

Breeding Programs

for

Registered **Beef Herds**



TEXAS AGRICULTURAL EXTENSION SERVICE
J. E. HUTCHISON, DIRECTOR, COLLEGE STATION, TEXAS

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Breeding Program for *Registered* Beef Herds

L. A. MADDOX, JR., U. D. THOMPSON

Extension Animal Husbandmen

The Texas A. & M. College System

THE USE OF A LARGE NUMBER of registered beef bulls to improve commercial beef cattle in Texas about the turn of the century made fast and substantial improvement in cow herds. At that time and for many years after the wide difference in ability to grow and fatten between common and high grade cattle made nearly any registered bull capable of improving several successive generations of grade cattle. Many of our present commercial herds are the result of 15 to 20 top crosses from registered bulls, while others were established by purchasing registered or high grade cows as foundation stock. For a registered breeder to produce bulls that will be able to improve the better commercial herds, he should have more productive cattle to begin with, and should maintain an effective breeding program that will assure faster herd improvement than the commercial cattlemen, who buy his bulls.

The practice of mating outstanding bulls with outstanding cows and careful selection of replacement breeding stock used by early breeders to establish our present beef breeds, is still the best method of improving beef cattle. Recent research shows that more exact methods for selecting breeding animals can be used. The use of production information (regularity of calving, weaning weight, ability to gain, conformation, finish and carcass information) makes it possible for a breeder to select animals that are (1) outstanding producers, (2) will develop into outstanding producers or (3) select matings that should result in animals capable of outstanding production.

A progressive breeding program should be designed to produce top replacement and sale cattle. This can be done most efficiently if the best producing cows are bred to bulls capable of outstanding production, and most of the heifer calves are saved for replacements. Where cow herds have not been divided according to ability to produce, below-average bulls will mate with top cows, resulting in average instead of outstanding calves. The mating of outstanding cows and bulls will result in the production of about four times as many top replacement and sale cattle.

The division of cows into breeding herds (cows bred to one bull) selected on production and mated

to bulls selected the same way will make the most efficient use of outstanding breeding stock. These herds usually are designated as top or first, second, third, etc. herds, and are separated according to production as described in Sections 1 and 2.

Section 1—Separating Cows into Breeding Herds

A. WITH PERFORMANCE RECORDS ON CALVES

When performance records are obtained on the entire calf crop, the division of cows into breeding herds should be made after the first year's records have been completed. From these performance records the mothers of the top 25 to 30 calves based on grade and weight should become the top or first herd. Using the same procedure, the mothers of the next 25 to 30 calves would become the second herd, etc.

B. WITH PRODUCTION RECORDS ON COWS

The separation into classes of breeding herds can be based on the production records of cows. The use of the cow's production index, Section 6, page 5, will identify those cows that are doing the best job in producing calves with desirable conformation and heavy weight. The 25 to 30 cows with the smallest number for a production index should make up the top or the first herd. The next 25 to 30 cows with the smallest remaining production index will become the second herd, etc.

Section 2—Selection of Bulls for Each Herd

A. THE FIRST SELECTION

The maintenance of good-producing bulls is of major concern to a breeder. In the initial stages of setting up breeding herds based on production, it may be impractical to purchase a new bull with performance or production records. If new bulls are not purchased, the present herd bulls should be selected for top or first, second, third, etc. herds, based on the productive

ability observed in the bulls' offspring and the productive ability of the cattle produced by the breeder who raised the bulls.

B. WITH PERFORMANCE AND/OR PRODUCTION RECORDS

In selecting herd bulls for registered herds, weaning weights, grade at weaning time, rate of gain and grades after gain tests should be known in order to make the proper selection. The importance of these bulls cannot be overemphasized since they will become, in about 10 years, the sires of the entire cow herd. Major importance should be placed on weaning weight and grade because these bull calves will be used to breed more productive registered or commercial herds. Considerable importance should be placed on ability to gain, if the bull is to produce stocker and feeder calves and yearlings.

The bull with the most outstanding production records should be used in the top or first herd and the less productive bulls will be used in the second, third, etc. herds.

Section 3—Getting Production Information and Grades at Weaning Time

1. Identify each calf as soon after birth as practical with a tattoo number or ear tag. Records showing the calf's number, the date of birth and the dam's number must be kept.
2. Work calves in groups between 160 and 250 days of age. See chart, page 7. If all calves are not in these age limits, work the younger calves at a later date
or
3. Calves exceeding a 90-day spread in age or which are more than 250 days of age

should be weighed and adjusted weight calculated as described in No. 8 in this section.

4. Put the calves through a chute to read the tattoo or tag number and put a corresponding number on each calf by using paint brands or auction sale numbers.
5. Weigh and record weight of each calf. Use Form 1 for recording 6-7-8-9.
6. Grade and record grades of each calf using USDA Grading Standards.
7. Adjust weight to 205 days of age by using Figure 1.
or
8. Divide calves described in No. 3 into groups dropped in 60-day periods; calculate weight per day of age and multiply by average age.
9. Correct adjusted weights for age of dam using Table 2.
10. List each calf's tattoo or tag number on Form 2 opposite adjusted weight and under proper grade. (Use separate forms for bulls, heifers or steer calves; see Section 8, page 9.)

Section 4—Getting Ability-to-Gain Information and Grades After Weaning

- ### A. THROUGH PASTURE TESTS (Test should last 6 to 12 months.)
1. Transfer weaning information from Form 1 to 1a. The weaning weights will be used as initial weights.
 2. Take weights and grades if no weaning weight information has been recorded.

TABLE 1. DATES TO WEIGH AND GRADE CALVES USING FIGURE 1 TO ADJUST FOR AGE

Date of birth oldest calf	Include calves born	Calves should be weighed and graded between	Date of birth oldest calf	Include calves born	Calves should be weighed and graded between
Jan. 1	Mar. 22	Aug. 29 - Sept. 8	July 1	Sept. 19	Feb. 25 - Mar. 7
15	Apr. 5	Sept. 12 - 22	15	Oct. 3	Mar. 11 - 21
Feb. 1	Apr. 22	Sept. 29 - Oct. 9	Aug. 1	Oct. 20	Mar. 28 - Apr. 7
15	May 6	Oct. 13 - 23	15	Nov. 3	Apr. 11 - 21
Mar. 1	May 20	Oct. 27 - Nov. 6	Sept. 1	Nov. 20	Apr. 28 - May 8
15	June 3	Nov. 10 - 20	15	Dec. 4	May 12 - 22
Apr. 1	June 20	Nov. 27 - Dec. 7	Oct. 1	Dec. 20	May 28 - June 7
15	July 4	Dec. 11 - 21	15	Jan. 2	June 11 - 21
May 1	July 20	Dec. 27 - Jan. 5	Nov. 1	Jan. 19	June 28 - July 8
15	Aug. 3	Jan. 9 - 19	15	Feb. 2	July 12 - 21
June 1	Aug. 20	Jan. 26 - Feb. 5	Dec. 1	Feb. 18	July 28 - Aug. 7
15	Sept. 3	Feb. 9 - 19	15	Mar. 4	Aug. 11 - 21

TABLE 2. PERCENT TO BE ADDED TO CALF WEIGHTS AFTER ADJUSTING FOR AGE

Age of dam	Percent to be added
2	10
3	5
4-9	None
10	5
11 or older	10

3. Weigh and grade each calf 6 to 12 months after start of test and record information.
4. Add the gain after weaning to the adjusted weaning weight for an adjusted yearling weight when actual and adjusted weaning weights are recorded on Form 1b. (List tattoo number on Form 2 according to adjusted yearling weight and grade.)
5. The total gain on test will be used when actual and adjusted weaning weights have not been recorded. (List tattoo number on Form 2 according to gain and grade.)

B. THROUGH DRYLOT FEEDING TESTS (Test should be 140 days or longer.)

1. Take and record initial weights and grades 14 to 21 days after the calves have been on feed. Use Form 1b for recording 1-2-3. (The average of two weights taken on consecutive days will be the initial weight.)
2. Obtain, if practical, intermediate weights every 28 days.
3. Weigh and grade each calf and calculate gain at the end of the test. (The average of two weights taken on consecutive days will be the final weight.)
4. Use Form 1a and add adjusted weaning weight to gain for adjusted yearling weight if weaning data is recorded. (List tattoo number on Form 2 according to adjusted yearling weight and grade.)

or

5. The total gain on test will be used when weaning weights are not available. (List tattoo number on Form 2 according to gain and grade.)

C. CONTINUOUS GROWTH TESTS

1. Take weights and grades of cattle born in a 90-day period at 12 months or more of age.
2. Using weight per day of age, calculate an adjusted weight for the age (12, 14 or 16

months) standards selected. (List tattoo numbers on Form 2 according to adjusted weight and grade.)

Section 5—Evaluation of Calves and Yearlings Using Form 2

A. EVALUATION OF WEANING CALVES (Example: page 9)

Select replacement heifers and young bulls for further testing according to position on Form 2, allowing sufficient numbers for further culling as yearlings. The best prospective replacement and/or salable cattle appear in the upper left corner. Replacement heifers for graded herds should be selected from this chart. The top heifers should go to the top or first herd and the remainder used in the second or third herds. In cases near the cull line, consider the records of the sire and dam. Cull from the bottom up and from right to left on this form.

B. EVALUATION OF YEARLING CATTLE (Example: page 9)

The final selection of replacement and/or salable cattle as yearlings should be made according to their position on Form 2, using the same procedure as described in evaluating weaning calves.

When a continuous growth test is being used, consideration of weaning weights if available should be given when final selection of replacement cattle is made.

Section 6—Evaluation of Breeding Cattle

Direct comparisons within a herd should not be made between weaning weights of calves dropped in different years, in different seasons within a year, handled under different systems of management or calves of different sex.

A. BREEDING COWS

1. Divide calves into weight groups on each Form 2 according to Table 3 and record on Form 1.
2. Record on Form 1 calf rating according to Table 4.

TABLE 3. SUGGESTED GROUPING FOR CALVES ON THE BASIS OF ADJUSTED WEANING WEIGHT

Group 1	Heaviest 10%	Group 4	Next 25%
Group 2	Next 15%	Group 5	Next 15%
Group 3	Next 25%	Group 6	Lightest 10%

TABLE 4. RATING VALUES FOR CALVES, GIVING EQUAL EMPHASIS TO WEANING WEIGHT AND GRADE

Weight Groups	Fancy	Choice+	Choice	Choice-	Good
1	2	3	4	5	6
2	3	4	5	6	7
3	4	5	6	7	8
4	5	6	7	8	9
5	6	7	8	9	10
6	7	8	9	10	11

3. Transfer weaning information on each calf to the individual life record (Form 4) of its dam.
4. Record once a year cow's number on Form 3 according to her production index. (This index is the average of the ratings of all calves she has produced.)
5. Cows with outstanding production records are shown at the top of the form. The group at the bottom of the form should be culled as soon as practical.
6. Consider in culling breeding cows:
 - a. Regularity of production
 - b. Adequate milk production
 - c. Soundness—freedom from unsound udders, cancer eye, bad feet and legs and other physical and hereditary defects
 - d. Length of productive life

TABLE 5. SUGGESTED MINIMUM WEIGHTS AND GAINS FOR CATTLE WITH EXCELLENT PASTURE AND FEEDING CONDITIONS

Conditions	Adjusted 205-Day Weights			140-Day Gain Tests	12 Month Weight
	Bull	Steer	Heifer	Bull	Bull
A cow and calf grazing on pasture with or without protein supplement.	475 lb.	450 lb.	425 lb.	364 lb. (2.6 lb.) (per day)	875 lb. (2.4 lb. per) (day age)
A cow and calf same as above with calf on creep feeder.	500 lb.	475 lb.	450 lb.	364 lb. (2.6 lb.) (per day)	915 lb. (2.5 lb. per) (day age)
A calf, nursing its mother, raised in a feedlot.	525 lb.	500 lb.	475 lb.	364 lb. (2.6 lb.) (per day)	915 lb. (2.5 lb. per) (day age)
A calf raised in a feedlot on a nurse cow.	550 lb.	525 lb.	500 lb.	364 lb. (2.6 lb.) (per day)	915 lb. (2.5 lb. per) (day age)

e. Hardiness and adaptation to production conditions

f. Temperament

Information on the above six points should be entered on the cow's record each year.

B. HERD BULLS

Separate calves into sire groups on Form 4 and make comparisons between sires using average-weight group and average-number grade in herds where the identity of each calf's sire is known. Show these averages of each sire on Form 4a and chart by sex. To set up number grades give the highest grade number 1, the next highest number 2, etc. Mate bulls to uniform groups of cows that have been on similar pastures to make this comparison effective.

Section 7—Using Minimum Weights and/or Gains in Selecting Replacement Cattle

The main objective of this breeding program is herd improvement and little direct comparison will be made between herds except when replacement cattle are purchased. Under range or pasture conditions, the rancher should make allowances for differences in pasture condition and may not select the cattle with the highest weights and/or gains.

When a buyer is looking at two or more groups of cattle that have been produced under excellent pasture and feeding conditions, minimum weights and gains can be used. Table 5 shows some suggested weights and gains. Ranchers may want to set their own minimums that will vary some from those suggested.

Age in days

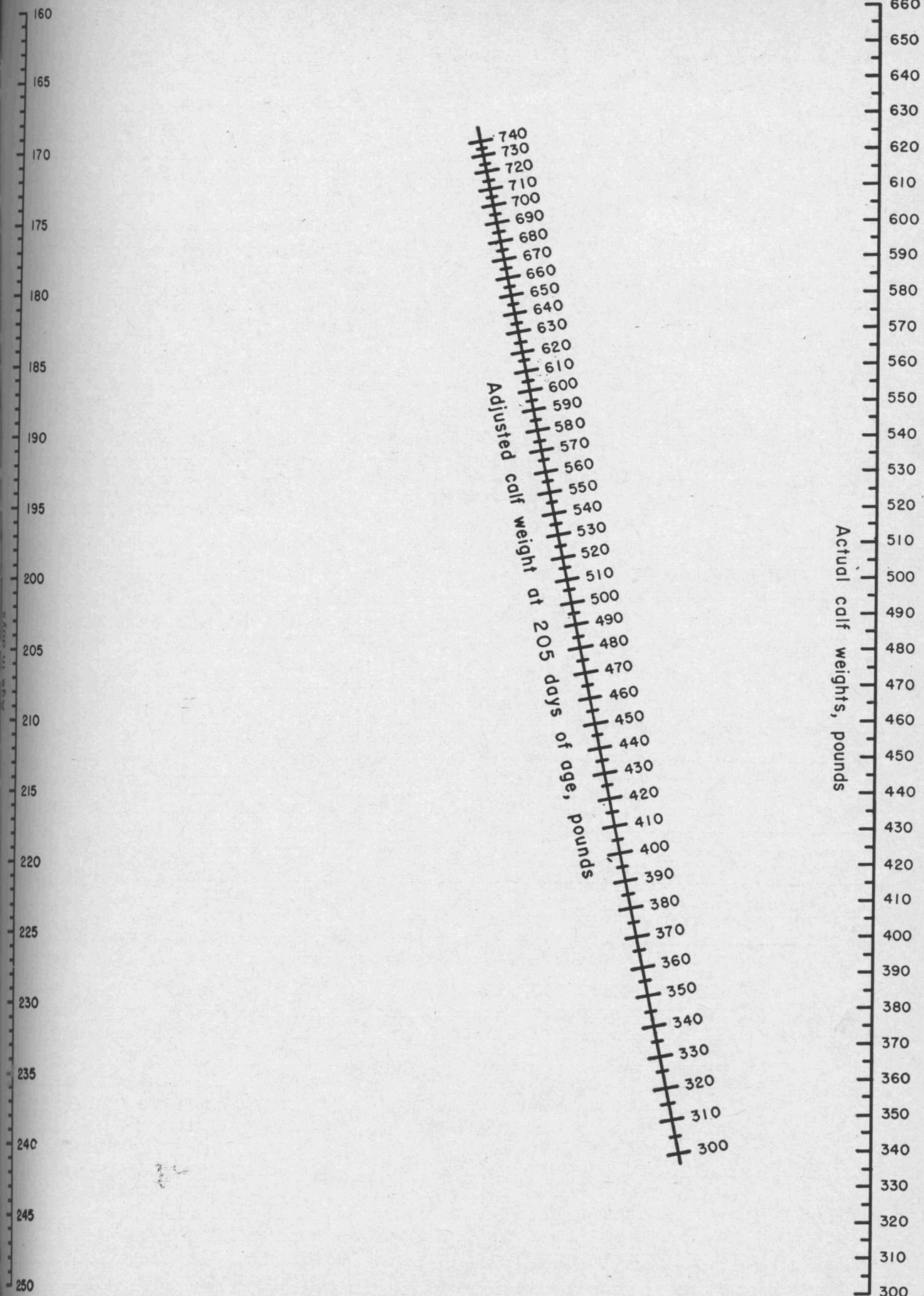


Fig. 1. A means of adjusting the weight of calves to 205 days of age. Use a straight edge to connect age in days with actual weight and read the adjusted weight at 205 days of age on the center scale. This chart was developed by subtracting an average birth weight of 70 pounds, calculating gain per day of age, multiplying this gain by 205, and adding the 70 pounds birth weight.

Name Date Nov. 1, 56 Ref. No. 1-57
 Address Sex Heifers

Herd No.	Dam	Sire	Date of birth	Age in days	Actual weight	Adj. Wt. 205 days	Age of dam	Adj. Wt. dam's age	Grade	Weight group	Rating	Remarks
50	283	JHR	3-1-6	245	585	510	4-	510	C+	3	5	X
51	905	JHR	3-1-6	245	620	535	7-	535	F	2	3	X
52	22	PM	3-6-6	240	545	480	6-	480	C	4	7	
53	399	PM	3-9-6	237	455	415	3(5%)	436	C	5	8	
54	117	PM	3-12-6	234	590	530	5-	530	C+	2	4	X
55	401	JHR	3-19-6	227	495	460	2(10%)	506	C	3	6	X
56	167	PM	3-19-6	227	610	560	5-	560	F	1	2	X
57	194	PM	3-25-6	221	490	465	5-	465	C	4	7	
58	223	JHR	3-27-6	219	505	480	4-	480	C-	4	8	
59	455	JHR	4-3-6	212	430	420	2(10%)	462	C-	4	8	
60	308	JHR	4-4-6	211	480	470	3(5%)	494	C+	3	5	X
61	478	RM	4-8-6	207	405	402	12(10%)	442	C	5	8	
62	81	PM	4-10-6	205	435	435	6-	435	G	5	10	
63	284	JHR	4-14-6	201	420	425	4-	425	C	6	9	
64	287	PM	4-17-6	198	460	470	4-	470	C	4	7	
65	296	PM	4-17-6	198	450	460	4-	460	C+	4	6	
66	96	PM	4-23-6	192	470	493	6-	493	C+	3	5	X
67	675	PM	4-27-6	188	390	400	10(5%)	420	C-	6	10	
68	272	JHR	5-3-6	182	480	525	4-	525	F	2	3	X
69	283	JHR	5-9-6	176	440	550	4-	550	C+	1	3	X
70	490	PM	5-14-6	171	405	455	2(10%)	500	C-	3	7	line backed
71	839	JHR	5-16-6	169	450	520	9-	520	C	3	6	X
72	280	JHR	5-20-6	165	405	468	4-	468	C+	4	6	

Please mail carbon copy of this record to Extension Animal Husbandman, College Station, Texas

Breed

X Replacement

D-444

FORM 1a—YEARLING RECORD

Name

Use Separate Sheets for Bulls and Heifers

Ref. No. 1-57

Address

Date Oct. 25, 57

Sex Heifers

Herd No.	Dam	Sire	Date of birth	Weaning Data			Yearling Data				Remarks
				Actual Weight	Adjusted Weight	Wt. Group & Grade	Actual Weight	Gain	Adjusted Weight	Grade	
50	283	JHR	3-1-6	585	510	3/C+	885	300	810	C-	X
51	905	JHR	3-1-6	620	535	2/F	925	305	840	F	
54	917	PM	3-12-6	590	530	2/C+	920	330	860	C+	
55	401	JHR	3-19-6	495	506	3/C	855	360	866	C+	
56	267	PM	3-19-6	610	560	1/F	930	320	880	F	
60	308	JHR	4-4-6	480	494	3/C+	820	340	834	C	
66	96	PM	4-23-6	470	493	3/C+	750	280	773	C	X
68	272	JHR	5-3-6	480	525	2/F	790	310	835	C+	
69	283	JHR	5-9-6	490	550	1/C+	820	330	880	C+	
71	839	JHR	5-16-6	450	520	3/C	780	330	850	C	

Please mail carbon copy of this record to Extension Animal Husbandman, College Station, Texas

Breed

X Culled as yearling

D-444

FORM 1b—GAIN RECORD

Name

Use Separate Sheets for Bulls and Heifers

Ref. No.

Address

Date

Sex Bulls

Herd No.	Initial Weights			1st wt. & gain	2nd wt. & gain	3rd wt. & gain	4th wt. & gain	Final weights			Total gain	Av. daily	140-day gain	Grade
	1st	2nd	Ave.					1st	2nd	Ave.				
25	625	635	630	710/80	795/185	870/175	945/175	1020	1040	1030	400	2.85		
26	650	630	640	740/100	810/170	985/165	950/165	1020	1020	1020	380	2.71		
27	630	610	620	680/60	755/75	820/65	890/70	950	960	955	335	2.39		
28	710	720	715	805/70	885/80	970/85	1050/80	1145	1135	1140	425	3.03		
29	665	665	665	755/70	845/90	945/100	1040/105	1140	1150	1145	480	3.42		
30	680	670	675	745/70	805/60	855/50	930/75	1010	1020	1015	340	2.42		
31	610	620	615	700/85	765/65	830/65	890/60	980	970	975	360	2.57		
32	645	685	665	760/95	850/90	935/85	1020/85	1120	1110	1115	450	3.21		
33	700	720	710	760/50	855/45	925/70	1000/75	1080	1080	1080	370	2.64		
34	635	645	640	715/75	800/85	875/75	945/70	1035	1025	1030	390	2.78		

Please mail carbon copy of this record to Extension Animal Husbandman, College Station, Texas

Breed

FORM 2—SELECTION SHEET FOR Yearling Cattle

(Weaning, Yearling, or Gain Record)

Use Separate Sheets for Bulls and Heifers

Sex Heifers Ref. No. 1-57

Name _____ Date Oct. 25, 57 Breed _____

Weight or gain	Grade				
	Fancy	Choice+	Choice	Choice-	Good
900 lb. 95-99					
90-94					
85-89					
80-84	56	69			
75-79					
70-74					
65-69		55			
60-64		54			
55-59					
50-54			71		
45-49					
40-44	51				
35-39		68			
30-34			60		
25-29					
20-24					
15-19					
10-14				50	
05-09					
00-04					
95-99					
90-94					
85-89					
80-84					
75-79					
70-74				66	
65-69					
60-64					
55-59					
50-54					
45-49					
40-44					
35-39					
30-34					
25-29					
20-24					
15-19					
10-14					
05-09					

*Use five appropriate grades (Fancy, Choice +, Choice, Choice-, Good +, Good and Good -)

FORM 2—SELECTION SHEET FOR Weaning Calves

(Weaning, Yearling, or Gain Record)

Use Separate Sheets for Bulls and Heifers

Sex Heifer Ref. No. 1-56

Name _____ Date Nov. 1-56 Breed _____

Weight or gain	Grade				
	Fancy	Choice+	Choice	Choice-	Good
600 lb. 95-99					
90-94					
85-89					
80-84					
75-79					
70-74					
65-69					
60-64	56				
55-59					1
50-54		69			
45-49					
40-44					
35-39	51				
30-34		54			2
25-29	68				
20-24			71		
15-19					
10-14		50			
05-09			55		
00-04				70	3
95-99					
90-94		60-66			
85-89					
80-84			52	58	
75-79					
70-74			64		4
65-69		72	57		
60-64		65		59	
55-59					
50-54					
45-49					
40-44			61		5
35-39			53		
30-34				62	
25-29					
20-24			63		
15-19				67	6
10-14					
05-09					

Culling line showing selection mostly on grade.
 Culling line showing selection mostly on weight.
 Culling line showing selection on grade and weight.

*Use five appropriate grades (Fancy, Choice +, Choice, Choice-, Good +, Good and Good -)

FORM 3—INDIVIDUAL COW RECORD

Name:

Horn or Chain No. 167

Date of birth 2-24-51

Bred by

Reg. No.

SIRE		Grade Breeder	Adj. wt. No.	Grade	Adj. Wt.
Grade Breeder				Grade	Adj. Wt.
DAM		Grade Breeder	Adj. wt. No.	Grade	Adj. Wt.
Grade Breeder				Grade	Adj. Wt.

WEANING DATA	
Date:	<u>11-1-51</u>
Age in Days:	<u>250</u>
Actual Wt:	<u>610</u>
Adjusted Wt:	<u>530</u>
Wt. Group:	<u>2</u>
Grade:	<u>C+</u>
Rating:	
YEARLING DATA	
Date:	<u>11-2-52</u>
Actual Wt:	<u>950</u>
Gain:	<u>340</u>
Adjusted Wt:	<u>870</u>
Grade:	<u>C+</u>
Remarks:	

PRODUCTION RECORD

WEANING DATA										YEARLING DATA						
Herd No.	Sex	Date of birth	Sire	Date	Actual weight	Adjusted weight	Wt. group & grade	Rating	Cow's prod. index	Initial weight	Final weight	Gain	Days on test	Adjusted weight	Grade	Remarks
305	Bull	4-13-3	22	11-4-3	460	506	3/C	6	6	Culled because	white spot	in back	-			
390	Cow	4-3-4	22	11-4-4	500	522	2/C+	4	5	500	850	350	360	872	C	
475	Bull	3-27-5	JHR	11-2-5	570	540	3/C+	5	5	640	1060	420	140		C+	3rd from top on top
54	Cow	3-12-6	PM	11-1-6	590	530	2/C+	4	4.75	590	920	330	359	860	C+	

Breed

Herd No.

FORM 3a—RATING COWS
ACCORDING TO PRODUCTION INDEX

Name: Date: Nov. 5-57 Breed:

Cows production index	Cows tattoo numbers
2.0 - 2.25	
2.33-2.50	
2.66-2.75	<u>167 -</u>
3.0 - 3.25	<u>905 - 56</u>
3.33-3.50	<u>250 -</u>
3.67-3.75	<u>272 - 657 - 120</u>
4.0 - 4.25	<u>117 - 283 - 411</u>
4.33-4.50	<u>294 -</u>
4.67-4.75	<u>180 -</u>
5.0 - 5.25	<u>308 - 96 - 470</u>
5.33-5.50	<u>283 -</u>
5.67-5.75	<u>34 -</u>
6.0 - 6.25	<u>401 - 296 - 491 - 893 - 260</u>
6.33-6.50	<u>261 - 213</u>
6.67-6.75	<u>490 - 839 - 280 - 950</u>
7.0 - 7.25	<u>22 - 71</u>
7.33-7.50	<u>194 - 287 - 390</u>
7.67-7.75	<u>478</u>
8.0 - 8.25	<u>223 - 455</u>
8.33-8.50	
8.67-8.75	<u>399</u>
9.0 - 9.25	
9.33-9.50	<u>451</u>
9.67-9.75	<u>284</u>
10.0-10.25	
10.33-10.50	<u>309</u>
10.67-10.75	
11.00-	

Should be culled
as soon as possible.

Sire Name JHR
Calf Crop 1956

Name
Address

WEANING DATA—Bull Calves				WEANING DATA—Heifer Calves			
Herd No.	Wt. Group	Grade	Rating	Herd No.	Wt. Group	Grade	Rating
10	2	F	1	50	3	C+	2
12	4	C	3	51	2	F	1
13	3	C	3	55	3	C	3
15	4	C+	2	58	4	C-	4
17	6	G	5	59	4	C-	4
18	3	C+	2	60	3	C+	2
19	1	C	3	63	6	C	3
20	3	C+	2	68	2	F	1
22	2	F	1	69	1	C+	2
23	4	C-	4	71	3	C	3
24	3	C+	2	72	4	C+	2
26	1	C	3				
27	4	C	3				
28	4	C	3				
30	3	C+	2				
Total	15	47	39	Total	11	35	27
Average		3.13	2.6	Average		3.18	2.45

Remarks:

D-444

FORM 4a. RATING BULLS

According to Av. Weight Group and Av. Grade of Calves

Name

Date

Calf Crop

Bulls No.	No. & sex of calves	Average		Ave. wt. group	Average No. grade							
		Wt. group	No. grade		1.00 - 2.00	2.01 - 2.25	2.26 - 2.50	2.51 - 2.75	2.76 - 3.00	3.01 - 3.25	3.26 - 3.50	
JHR	B 15	3.13	2.60	1.00 - 2.00								
	H 11	3.18	2.45	2.01 - 2.20								
PM	B 12	3.85	3.08	2.21 - 2.40								
	H 12	3.83	2.91	2.41 - 2.60								
105	B 14	3.50	3.00	2.61 - 2.80								
	H 17	3.41	2.17	2.81 - 3.00								
	B			3.01 - 3.20								
	H			3.21 - 3.40								
	B			3.41 - 3.60								
	H			3.61 - 3.80								
	B			3.81 - 4.00								
	H			4.01 - 4.20								
	B			4.21 - 4.40								
	H			4.41 - 4.60								
	B			4.61 - 4.80								
	H			4.81 - 5.00								

JHR(H) — JHR(B)

105(H) — 105(B)

PM(H) — PM(B)

CHART FOR CALCULATING DAYS OF AGE

	1 Jan.	2 Feb.	3 March	4 April	5 May	6 June	7 July	8 Aug.	9 Sept.	10 Oct.	11 Nov.	12 Dec.	
1	1 365	32 334	60 306	91 275	121 245	152 214	182 184	213 153	244 122	274 92	305 61	335 31	1
2	2 364	33 333	61 305	92 274	122 244	153 213	183 183	214 152	245 121	275 91	306 60	336 30	2
3	3 363	34 332	62 304	93 273	123 243	154 212	184 182	215 151	246 120	276 90	307 59	337 29	3
4	4 362	35 331	63 303	94 272	124 242	155 211	185 181	216 150	247 119	277 89	308 58	338 28	4
5	5 361	36 330	64 302	95 271	125 241	156 210	186 180	217 149	248 118	278 88	309 57	339 27	5
6	6 360	37 329	65 301	96 270	126 240	157 209	187 179	218 148	249 117	279 87	310 56	340 26	6
7	7 359	38 328	66 300	97 269	127 239	158 208	188 178	219 147	250 116	280 86	311 55	341 25	7
8	8 358	39 327	67 299	98 268	128 238	159 207	189 177	220 146	251 115	281 85	312 54	342 24	8
9	9 357	40 326	68 298	99 267	129 237	160 206	190 176	221 145	252 114	282 84	313 53	343 23	9
10	10 356	41 325	69 297	100 266	130 236	161 205	191 175	222 144	253 113	283 83	314 52	344 22	10
11	11 355	42 324	70 296	101 265	131 235	162 204	192 174	223 143	254 112	284 82	315 51	345 21	11
12	12 354	43 323	71 295	102 264	132 234	163 203	193 173	224 142	255 111	285 81	316 50	346 20	12
13	13 353	44 322	72 294	103 263	133 233	164 202	194 172	225 141	256 110	286 80	317 49	347 19	13
14	14 352	45 321	73 293	104 262	134 232	165 201	195 171	226 140	257 109	287 79	318 48	348 18	14
15	15 351	46 320	74 292	105 261	135 231	166 200	196 170	227 139	258 108	288 78	319 47	349 17	15
16	16 350	47 319	75 291	106 260	136 230	167 199	197 169	228 138	259 107	289 77	320 46	350 16	16
17	17 349	48 318	76 290	107 259	137 229	168 198	198 168	229 137	260 106	290 76	321 45	351 15	17
18	18 348	49 317	77 289	108 258	138 228	169 197	199 167	230 136	261 105	291 75	322 44	352 14	18
19	19 347	50 316	78 288	109 257	139 227	170 196	200 166	231 135	262 104	292 74	323 43	353 13	19
20	20 346	51 315	79 287	110 256	140 226	171 195	201 165	232 134	263 103	293 73	324 42	354 12	20
21	21 345	52 314	80 286	111 255	141 225	172 194	202 164	233 133	264 102	294 72	325 41	355 11	21
22	22 344	53 313	81 285	112 254	142 224	173 193	203 163	234 132	265 101	295 71	326 40	356 10	22
23	23 343	54 312	82 284	113 253	143 223	174 192	204 162	235 131	266 100	296 70	327 39	357 9	23
24	24 342	55 311	83 283	114 252	144 222	175 191	205 161	236 130	267 99	297 69	328 38	358 8	24
25	25 341	56 310	84 282	115 251	145 221	176 190	206 160	237 129	268 98	298 68	329 37	359 7	25
26	26 340	57 309	85 281	116 250	146 220	177 189	207 159	238 128	269 97	299 67	330 36	360 6	26
27	27 339	58 308	86 280	117 249	147 219	178 188	208 158	239 127	270 96	300 66	331 35	361 5	27
28	28 338	59 307	87 279	118 248	148 218	179 187	209 157	240 126	271 95	301 65	332 34	362 4	28
29	29 337	— —	88 278	119 247	149 217	180 186	210 156	241 125	272 94	302 64	333 33	363 3	29
30	30 336	— —	89 277	120 246	150 216	181 185	211 155	242 124	273 93	303 63	334 32	364 2	30
31	31 335	— —	90 276	— —	151 215	— —	212 154	243 123	— —	304 62	— —	365 1	31

EXAMPLE: A calf born November 10, 1954 and weighed May 31, 1955. Looking across from 10 under November, the heavy number shows that it was 52 days before January 1. Looking across from 31 and May, the light number shows that it was 151 days since January 1. By adding both numbers we find the calf is 203 days of age on May 31, 1955.