Texas Agricultural Extension Service
The Texas A&M University System

Commercial Bull Selection Made EZ

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1. Determine the goals and direction of the breeding program.

All I need is a masculine bovine to freshen my cows.

True ..... go to 2.
False ..... go to 3.

2. Bull acquisition program

Buy the cheapest bull available, regardless of the source. Wait 283 days; if no new calves appear, sell the bull but do not complain - you got exactly what you paid for and were entitled to.

No lesson learned ..... repeat step 2.
To avoid repeating mistake ..... repeat step 1.

If calves do appear but are 47 different colors and weaning weights at 7 months of age range from 282-413 (pounds) and you are satisfied, STOP HERE.

If you are not satisfied, do not complain - you got exactly what you paid for and are entitled to.

To avoid repeating mistake ..... repeat step 1.
No lesson learned ..... repeat step 2.

3. A Bull Selection Program

Do you intend to save replacement females from this sire?

No ..... go to 4.
Yes ..... go to 5.

4. Producer does not intend to save any replacement females from this sire.

Terminal sire mating system. Specialized and even extreme sire and maternal types may be used.

Caution: Significant price discounts can be avoided and production efficiency enhanced by producing crossbred calves with breed-type percentages that are:

at least 25%	British
no more than 50%	Continental
no more than 25%	Bos indicus

For breed-type categorization, see table 1.

Possible Breed Combinations Which Yield Preferred Stocker-Feeder Calves
British X British British X Continental British X American British X percentage Bos indicus Continental X American Continental X British x Bos indicus
List is not all inclusive.

Uniformity - Within sex (steer vs heifer), groups of like color, weight, frame and condition are more marketable than those lacking in one or more of these characteristics.

Stocker-Feeder Color Patterns Summer/Fall 1996	
Desirable	**Undesirable**
black red smoky cream (white on the extremities is acceptable for most of the above)	paint spotted speckled brindle white dun brown some grays
Breeders who document and merchandise genetic merit can avoid most unjustified price discounts due to hair color and other distinctive physical characteristics.	

For possible sire x cow herd combinations, see table 2.

Table 1. Beef Breed-Type Categorization				
British	**Bos Indicus**	**American**	**Continental (high milk)**	**Continental (lower milk)**
Angus Red Angus Hereford Polled Hereford Shorthorn	Brahman	Beefmaster Bradford Brangus Red Brangus Santa Gertrudis Simbrah	Gelbvieh Maine-Anjou Salers Simmental	Charolais Chianina Limousin
Breeds listed are examples thought to be most numerous in Texas. Other applicable breeds are found in all groups. Exclusion of a breed is not a reflection upon its importance.				

How does breeder intend to market calves?

At weaning:

small groups, mixed sex, several times per year ..... go to 4a
large groups, by sex, 1-2x per year ..... go to 4b

Retain Ownership

stocker only ..... go to 4c
stocker and/or feedlot ..... go to 4d

4a. Calves sold in small mixed-sex groups several times per year.

A small group of calves is less than or equal to a 24" gooseneck trailer load. Typical marketing scheme for a year-long calving program. Uniformity of color and phenotypic characteristics less crucial because of small numbers offered at any one time. Even though offered in small groups, they still must "fit" other cattle being offered in order to bring top dollar.

1. If EPD's are available: Know the average EPD's for the breed of sire being considered. Pay particular attention to the weaning weight EPD - select a bull with a high (not necessarily the highest) WWT EPD in order to maximize preweaning growth. Birth and weaning weights are positively correlated - be conscious of birth weights becoming too heavy and increasing the incidence of dystocia (calving difficulty). *Dead calves don't weight much on sale day and deceased cows are not very productive the following year.*

2. If performance information limited to weight ratios: select a bull with above average weaning weight ratio (>100). If birth weight data available, use it to balance the selection process and guard against calving problems.

3. If no performance information available: get back in vehicle and proceed to another breeder.

4. Visual inspection: Inspect the bull for physiological defects of the eyes, feet and legs or testicles. Evaluate the conformation (frame and muscle) of the bull.

4b. Calves sold in large groups, by sex 1-2x per year.

Large groups are ≥10-15 head of same sex and similar color, quality, weight and condition. Typical marketing program that follows a sound 90-120 day breeding season. Uniformity across the set of calves now more important. Color is the most obvious factor affecting uniformity. Quality (muscle, frame and condition) is the true determinant of uniformity.

Also see 4a.

4c. Calves sold after a postweaning stocker (grazing) period.

In this situation, milk production by the cow, and hence weaning weight, is of less importance than when selling at weaning. During the stocker phase, calves can take advantage of "compensatory growth" accumulated preweaning.

Caution: Be careful that the initial weight of the calves does not exceed 500-600 lb, especially if calves are going to good summer or cool season annual pasture. Marketing heavy stocker calves (>750 lb) is often not an enviable process.

In addition to the items in 4a:

1. If Yearling Weight EPD's or yearling weight ratios are available: use them to assure postweaning growth in this bull's calves. Do not select a bull with lower than average yearling performance data.

4d. Ownership to be retained through the feedlot.

Whether selling live with a 4% shrink or on the rail, feedyard performance and carcass characteristics are ultimately of paramount concern. Unfortunately, there is no such thing as carcass data from prospective sires. Therefore, the next best data is from siblings of the bull being considered or from the same "family". *Within every breed, small populations with excellent carcass traits can be found.*

Carcass EPD's would certainly be helpful but are limited to a relatively small number of bulls within only a handful of the breeds. As a result, this is a tool with tremendous potential but limited availability at present.

5. Operator intends to save replacement females from this sire.

Continuous mating system. Cattle should be moderate in most production characteristics.
Warning: Some breed combinations may be desired which are not preferred by the stocker-feeder market, particularly ⅜ to ½ Bos indicus (see table 2).

1. **Scrotal circumference** of the bull (measured at 12 months of age) is related to puberty in his daughters - larger scrotal size indicates earlier maturity (puberty at a younger age). The minimum acceptable circumference for a yearling bull is 30 cm.

2. If available, use **Milk EPD's** to refine the selection process. Know the breed average Milk EPD and select accordingly. For example, if greater milk production is desired, look for bulls with Milk EPD's well above the breed average.

   Caution: Although milk production is the single largest factor influencing weaning weight, it can be overdone! Cows with large milk production potential also have large maintenance requirements and may require extra attention if expected to rebreed within 90 days postcalving.

Table 2.
Matching Bulls to the Commercial Cow Herd

DAM	SIRE			
	British	Brahman	American	Continental
British[1]	M	R	M	M
Brahman	R			R
British X Brahman[2]	M		R	M
American	M		R[3]	M
American X British	M		M	M
American X Continental	M			M
Continental	M			
Continental X British	M	R	M	
Continental X Brahman	M		R	

M = meets the preferred stocker-feeder breed-type formula.
(Min. 25% British, max. 50% Continental, max. 25% Bos indicus)
R = primarily used for replacement females. Steers usually discounted.

[1]Straightbred or British breed crosses.
[2]Includes American X Brahman x British females.
[3]Crossbred unless desiring straightbred replacements.