence of Mole Crickets - In the 1998 survey 64% of producers indicated they had mole cricket damage. On ranches where mole cricket damage was indicated the average acreage

affected was 289 acres.

Weed Problems and Approximate percentage of Pastures Affected - For the 1998 survey the following table shows the incidence of weed problems on ranches surveyed, and the percentage of pasture affected on ranches that indicated a weed problem. This question was not asked in past surveys.

Weed	Percent of ranches	Percent of pasture affected
Blackberry briars	23	10
Dog fennel	71	33
Pig weed	23	13
Smutgrass	63	27
Tropical soda apple	53	21
Wax myrtle	26	19
Other	9	18

Methods Used to Control Weeds - For the 1998 survey the following methods of weed control was used. This question was not asked in past surveys.

Method of weed control	Percent
Mowing	98
Pasture renovation	15
Herbicide	68

ENVIRONMENTAL CONSIDERATIONS IN 1998 SURVEY

Eighty-eighty percent of producers surveyed indicated they had open water areas on their property.

Ninety-four percent of producers who had open water said cattle had access to these areas.

Sixty-one percent of producers who had open water said they also provided water troughs in these pastures.

Ninety-two percent of producers who had open water said they do not fence off these areas.

Seventy-eight percent of producers surveyed said they feed mineral, supplement, and hay over 100 feet from open water areas.

Fifty-eight percent of producers surveyed felt that pasture fertilization practices can affect water quality.

These questions on environmental issues were not asked in previous surveys.

OTHER QUESTIONS IN THE 1998 SURVEY

Where, or to whom do ranches look for information?

Source of information	Percent
Other cattlemen	84
County extension	66
Close relations	21
Magazines	63
Farm organizations	23
Veterinarians	67
Internet	11
Company reps	43
Other	2

What do ranchers feel are the three most important problems facing the beef industry.

Problem facing beef industry	1st	2nd	3rd
Retail price of beef	10[1]	14	9
Demand for beef	16	19	15
Environmental issues	10	15	16
Consumer concerns	2	7	11
Animal welfare issues	10	2	3
Government regulations	47	15	10
Price rancher receives for calves	1	14	14
Urban encroachment	3	5	7
Production efficiency	2	8	12

[1]Data are in percent.

How do ranchers describe the University of Florida, Cooperative Extension Service's participation in Florida beef industry?

Rating	Percent
Satisfactory	94
Unsatisfactory	2
Other	4

METHOD FOR OBTAINING INFORMATION

County Extension agents obtained this information from beef producers using mail questionnaires in nine counties: DeSoto, Hardee, Highlands, Hillsborough, Manatee, Okeechobee, Pasco, Polk and Sarasota. A sample size was 503 randomly selected ranchers. One hundred and ninety eight were returned and 176 were usable for this analysis. Data were tabulated and analyzed at the Range Cattle Research and Education Center at Ona, FL.

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