

# **BEEF CATTLE BREEDS**

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**Beefing Up Livestock, Poultry and Agroforestry Enterprises for Military Veteran Farmers  
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# **OBJECTIVES**

- **Understand basic terminology of the beef cattle industry**
- **Identify various breeds of the beef cattle industry**
- **Identify breeds better for grass-fed operations**



# TERMINOLOGY

## THE BASICS

- **Bovine** – An animal of the cattle breed, refers to an general family grouping of cattle
- **Bull** – Uncastrated male cattle of any age
- **Calf** – Young cattle of either sex, less than one year of age
- **Cow** – Female cattle that have had one or more calves
- **Heifer** – Female cattle that have not had a calf
- **Steer** – Male cattle that are castrated



# TERMINOLOGY

## THE GROUPS

- **American Breeds** – Breeds developed in the United States, such as; Santa Gertrudis, Texas Longhorn and Brangus
- **British Breeds** – Breeds of cattle originating in Great Britain, such as; Angus, Hereford and Shorthorn
- **Composite Breed** – A breed that has been formed by crossing two or more breeds, composite breeds can sometimes still be registerable
- **European Breeds** – Breeds originating in European countries other than England. Usually larger, dual-purpose breeds such as Charolais, Simmental and Limousin. These can also be called Continental or Exotic Breeds





# TERMINOLOGY

## THE COMMONLY USED

- **Calving** – The act of giving birth, also called “dropping a calf” or parturition
- **Commercial Cattle** – Cattle herds which produce beef calves for sale for fatteners; used to produce meat for the general market
- **Dewlap** – Loose skin under the chin and neck of cattle
- **Dominant Gene** – One allele masks the effect of another (recessive) allele
- **Expected Progeny Difference (EPD)** – The predication of how future progeny of each animal are expected to perform relative to the progeny of other animals from the same database
- **Genotype** – Genetic constitution or makeup of an individual



# TERMINOLOGY

- **Heterozygous** – Designates an individual whose genes for a particular trait are different
- **Homozygous** – Designates an individual whose genes for a particular trait are alike
- **Horned** – With horns
- **Marbling** – Flecks of intramuscular fat distributed in muscle tissue. Marbling is usually evaluated in the rib-eye between the 12<sup>th</sup> and 13<sup>th</sup> ribs
- **Maternal Traits/Characteristics** – All the traits expressed by the cow. A limited definition implies milk and weaning weight production of the cow



# TERMINOLOGY

- **Phenotype** – Characteristics of animal that can be seen and/or measured. For example: presence/absence of horns, color, weight
- **Polled** – Naturally or genetically without horns
- **Purebred** – An animal eligible for registry with a recognized breed association, such as the Angus Association
- **Recessive Gene** – A gene that has its phenotypic expression masked by its dominant allele when the two genes are present together in an individual
- **Terminal** – Marketing animals for meat. When animals are evaluated on terminal characteristics, they are evaluated for meat and muscle

Definitions provided by:

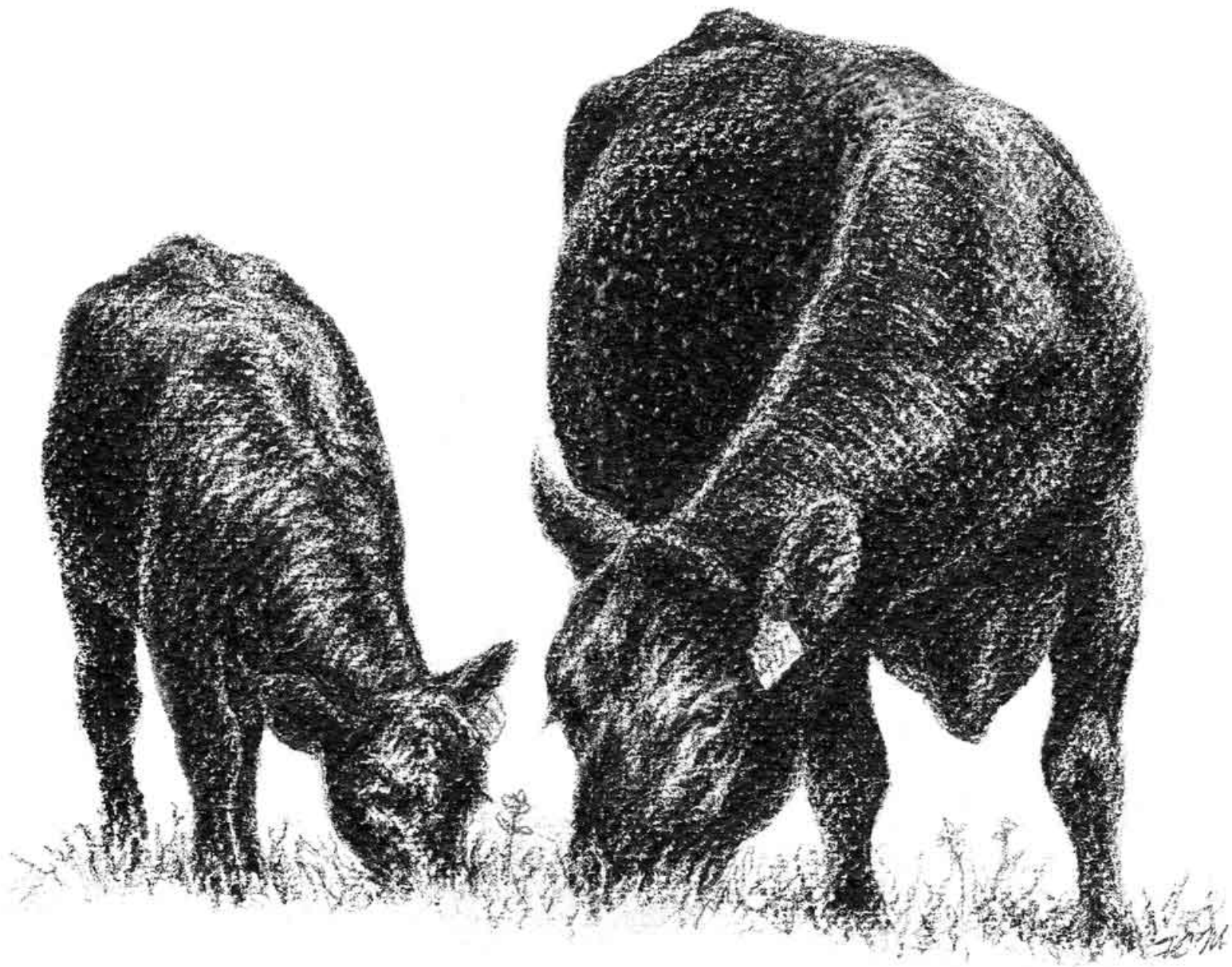
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# COMMON BEEF CATTLE BREEDS



# ANGUS

- Originated in Scotland
  - As early as 1735
  - The rainfall in Scotland creates favorable grass pastures
  - Temperate climate



- Imported to the United States in 1873 by George Grant of Victoria, Kansas
- Black in color
- Naturally polled
- A medium-sized breed
  - Cows weigh around 1,000 to 1,500 lbs.
  - Bulls weigh 1,799 to 2,400 lbs.



# ANGUS

- The Angus breed is commonly used in cross breeding
  - Foundation breed for Brangus and Amerifax



- Known for good marbling and taste. This consumer preference of taste lead to the Certified Angus Beef (CAB) program
- Great mothering abilities and maternal characteristics
  - At times can have a harsh disposition to humans while protecting young
- The Angus breed has the largest number of annual registrations in the United States

# BRAHMAN

- Originate from *Bos Indicus* cattle in India
  - In the early 1900's strains of Indian cattle were used to develop the Brahman breed in the US
- Commonly used for cross-breeding
- Medium sized breed
  - Cows weigh around 1,000 to 1,600 lbs.
  - Bulls weight range is 1,600 to 2,200 lbs.



- Color: usually gray but can also have strands of red, black, white or spotted
- Black pigment around eyes keeps sun rays out





# BRAHMAN

- Later maturing, slower to come into production
- Great maternal abilities
  - Calves are born small, but with good milk they grow quickly and have comparable weaning weights to other breeds
- Easy keepers/feeders, but not known for meat quality
  - Less marbling
- Moderate in muscle
- Heat tolerant
  - Sweat glands allow body to perspire more freely
  - Lower internal body temperature
  - Loose skin create more body surface, and more ability to cool
  - Short, thick and glossy hair reflects the sun's rays
- Insect/disease resistance
  - From sweat glands, an oily secretion is formed which has a distinctive odor and repels insects
- Excessive skin & large hump on back
  - Large hump is a characteristic of *Bos indicus* cattle





# BRANGUS



- Naturally polled
- Medium sized breed
  - Cows weigh around 1,100 to 1,500 lbs.
  - Bulls weigh between 1,850 to 2,200 lbs.
- Color – Black and Red
- Outstanding carcass quality

- Developed in the U.S.
  - Vinita, Oklahoma
  - Comprised of:
    - 5/8 Angus and 3/8 Brahman
  - Cattlemen wanted an animal with the mothering ability of Angus cattle, but with the ability to adapt to environments like the Brahman breed



# BRANGUS



- Hardy breed (derived from the Brahman side)
  - High tolerance for heat
  - Insect/pest resistance
  - Larger statured

- Good maternal traits (derived from the Angus side)
  - Known calving ease and higher milk production
  - Very protective of offspring – so watch out when working around mommas and calves
  - Excel in fertility





# CHAROLAIS

- Originated in France
  - Date back to the 16<sup>th</sup> century
  - Introduced to the US in 1936
- White to a Golden color
  - Pink pigment around eyes, increases sensitivity and can be more prone to pink-eye
- Naturally horned, but are often seen polled now
- Large sized breed
  - On average, cows weigh from 1,800 to 2,000 lbs.
  - Bulls weigh 2,600 to 3,000 lbs.





# CHAROLAIS



- Very heavy muscled, superior growth, economically beneficial terminal weights
- Often used for cross-breeding to increase muscle and growth benefits
- Easy feeders with rapid weight gain
  - Very feed efficient
  - Reach terminal weights on feed or grass rations
- Maternal traits
  - Easy calvers
  - Mostly a docile breed, but very protective of offspring
  - Late maturing

# CHIANINA

- Originated in Italy
  - In the province of Tuscany
  - Used as draft animals during the Roman Empire
  - Semen was first sent to the U.S. in 1971
- White to Steel Gray in color
  - The white gene is recessive. When crossed with other breeds, the dark color is exposed
  - Black skin pigmentation
  - Although if you look at Chi's today, you'll see them to be predominately black, more moderate in size and fuller in their flank through strict breeding





# CHIANINA



- Have been recorded to be the largest breed of cattle, and often used in crossbreeding for added size
  - Cows weigh up to 2,200 lbs.
  - Bulls weigh as much as 3,500 lbs.
  - This breed has been recorded to stand 5 to 6 ft. tall

- Hardy and adaptable to many environmental conditions
  - Strength and muscle
  - Large bone and foot size
- Terminal breed used primarily for meat production
- Not the best maternal characteristics
  - small udders
  - poor milk production



# GELBVIEH

- Originated in Germany
  - Made their appearance in the United States in 1972, after semen was imported from Germany in July of 1971
- Developed as a result of crossbreeding
  - Keltic-German Landrace, Simmental, Shorthorn and Heil-Brown Landrace



- Golden red to rust color
  - Commonly seen black today, as most cattle have been influenced from crossbreeding
- Naturally horned
  - Polled Gelbvieh cattle were developed in the U.S. with the use of naturally hornless females
- Medium size breed
  - Cows average between 1,150 lbs. to 1,350 lbs.
  - Bulls weigh 2,000 lbs. to 2,400 lbs.





# GELBVIEH

- Able to adapt to warmer-weather areas
  - Tick and parasite resistance
- Faster growth-rates
- Lean meat breed
  - Means relatively low fat content
  - Lean meat yield is an indication of higher profits



- Known to have a more docile temperament
  - Easier to work and move
- Dual purpose breed
  - Can be used for milk & meat
  - Most commonly used for meat in the U.S.
- Great maternal characteristics
  - Higher milk performance
  - Recognized for calving ease

# HEREFORD

- Originated in England in the county of Herefordshire
  - First developed in the mid-1700's
  - Developed to more efficiently convert native-grass to meat
  - Made their way to the U.S. in 1817 by Henry Clay of Kentucky



- One of the oldest breeds on record
  - Hereford's proved adaptability and hardiness through rough conditions
  - Hereford carcasses were continually praised and demand for bulls increased



# HEREFORD

- Red to red-yellow with white face, chest, dewlap & underside of body
  - can also have white feathers on neckline, and on flank, knees & hocks
- High carcass yield, more meat per pound
  - Increasing profitability
  - Faster growth-rate
- Known for vigor & forage ability
  - Can be turned out in many environments and still produce a quality carcass
  - This is an advantage as Herefords can sometimes put on too much fat with a grain diet, decreasing carcass grade
- Docile breed; easy to handle and work with
- Longevity in maternal characteristics
  - Known as being some of the best momma's in the cattle industry
- Naturally horned
- Medium-sized breed
  - Cows weigh about 1,300 lbs.
  - Bulls weigh around 2,000 lbs.



# HEREFORD ★ POLLED ★



- Developed in Iowa in the late 1890's
  - By Warren Gammon of Des Moines
- Naturally hornless
  - Developed from naturally hornless Hereford cattle
  - The breed started with 11 head
- Red with white face, legs and underline like horned Hereford cattle
  - Can have varied white feathers and dewlaps as well
- Early maturing
  - Sometimes have lower milking ability, but normally great maternal instincts
- One of the most numerous breeds in the United States



# LIMOUSIN

- Originated in France
  - Considered a Continental Breed
  - Records of Limousin cattle date to the 1600s
  - First imported to Canada in 1968; semen was available in the United States in 1969



- Color:
  - Red
  - Golden
  - Black
- Naturally horned
  - Some polled strains being developed

# LIMOUSIN



- Medium-sized breed
  - Cows weigh about 1,300 lbs.
  - Bulls weigh about 2,400 lbs.
- Considered the fastest growing breed in the U.S. (terminal sires)
  - Terminal meaning marketed for meat production

- Known for leanness and heavy muscle
  - Strong top
  - Deep chest
  - Thick hindquarters
- Heavily used in cross breeding for muscle
  - But, the heavy muscle can sometimes cause calving difficulties





# MAINE ANJOU

- Originated in the northwestern part of France
  - Early 19<sup>th</sup> Century
  - Largest breed of cattle in France
- Introduced to Canada in 1969 and then to the United States through artificial insemination
- Very dark red with white markings
  - White may be on the head, body, underline, tail and rear legs
  - Also can be black



# MAINE ANJOU



- Slower maturing due to their large size
  - Cows weigh around 1,500 to 1,900 lbs.
  - Bulls weigh around 2,200 and up to 3,100 lbs.



- Can be horned or genetically polled
- In France, Maine Anjou cattle are known to be a dual-purpose breed
- In the U.S., they are a more terminal breed, known for muscle and high cutability
- They are maternally known for their milking ability



# RED ANGUS



- Color: Red
  - Black/dark pigment
- Result of recessive gene of Angus (Black) Breed
- Foundation Breeds:
  - Brangus
  - Ankina
  - Amerifax

- Originated in Scotland, as in the early registration handbook, both reds and blacks were recognized
  - Reds, and other colors were barred from registration in 1917
- Cattlemen in the U.S. found value in the Red Angus and by 1945 selection for breeding Red Angus was under way



# RED ANGUS



- Medium sized breed
  - Cows weigh 1,000 to 1,500 lbs.
  - Bulls average 1,700 to 2,400 lbs.
- Homozygous Polled



- Often used for maternal purposes
  - Good mothering ability
  - Easy calvers
- Moderate in muscle and terminal traits
- Good for use in grass-fed beef operations



# SALERS



- Originated in France
  - One of the last breeds imported into the U.S. in 1975
- Color:
  - Most commonly red
  - Can also be black
- Naturally horned
  - Horns are upright
- Originally a dual purpose breed in France
  - Terminal, beef characteristics are emphasized in the U.S.
- Can sometimes be hard to manage as they can be flighty/nervous

# SALERS

- Adapted to severe weather conditions and less than optimum environments
  - Hardy breed
- Medium-sized breed with moderate muscling
  - Cows weigh around 1,300 lbs.
  - Bulls weigh an average of 2,000 lbs.
- Considered a two-way breed
  - Noted for their early maturing pattern (terminal)
  - good milking abilities (maternal)





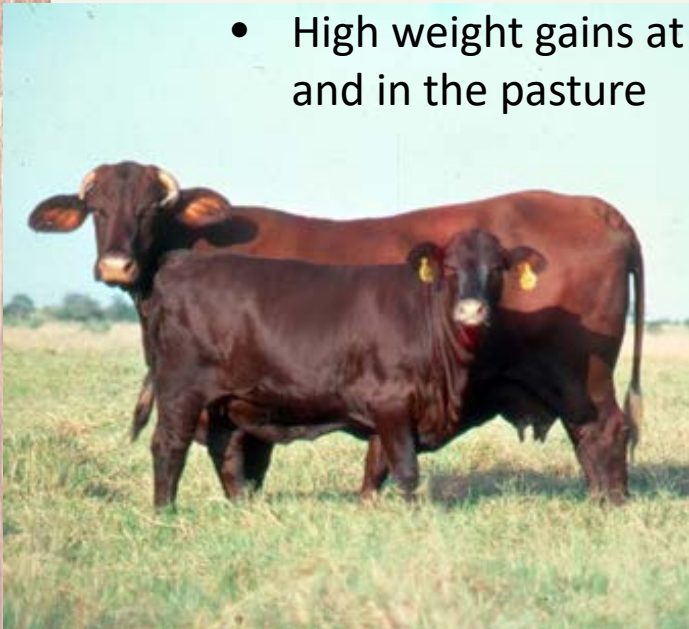
# SANTA GERTRUDIS

- Developed in the United States
  - King Ranch in Kingville, Texas
  - One of the largest ranches in the U.S.
  - Wanted to use Brahman influenced cattle to work on the range
- 5/8 Shorthorn and 3/8 Brahman
  - They were created by crossing shorthorn cows and Brahman bulls
- It wasn't until 1940 that they were recognized as a purebred breed



# SANTA GERTRUDIS

- Hardy cattle for warmer climates
  - Heat tolerant
  - Tick resistant
- Great maternal traits
  - Easy calvers
  - High milk production
  - High weight gains at the feedlot and in the pasture



- Solid cherry red in color
- Can be polled or horned
- Physical Characteristics:
  - Large ears
  - Loose skin
  - Excessive skin in the dewlap
- Cows weigh an average of 1,600 lbs.
- Bulls weigh an average of 2,000 lbs.



# SHORTHORN

- Originated in England in the 1600's
- Imported to the United States in 1783
- There are three types of Shorthorns:
  - Milking Shorthorn
  - Beef Shorthorn
  - Polled Shorthorn



- Color:
  - Red, white, red and white or roan
- Can be horned or polled





# SHORTHORN

- Adaptability to many climates and have a very quiet temperament
  - Usually easy to handle and work
- Medium sized breed with moderate muscling
  - Cows weigh about 1,600 lbs.
  - Bulls weigh about 2,000 lbs.
- Have excellent maternal traits
  - High milk production
  - Protective of offspring
- Work well in crossing with other breeds to increase milk production
- A foundation for many breeds





# SIMMENTAL

- Originated in Switzerland
- Semen was brought to the U.S .in 1967
- One of the oldest and largest breeds in the world
- Originally used as a triple purpose breed
  - Labor
  - Meat
  - Milk
- Yellowish brown to red in color:
  - Head, underline, breast, legs and switch can be white
- Naturally horned, but can be polled



# SIMMENTAL



- Bodies are long with well-muscled thighs
- Mainly used for meat production
  - With size, Simmental cattle can sometimes be harder to finish on pasture and may require grain
- Will help improve milk production, added height and growth
- Traits desired in cross-breeding on both the dam and sire side
- Larger sized breed
  - Cows can weigh around 1,600 lbs.
  - Bulls can weigh up to 2,600 lbs.



# SOUTH DEVON

- Originated in Southwest England in the 16<sup>th</sup> century
  - Brought to the U.S. in 1969
  - The North American South Devon Association was formed in 1974
- Largest of the British Breeds
- Not related to Devon cattle
- Can be both horned and polled
- Color:
  - Black
  - Red



# SOUTH DEVON

- Exceptionally docile
  - Both cows & bulls are easy to handle
  - Gentle disposition works well for moving on pasture
- Work great in a variety of pasture and environmental conditions
- Great for grass-fed, pasture raised operations
  - Provide a more quality carcass, even on poorer forage
- Cows usually weigh between 1,300 to 1,500 lbs.
- Bulls obtain an average mature weight of 1,800 to 2,400 lbs.





# TEXAS LONGHORN

- Originated in the United States
  - Developed by natural selection and survival of the fittest
  - Christopher Columbus brought cattle of Spanish origin to Mexico in 1493
  - These cattle became the foundation of the Texas Longhorn
- Possess a variety and combination of colors and patterns
- Noted for long distinctive horns





# TEXAS LONGHORN

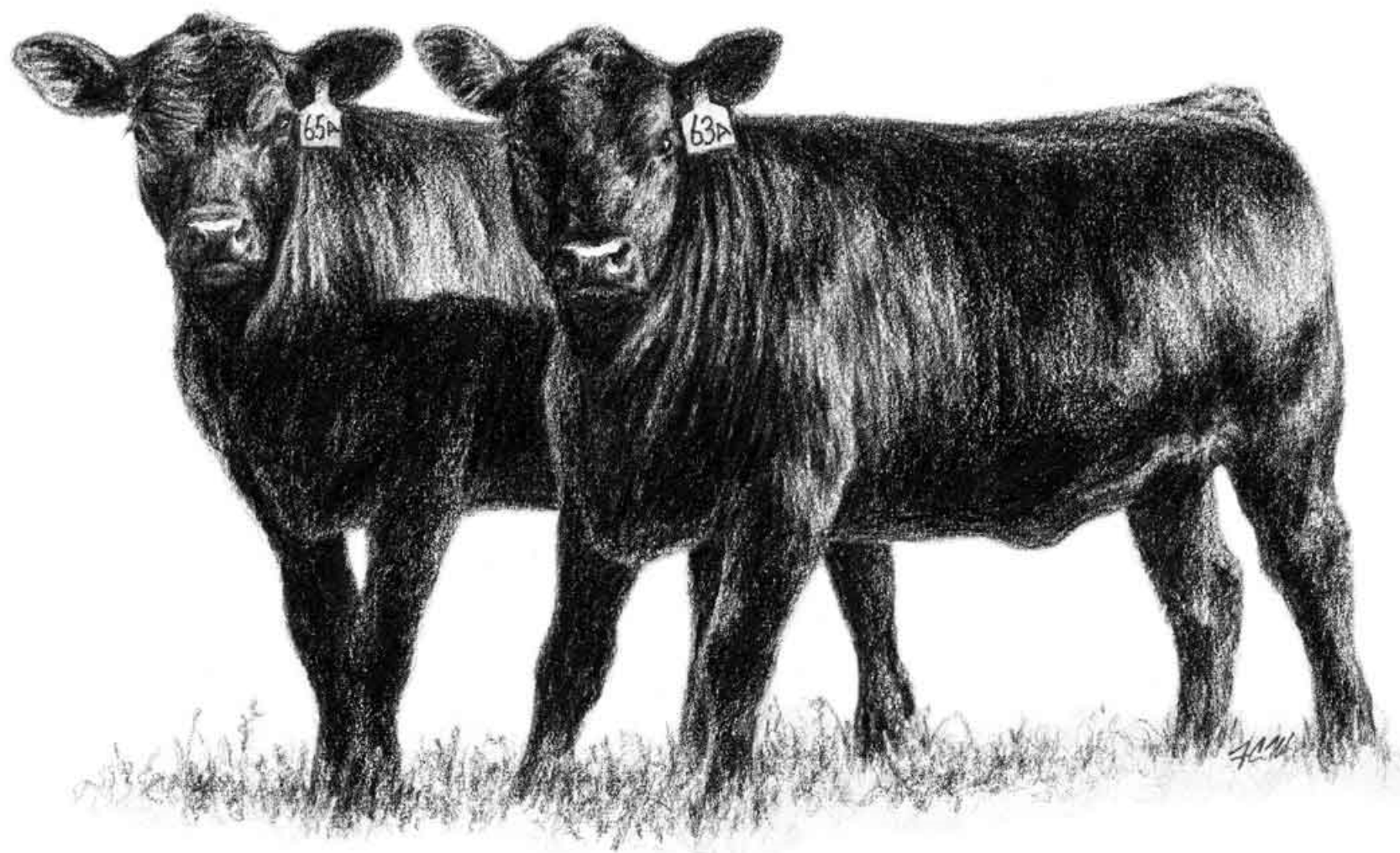
- Calves have small birth weights, slim shoulders and hips
  - Makes for easy calving
- Medium sized breed with moderate, flat muscle



- Noted for their “ruggedness”, strong legs and adaptability
- Extremely hardy breed
  - Developed to naturally withstand heat, cold winters and to travel long distances without water







**COMMON  
SMALLER**

**★MINI★  
CATTLE  
BREEDS**





# BELTED GALLOWAY

- Originated in Scotland
- Large white belt around the middle
  - Nickname: Belties
- Produces lean and flavorful meat
  - Carcass dressed weights an average of 60 percent of live weight
- Smaller and flatter muscles
- Noted for their hardiness in cold weather and adaptability to rough terrain
- Rapid gain, even on pasture
- Cows are good mothers and reach puberty early



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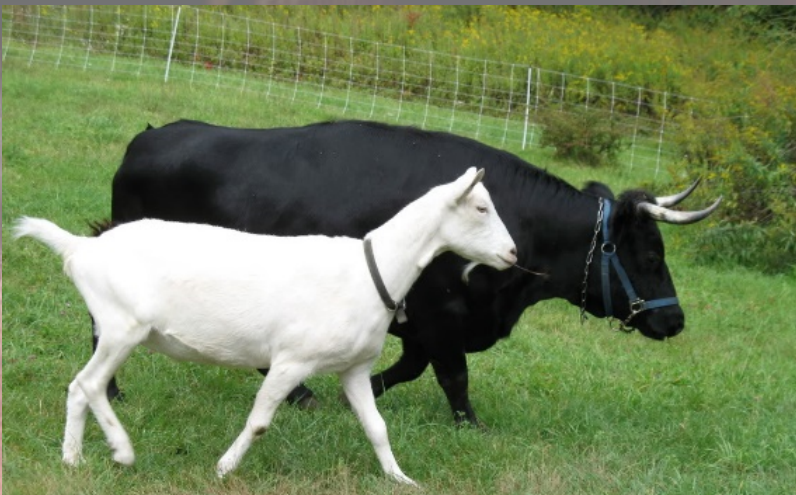


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- Originated in Ireland
  - Introduced to the United States in the early 1900's
- Color: Black or Red
- Naturally horned
- Used for both milk and meat
  - Can produce more milk for its weight than any other breed
  - Mature for meat around 18-months and dress out 50-60% of live weight
- Among the smallest breeds in the world
- Hardy & forage efficient



# LOWLINE ANGUS

- Originated in Australia
- Commonly known as the “Original Aberdeen Angus”
- Color: Black
- Homozygous Polled
- Feed efficient and self-maintainable on grass
- 60% size of “common beef breeds”, such as breeds mentioned earlier in module
- Ideal for the small acreage farmer





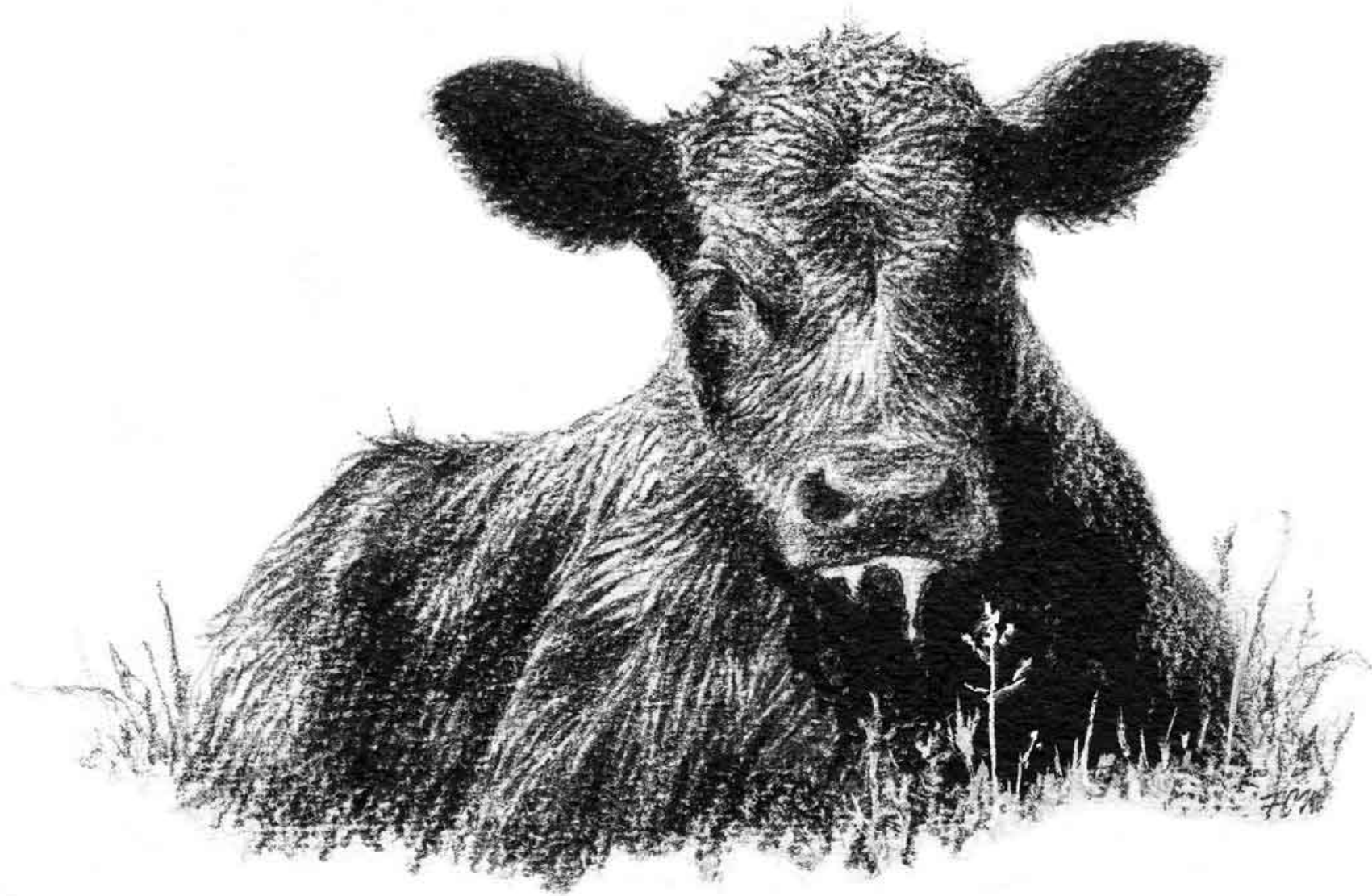
# MINI HEREFORD



- Originated in the United States
- Follow the coloring of Hereford cattle
- Docile, easy to work with & care for
- Hardy & adapt well to all environments
- Very fertile
- Tender meat
- Mature early
- Less pasture space needed, easier on pastures & fences
- Great “mini” market







# OTHER BREEDS NOT LISTED ABOVE

Please take note that the breeds covered in this presentation is not a full list of breeds of cattle. This module focuses on common breeds across the United States. We have compiled the list below of other breeds you may be interested in researching for your farm.

## Other Heat Tolerant Breeds:

- Florida Cracker
- Pineywoods
- Senepol
- Romosinuano
- South Poll



## Other Breeds of Consideration:

- Beefmaster
- Devon
- Nelore
- Red Poll





# THINGS TO THINK ON

These are things to decide prior to getting cattle, and knowing how many head you can put on your pasture to adequately meet your goals.

- Goals for your farm, also consider your production system and environment:
  - Will you be direct-marketing meat off your farm?
  - Are you taking cattle to the sale barn?
  - Will you have a grain-free operation? Or will you supplement with grain?
  - Will you need pasture to cut for hay?
  - Are you in a hotter climate area?
  - Is your environment common for ticks and other insects?
- If you're planning to direct market your own meat, make sure you chat with others in your area or nearby who have that type of operation and see what works best (selling whole, halves, cuts, etc.)
- If you're hauling to the sale barn, check your markets, know if your area brings better money for black cattle (this is common). Also note that "eared" cattle such as Brahman influenced breeds usually bring less money.
- Just because you have less land, doesn't automatically mean you need a smaller size of cattle, when selling for meat (direct or to finishers) having less head of an average size breed will be more profitable

# REFERENCES AND RESOURCES

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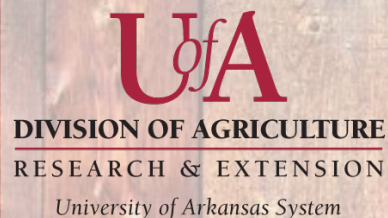




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