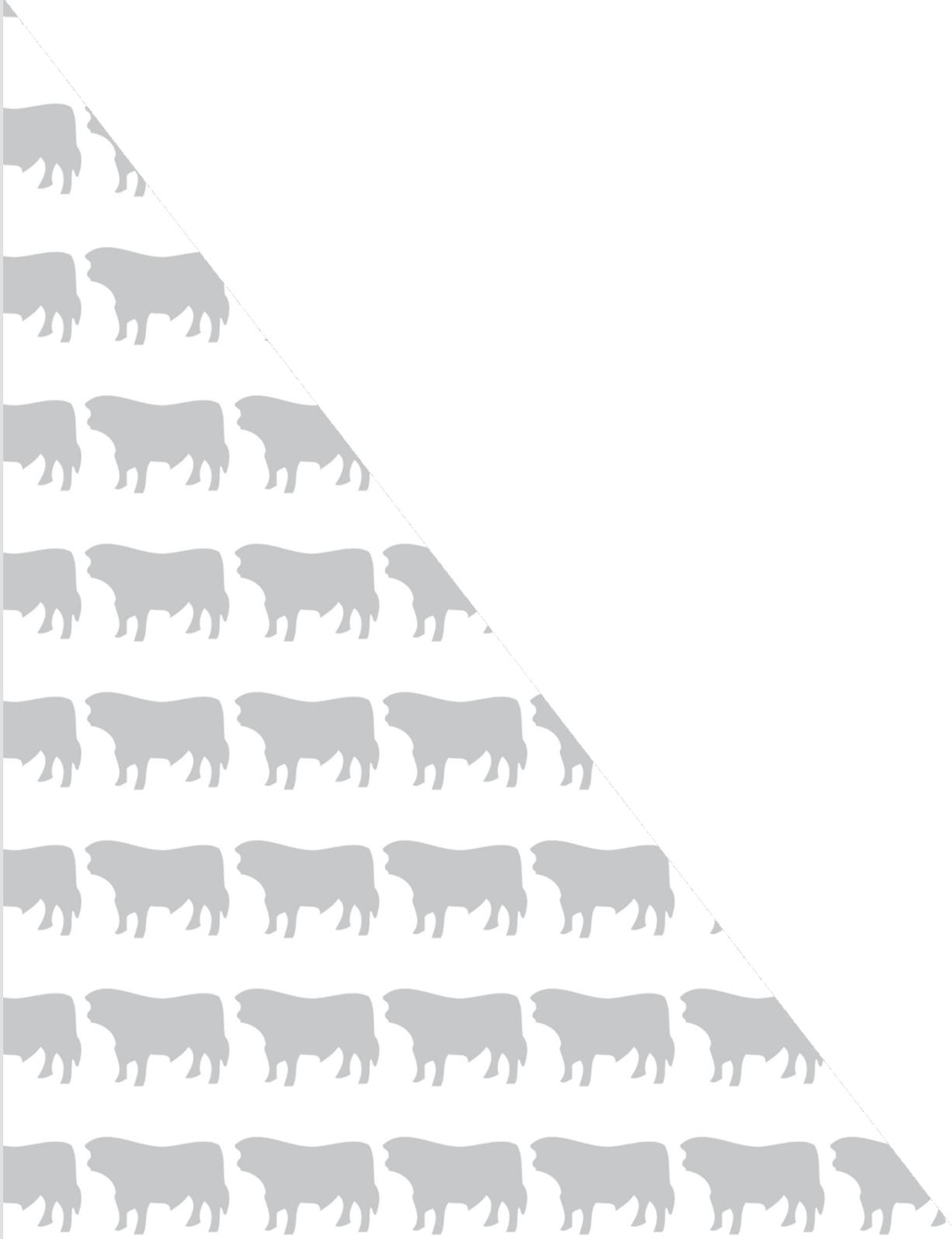


# Beef Cattle (Bovine)



Black Angus



Hereford



Red Angus



Shorthorn



Charolais



Limousin



Maine Anjou



Simmental



Brahman



Black Brangus



Santa Gertrudis



Beefmaster



## Terminology:

**Bull:** Sexually mature male. Bull calf used to denote males under a year of age.

**Cow:** Female that has produced a calf.

**Heifer:** Female that has not produced a calf.

**Heiferette:** Heifer that has calved once, dried up, and is then fed for slaughter.

**Steer:** Castrated male.

**Calf:** Young cattle (less than 1 year) of either sex.

**Calve:** Act of giving birth. Some dairymen will refer to "freshen" as a term denoting calving.

**A.I.:** Artificial insemination

**Stocker:** Weaned cattle that are run on grass or fed on high roughage diets. Generally weigh 350 to 550 pounds when started. Expected to gain 250 to 300 pounds during growing phase.

**Cow-Calf Operation:** Management unit that maintains a breeding herd of cows and produces weaned calves for sale.

**Yearling:** A cattle of either sex that is 1 to 2 years of age. Some cattlemen will refer to short and long yearlings.

**Crossbred:** An animal that is a product of the crossing of two or more breeds.

**Feeder Cattle:** Those requiring more growth and/or fattening before slaughter.

**Feedlot:** Beef cattle enterprise where cattle are placed in confinement, fed harvested feeds and fattened for slaughter.

**Seedstock Producer:** Enterprise that produces breeding animals for the commercial segment of the industry. The majority of purebred breeders fall into this category.

## Introduction:

**B**eef cattle production is spread across the United States with Texas as the leading state in all segments of the industry including cow/calf production, stocker cattle production and feedlot production. Cow/calf production includes cattle raised on grassland and focuses on production of a live calf annually. Environmental adaptation is critical for success of cow herds so breed types vary across the country to acclimate to environmental stressors. Brahman-influenced or American breeds proliferate as the cow herd base in the south and southeastern parts of the country. British breeds originated in colder climates and are more adaptable to the cold. British breeds constitute the cowherd base in the Midwestern and western states. European breeds are also found in the Midwestern states and are typically used as sire breeds. Charolais or reddish-colored breeds also work well in the south or southwest as sire breeds. Stocker cattle production focuses on moderate growth on a forage based diet. Stocker cattle graze on wheat pastures of northern Texas and Texas Panhandle areas during the winter months. Feedlot production encompasses feeding of high concentrate, grain based diets to cattle to achieve rapid growth to attain market endpoint weights. Feedlot production is centered in the Texas Panhandle, Kansas and Nebraska. Most steers and heifers are marketed between 15-24 months of age weighing 1000-1400 pounds.

## Beef Cattle Production in the United States and Globally:

Beef cattle production plays a highly significant role in United States agriculture. It creates the most jobs in agriculture-providing 1 million direct jobs and nearly 2 million related positions in thousands of American communities. Every dollar of cattle sales generates another \$5 to \$6 in increased economic activity in the community. The amount of beef consumed in the U.S. per capita was 57.2 pounds in 2018. One steer can provide 540 servings of beef, thus potentially impacting 540 consumers. There are 94.8 million cattle in the United States in 2019. Top five beef cattle states are Texas, Nebraska, Kansas, Oklahoma and California. Top beef producing countries in 2019 are United States, Brazil, European Union and China.

90% of cow herds have less than 100 cows (average 40 head).

**Top Foreign Markets (2018) for U.S. Beef (value):** Japan, South Korea, Mexico, Hong Kong and Canada

**Global Leaders in Cattle Numbers:** India (305m), Brazil (232m), China (97m), USA (94m), and European Union (88m).

# Beef Cattle Production in Texas:

Texas ranks first in beef cow numbers (5.2 million) with followed by Oklahoma (2.15m), Missouri (2.06m), and Nebraska (1.94m), and South Dakota (1.82m) (2018). Gonzales County (57,341 cows) ranks 18<sup>th</sup> and Lavaco County (67,102 cows) ranks 13<sup>th</sup> nationally among counties (2019).

Nebraska and Texas both have 2.75 million head of cattle on feed to rank first, Kansas (2.43m), Iowa (1.32m), and Colorado (1.05m) round out the top 5.

Texas ranks first in total cattle numbers (13 million) and beef production is the largest sector of the Texas agriculture industry.

Texas is number one in the Nation in:

Total Cattle

Ranches Beef

Cows

Feedlot Cattle (tied with Nebraska)



## Beef Cattle Production Systems:

Cattle production in the U.S. encompasses many different types of operations and the predominant types are listed below.

**A. Cow-Calf Production** involves cows and heifers mated to bulls, either by natural service or artificial insemination, to produce a **calf crop**. Various breeding programs are utilized to achieve the desired result. The two types of cow-calf producers include **commercial** and **purebred** breeders.

1. **Commercial producers** raise steers and heifers that are generally sold at weaning and destined to become slaughter animals. However some operations retain ownership of cattle through the feedlot and merchandise them at market weight.
2. **Purebred breeders** specialize in **seedstock production** meaning that these calves are destined to become part of breeding herds or become bulls from which semen can be collected for artificial insemination purposes.

### **Top 5 U.S. Beef Cow/Calf Operations Number of Cows, 2018**

1. Deseret Cattle & Citrus, FL
2. J.R. Simplot Co., ID
3. King Ranch, Inc., TX
4. Silver Spur Land and Cattle, WY
5. Lykes Bros., Inc., FL

### **Top 5 Seedstock Operations Calves Produced Per Year, 2018**

1. Express Ranches, OK
2. Gardiner Angus Ranch, KS
3. 44 Farms, Cameron, TX
4. Leachman Cattle of Colorado, CO
5. Ludvigson Stock Farms, Billings, MT

### **Reproduction Summary for Breeding Operations:**

**Age at Puberty:** Bulls - 10 (6-10 months) Heifers - 10 (4-14) months

**Estrous Cycle:** Length of Cycle - 21 (18-24) days

Length of estrus - 18 (10-26) hours

Time of ovulation - 12 (4-6) hours post-estrus

**Signs of Estrus:** Stands to be mounted / Nervous / Mucus secretion from vulva / Roughened hair over tail

**Breeding Ratio:** Pasture mating - 1:25-30 (Young bulls 1:15 / Mature bulls 1:30 )

**Time to breed in cycle:** Mid to late estrus

**Gestation length:** 283 (275-290) days

# Beef Cattle Production Systems:

**B. Stocker Operations** utilize available forages or roughages to grow cattle from weaning until weight- ready for entrance into the feedlot. In addition, replacement heifers for cow-calf operation are generally handled in a similar manner from weaning to yearling age.

**C. Feedlot Production** (30,320 feedlots in US) involves feeding high concentrate rations to cattle in a large confinement facility specifically designed for finishing cattle. When cattle are deemed market ready as determined by finish and weight, cattle are sold to a commercial meat processor for conversion to consumer product. The two types of feedlot operations include **commercial cattle feeding** operations and **farmer-feeder**.

## Top 5 U.S. Feedlots One Time Capacities, 2015

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1. Five Rivers Cattle Feeding, LLC., KS, TX, CO, OK, ID, NM, AZ
2. Cactus Feeders, Inc., TX, KS
3. Friona Industries, L.P., TX
4. Irsik and Doll Services, Inc., KS
5. Green Plains Cattle Company, TX, KS, CO

1. **Commercial feeders** are generally quite large with capacities of up to 40,000 to 100,000 head. Corporations often own these operations (81% of all cattle on feed).
2. **Farmer-feeder** producers have capacities less than 1000 head and accounts for approximately 19 % of the feedlot cattle in the U.S.

## Beef Control Funnel:

