

You Be The Judge

Train Yourself To See And Select Functionally Correct Cattle

Then from these should come the champions
— true in function and breed type.



By Walter B. Scott

I give credit to my fellow livestockmen for what I have learned and blame only myself for all I have not learned. In the area of functional efficiency, I particularly wish to give credit to Dr. Jan Bonsma, Dr. Cas Maree and Dr. Rex Butterfield. Special credit and thanks must go to Dr. Stewart Fowler for his many years of help, encouragement and friendship.

May this in some way be thought provoking and useful to you.

Functional efficiency and breed purity are necessary to preserve those valuable traits in the genetics of Texas Longhorn cattle.

No other breed can surpass the Texas Longhorn in reproductive efficiency. Most breeds are far behind because they start late and quit early. Texas Longhorns, because of early sexual maturity, easily conceive at about 15 months, have the

first calf on the ground about 24 months, and continue calving yearly through age 16 and beyond.

Many other breeds do not mature sexually until age 2, have an extended postpartum interval (breed back time after calving), and have difficult births and diminishing reproduction about age 12, resulting in shipping to slaughter.

Breeding stock of most breeds have been selected with steer conformation in mind (due to livestock shows and judges) and therefore cannot easily calve. These kinds of cows either have trouble getting pregnant and/or birthing their calves because of late sexual maturity, extended postpartum, large calves at birth, acute sacral-iliac angle and incorrect pelvic opening.

This is why functional reproductive efficiency is the single most important money-making trait of the Texas Longhorn. The cattle industry continues with declining reproduc-

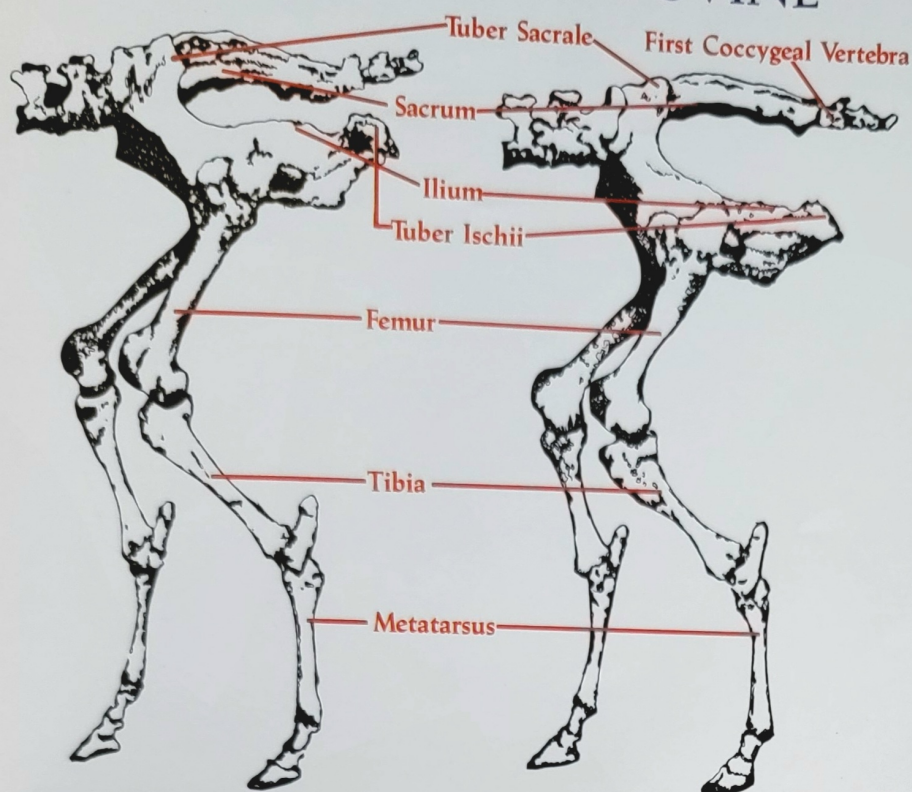
tion as a major problem. The use of Texas Longhorn genetics in the breeding program of those with this problem would be of great value.

Texas Longhorns have functional reproductive efficiency, and many other cattle need it.

Because there will always be animals in any breed and herd which are subfertile, considerations for reproductive efficiency must take precedence. Only then should breed characteristics and conformation be considered in the selection for breeding stock. If cattle look the part of the breed, but can't perform as they should, they have no value in any breeding program.

Internationally renowned animal scientist Dr. Jan Bonsma says, "the introduction of a system whereby only animals that have attained certain performance and production standards qualify for showing, will be a positive step in breeding better livestock."

BACK LIMB OF THE BOVINE

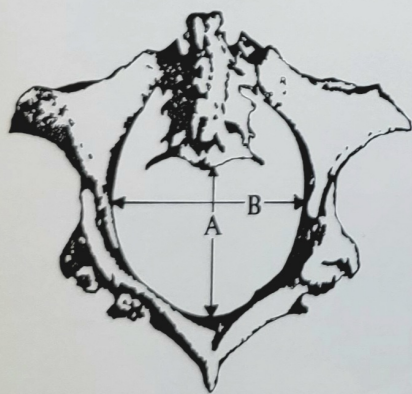


Subfertile

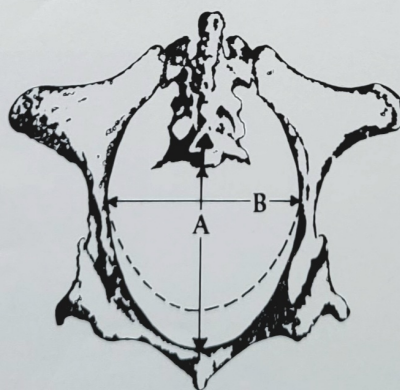
Fertile

Back limbs of subfertile and fertile cows. Note the larger opening of the pelvis in the fertile cow. A sloping rump allows for a wider pelvic opening. Lowered pin bones and lower position of the thurls also facilitate calving because the sacral-ilial angle is widened. The sacral-ilial angle is determined by a line drawn from the point of the hip bone (hook) to the point of the pin bone and one drawn from the point of the hip bone to the point of the thurl. A square-rumped cow with high thurls is prone to have calving difficulty because the sacral-ilial angle is small. For this reason a sloping rump is an advantage in calving ease.

PELVIC LIMB OF THE BOVINE



Subfertile



Fertile

The distance between the median crest of the sacrum to the floor of the pelvis is shortened as a result of a higher acetabulum. The dotted line indicates how much smaller the pelvic opening is in the subfertile animal. The femur, or large leg bone, articulates in the acetabulum. This point is also known as the thurl.

These illustrations were taken from Dr. Jan Bonsma's book, *Livestock Production, A Global Approach*, Chapter 4, "Judging Livestock For Functional Efficiency."

My appraisal of the efficiency and breed type of Texas Longhorn cattle is based on 20 years of owning and breeding these cattle only, with constant attention to selection of the better individuals.

Because of my early entry on the "comeback" trail of Texas Longhorns and my long exposure to a public prejudice against these cattle, I've tried to grab the handle of those tools available to enable me to answer questions of my own and the public's. I believe that even the very serious breeder never does enough in the area of study and observation of his cattle.

My approach to visual appraisal of our cattle, the animals in the McCombs Ranches 1981 Heifer Futurity and the October 29, 1982 Top of the Crop Heifer Futurity Presentation at the Y.O. Ranch is to encourage selection of animals for their apparent reproductive and productive efficiency as well as basic Texas Longhorn conformation.

Visual appraisal of an animal reveals the animal at that specific moment in life. The older the animal, the more revealing the appraisal. Whenever possible, the individual's parents should be visually appraised and their records evaluated.

Reproduction is to be defined as everything from conception to having the calf and then the process repeated, whereas production is what the mother does for the calf until it is weaned.

Bone Growth and Skeletal Development

Bone growth continues for a much longer period of time in the late sexual maturing or subfertile animal and is evidenced in the elongation of the long bones of the front limb (forequarter).

Proper hormone balance will bring about the secretion of the female sex hormone, estrogen, which causes bone to ossify, or harden, and overall growth comes to a standstill because bone growth stops. When delayed, the animal becomes taller and taller; therefore, abnormally tall animals are objectionable.

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Certain abnormal skeletal deviations occur after extended periods of underfeeding, as in the case of drought. This causes the impairment of ovarian function in heifers, which is objectionable. The head will become abnormally narrow, with the lower jaw somewhat heavy and overshot. The limbs become long and thin and the front ribs deep and flat.

Hair, Horn, Hooves, Hide and Tail

Animals which do not have a lively, glossy coat do not have a normal hormonal status. The hair is a very sensitive index of the animal's gonadotropic (sex-gland stimulating) status. The early hair shedder in the spring is usually potentially

more fertile; early shedding also indicates vitality.

The sex hormones influence color and fineness of the hair and the female with dull color and coarse hair should be discriminated against, since coarser hair is masculine.

White, porcelain-smooth demarcations of the horn indicate metabolic disturbances. Waxy, textured horns should be preferred. Bonsma says, "the functionally efficient cow is one that calves down at two years and produces at least four calves in five years and raises them herself." He also says the horn growth of this type cow will be slower, and I agree, based on personal observation.

The hooves, for travel, should be smooth and large, but not grown out, not splayed, not flaky and not ringed, which indicates susceptibility to laminitis (foot problems in which the laminae become inflamed and very tender).

The more vascular, thicker hides with shiny hair indicating secretion of sebum and sensitive pilomotor nerves are to be desired, since an

animal so blessed will be more resistant to external parasites.

Skin pigmentation is most desirable because very light or white colored animals without it are sensitive to ultraviolet radiation which can cause hyperkeratosis of the hide, inflicting severe pain to the animal (as severe sunburn).

A full-growing switch is surely an aid in external parasite protection. I find a heavy switch desirable in Texas Longhorn cattle for the above reason and because it indicates "cold bloodedness," meaning cattle of semiwild state and uncontrolled breeding from which Texas Longhorn cattle did evolve.

A tail somewhat short with a thin switch indicates the reverse to me, and I find it objectionable. Those animals with a tail where the vertebra or hard cartilage ends an inch or so before the top of the switch begins can produce a whiplash effect in defense against external parasites and this type tail and switch is more effective. These animals will be more resistant.

Animal's Name _____ Age _____ T.B.A.A. # _____
 Ps. # _____

Visual Appraisal of Functional Efficiency

I. Bone Growth and Skeletal Development

Head: _____ Wide _____ Dislike _____ Roman Nose _____ Short _____
 Skull: _____ Large _____ Small _____ Normal _____ Thick _____
 Lower Jaw: _____ Heavy _____ Underbite _____ Normal _____ Thin _____
 Limbs: _____ Long _____ Short _____ Fine _____ Coarse _____
 Front Ribs: _____ Deep _____ Flat _____ Normal _____
 Overall Height: _____ Short _____ Tall _____ Long _____
 Overall Length: _____ Short _____ Moderate _____
 Other: _____

II. Hair, Horn, Hoof, Hide, Tail

Hair Coat: _____ Dense _____ Thin _____ Frayed _____ Shed _____ Unshed _____
 Hair Coat: _____ Dull & Shiny _____ Coarse _____ Medium _____ Fine _____
 Neck: _____ Coarse _____ Fine _____ Furred _____ Coarse _____ Fine _____
 Chin: _____ Coarse _____ Fine _____ Furred _____ Coarse _____ Fine _____
 Face: _____ Coarse _____ Fine _____ Tough _____ Coarse _____ Fine _____
 Shank: _____ Coarse _____ Fine _____ Spine _____ Coarse _____ Bristly _____
 Udder: _____ Coarse _____ Fine _____ Mottled _____
 Crown of Head to Neck Whisker to Neck Whisker: _____ Mottled _____
 Dark _____ Light _____
 Horn: _____ White Porcelain _____ Smooth & Wavy _____ Crown Out _____ Splayed _____
 Hoof: _____ Flaky & Ringed _____ Vascular _____ Nonpigmented _____ Pigmented _____
 Hide: _____ Thin _____ Thick _____ Vascular _____ Nonpigmented _____ Pigmented _____
 Tail: _____ Short _____ Normal Length _____ Tail Bone Extended into Switch _____
 Tail Bone Not Extended into Switch _____
 Other: _____

III. Fat and Deposition

Degree Fined: _____ Lightly _____ Moderately _____ Heavily _____
 Deposition & Location: _____ Even _____ Slightly Prominent Hips & Pans _____
 Prominent, Hard, Permanent _____ Broken _____ Hips & Pans _____
 Withers _____ Lower Ribs _____

IV. Muscle Development

Smooth Overall: _____ Neck _____ Chest _____ Front Legs _____ Upper Shanks _____
 Prominently Defined: _____ Flanks Above Sifts _____ Thighs _____
 Other: _____

V. Temperament and Behavior

Mild Gentle _____ Nervous _____ Wild _____ Erratic _____
 Other: _____

VI. Eyes, Ears, Udder, External Genitalia

Eyes: _____ Normal _____ Bulging _____ Sunken _____ Blindness _____
 Excessive White of Sclera _____ Skin Pigmented Around Eye _____
 Skin Not Pigmented Around Eye _____
 Ears: _____ Normal _____ Defective _____ Flethy Fat Infiltrated _____
 Udder: _____ Poor Attachment _____ Good Attachment _____ Pleated _____
 Vascular _____ Defective _____ Infantile _____
 External Genitalia: _____ Vulva _____ Normal _____ Defective _____ Infantile _____
 Other: _____

VII. Rump

Pin Position: _____ High _____ Medium _____ Low _____
 Tail Position: _____ High _____ Medium _____ Low _____
 Hip Width: _____ Wide _____ Medium _____ Low _____
 Overall Rump Appearance: _____ Flat _____ Sloping _____ Narrow _____
 Other: _____

VIII. Texas Longhorn Characteristics & Conformation

Rectangular Appearance: _____ Yes _____ No _____
 Balanced Proportionately: _____ Yes _____ No _____
 Masculine: _____ Yes _____ No _____
 Excessively Dislike: _____ Yes _____ No _____
 Excessively Roman Nose: _____ Yes _____ No _____
 Relatively Flat Straight Crown: _____ Yes _____ No _____
 Ear Small Appearing and Semirounded & Straight Set: _____ Yes _____ No _____
 Horn: _____ Massive or Heavy for Skull, Not Massive or Heavy for Female, Not Restricted to Any Particular Configuration, Not Showing Definite Configuration and/or Set of Other Breeds _____
 Color: _____ Any Color or Combination Acceptable as Long as Hair & Color Do Not Indicate Crossbreeding _____
 Indicated _____ Not Indicated _____
 Leg & Hoof: _____ Sufficient Length of Leg With Larger, Firm, Hoof Indicative of Traveling Ability _____
 Yes _____ No _____
 Body: _____ Some Sway in Back Common, Especially With Age Maturity, Some Cows Ahead of a Somewhat High Tail Head Setting Common, Height Distribution and Depth Asymmetrical Toward Forequarter, Body Degree of Hump in Neckers: _____ Withers Region of Female Not Characteristic _____
 Highly Characteristic _____ Moderately Characteristic _____ Not Characteristic _____
 Hide: _____ Should Tend to Be Thick Hide and Vascular: Naval Flap and Pundulous Ovaries and Sheath (Shaft) _____
 Not Characteristic _____ Extra Loose and Large External Vaginal Covering Not Characteristic _____
 Characteristic _____ Not Characteristic _____
 Rump & Hindquarter: _____ Moderate to Light Twist Common, Sloped Hips Common, Excessively Loosened Fine Not Characteristic _____
 Flat Hipped Not Characteristic _____
 Highly Characteristic _____ Moderately Characteristic _____ Not Characteristic _____

Appraised By _____ Date _____

The judge's score sheet provides a quick method for evaluating traits related to functional reproductive efficiency.

Fat and Deposition

Excessively fat females have difficulty with conception, are prone to have parturition (birthing) problems

and will probably wean light calves due to reduced milk production caused by fat infiltrated udders.

Permanent impairment of libido

and fertility can also result from being overfatted. Without proper udder attachment and vascularity, adequate milk to develop the calf is

not forthcoming. Very pronounced localized deposits of fat in the brisket, chine (backbone), withers, lower rib, hips and pins indicate reduced libido and subfertility.

Muscular Development

Muscular development is mainly important from the standpoint that it is a sex-linked characteristic. Contrary to the male, the female should have the overall appearance of smoothly developed muscles. Clearly defined muscles in the neck, front legs, upper shank, thigh, and the flank, and a slightly masculine chest are other indicators of subfertility, because muscular females often have small, smooth ovaries.

Temperament and Behavior

An overactive thyroid (the thyroid has a close relation with the sex glands) can be the reason for wildness or nervousness. These types of heifers and cows are often poor milk producers and mothers. The animal's temperament is important from a management point of view as well as a reproductive point of view.

Eyes, Ears and External Genitalia

A deficiency of thyroid activity can be reflected by bulging eyes showing too much white of the sclera, and when accompanied by dry skin and dull hair, subfertility may be suspected. Sunken, dehydrated eyes are indicators of retained afterbirth or prolonged high fever.

Blindness in one eye or both should be looked for if for no other reason than that of management. The same consideration should be given deafness of one or both ears. When an ear problem exists, the animal will not hold its head square.

A defective, incomplete and infantile vulva and udder in an animal having reached the age of puberty must be severely penalized for obvious reasons.


Rump

A square rump is not better muscled than a sloping rump. The sloping rump, such as that of wild animals, allows for a wider pelvic opening at parturition.

Lowered pin bones and lower position of the thurls (where the head of the femur, or large leg bone, articulates in its socket) also facilitate calving.

A line drawn from the point of the hip bone (hook) to the point of the pin bone and one drawn from the point of the hip bone to the point of the thurl (the point of articulation of the femur in the acetabulum, a cup-shaped socket) will show the sacral-ilial angle. Sloping hips will have a wide angle.

Texas Longhorn Characteristics and Conformation

Texas Longhorn breed guidelines were adopted at the Texas Longhorn Breeders Association of America (TLBAA) Board of Directors meeting of April 15, 1978. If you've never had a copy, ask for it. It may be helpful. 

References:

Bonsma Lectures — Invitational Lectures Given Before the International Stockman's School, January 1968, 1972, 1975, 1970.
Beef Cattle Science Handbook, Volume 18
(Both are available through Agriservices Foundation, 648 West Sierra Ave., P.O. Box 429, Clovis, California, 93612.)