

Breed Characteristics of Beef Cattle

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What is a breed?

- Animals with a common origin and selection history. Animals within a breed have physical characteristics that distinguish them from other breeds or groups of animals within that same species. Animals within a breed tend to breed true for the specific traits they have been selected for and that characterize the breed.

Beef vs. Dairy

- Beef
 - Angus, Beefmaster, Brahman, Charolais, Hereford, Simmental, Senepol, Santa Gertrudis
- Dairy
 - Holstein, Jersey, Brown Swiss, Ayrshire, Guernsey
- Dual Purpose
 - Simmental, Shorthorn, Gyr

Bos taurus vs. Bos indicus

- **Bos taurus:** A subspecies of cattle of western Asian origin but often referred to as “European” or “Continental” breeds. Most breeds commonly found in the U.S. and Canada belong to this group. (Angus, Charolais, Hereford, Simmental, Senepol, Dairy breeds)



Bos taurus vs. Bos indicus

- **Bos indicus:** A subspecies of cattle of south Asian origin. Often known as Zebu, they have prominent humps forward of the shoulder. The Brahman breed is one example in the U.S.



Bos taurus breeds

- Angus
- Charolais
- Hereford
- Senepol
- Simmental

Angus



<http://www.angus.org>

Breed Traits (+)

- **Maternal**
 - Good mothering and calf-rearing abilities with good milk production
- **Calving Ease**
 - Lower birth weights maximize calving ease
- **Growth**
 - Vigorous growth from birth to harvest
- **Carcass Merit**
 - Produce a quality carcass; recognized as high quality beef breed

Breed Traits (-)

- **Adaptation**

- Not well adapted to hot, humid climate
- Black cattle may not do well in areas of high solar radiation
- Limits grazing time during hot parts of the day



Charolais



<http://www.charolaisusa.com>

Breed Traits (+)

- **Growth**
 - Efficient feedlot gains and carcass cut-out values
- **Coat color**
 - Light color is good for heat management

Breed Traits (-)

- **Size**

- May be too large
- Risk of double muscling – undesirable trait
- High birth weights – don't breed to heifers
- Forage based diet may not sustain full growth potential

- **Color**

- Light color may lead to higher incidence of pink eye

Hereford



<http://www.hereford.org>

Breed Traits (+)

- **Fertility & Reproductive performance**
 - Early maturing
- **Feed efficiency & growth**
 - High rate of gain in feedlot
- **Good carcass quality**
- **Milk production**
 - Calf growth and health
- **Disposition**
 - Calm
- **Crossbreeding advantages**
 - Used in many crossbreds and composites

Breed Traits (-)

- **Adaptation**

- Not well adapted to hot, humid climate
- White face can lead to high incidence of pink eye

Senepol



<http://www.senepolcattle.com>

Breed Traits (+)

- **Heat Tolerance**
 - Ideal for tropical climates; graze throughout heat of day
- **Disease and Insect Resistance**
 - Greater immune response when compared to other beef breeds
- **Calving Ease / Calf Vigor**
 - Senepol are similar to Angus in calving and light birth weight with good calf vigor
- **Maternal Efficiency**
 - Fleshing and foraging ability of the Senepol cow.
- **Longevity**
 - Cows can stay in production upwards of 15-20 years
- **Naturally polled**
- **Hybrid Vigor**
 - Complement many breeds and bring heat tolerance to the crosses
- **Tenderness**

Breed Traits (-)

- **Maturity**
 - Puberty and maturity fall between *Bos taurus* and *Bos indicus*
- **Disposition**
 - Mild disposition can make them hard to work – no flight zone

Simmental



<http://www.simmental.org>

Breed Traits (+)

- **Growth**
 - Rapid growth and development
 - High rate of gain
- **Maternal breed**
 - High level of milk production
- **Multi purpose**
 - Meat
 - Milk
 - Draft

Breed Traits (-)

- **Adaptation**

- Not well adapted to hot, humid climate

- **Color**

- Not selected for any particular color
- Black cattle may not do well in areas of high solar radiation

- **Size**

- Large size may not be supported on forage diet

Bos indicus breeds

- Brahman
- Beefmaster
- Brangus
- Santa Gertrudis

Brahman



<http://www.brahman.org>

Breed Traits (+)

- **Heat tolerance**
 - Well adapted to high heat and humidity
- **Crossbreeding advantages**
 - Maximum hybrid vigor when crossing with *Bos taurus* breeds
 - F-1 females are great maternal cows
 - Enhances milk production for use in crossbred milk cows
 - Enhances growth and gain
 - Brings heat tolerance to the crosses
- **Used as base for many composite breeds**

Breed Traits (-)

- **Maturity**
 - Late maturing , males and females
- **Carcass quality**
 - Purebreds are not know for carcass quality
- **Disposition**
 - Not known for mild disposition; strong “maternal instincts”
- **Horns**

Beefmaster (Hereford, Shorthorn and Brahman)



<http://www.beefmasters.org>

Breed Traits (+)

- **Growth**
 - Gain well
- **Conformation**
 - Selected for moderate confirmation
- **Milk Production**
 - Cows produce milk for good calf growth
- **Heat tolerance**
 - Bos indicus breeding helps with heat tolerance
- **Hardiness**
 - Developed to survive and thrive in the harsh south Texas environment

Breed Traits (-)

- **Bos indicus breeding**
 - May bring some of the negatives of Bos indicus cattle to the breed
- **Horns**
 - Management and safety

Brangus (5/8 Angus X 3/8 Brahman)



<http://www.int-brangus.org>

Breed Traits (+)

- **Crossbreed**
 - Brings advantages of Angus to Brahman
- **Heat tolerance**
 - Heat tolerant black cattle
- **Carcass traits**
 - Carcass better than straight Bos indicus

Breed Traits (-)

- **Disposition**
 - Not the most calm cattle
- **Coat color**
 - Black cattle may not be best for tropical environment

Santa Gertrudis (3/8 Brahman X 5/8 Shorthorn)



<http://santagertrudis.com>

Breed Traits (+)

- **Crossbreed**
 - Brings advantages of Angus to Brahman
- **Heat tolerance**
 - Heat tolerant black cattle
- **Carcass traits**
 - Carcass better than straight Bos indicus
- **Hardiness**
 - Selected for performance in hot, humid climate

Breed Traits (-)

- **Maturity**
 - Late maturing similar to *Bos indicus*
- **Carcass quality**
 - Carcass traits and growth similar to *Bos indicus*
- **Horned**
- **Disposition**
 - May not be the calmest cattle

Summary

- Select breeds for desired traits
 - Heat tolerance – coat color
 - Fertility
 - Growth
 - Efficiency – growth and reproduction
 - Disposition
 - Carcass quality
 - Availability

Breed Information

- <http://www.ansi.okstate.edu/breeds/>
- Specific breed associations on internet
 - *Beware of breed bias!*

Questions?

