

# EXOTIC CATTLE BREEDS

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- ❖ Friesian
- ❖ Jersey
- ❖ Ayrshire



# INTRODUCTION

- Cattle are the most common type of large domesticated ungulates. Cattle are raised as livestock for meat (beef and veal), as dairy animals for milk and other dairy products, and as draft animals (oxen or bullocks) (pulling carts, plows and the like). Other products include leather and dung for manure or fuel. In some regions, such as parts of India, cattle have significant religious meaning.

# SCIENTIFIC CLASSIFICATION

- Kingdom: Animalia
- Phylum: Chordata
- Class: Mammalia
- Subclass: Theria
- Infraclass: Eutheria
- Order: Artiodactyla
- Family: Bovidae
- Subfamily: Bovinae
- Genus: Bos
- Species: *B. taurus*
- Subspecies: *B. t. primigenius*,  
*B. t. indicus*

# FRIESIAN CATTLE



# FRIESIAN CATTLE

- **Origin:** Germany/Netherlands
- **Morphological Features:**
  - They are large, black-and-white marked animals.
  - Vary from mostly black to mostly white, or they can also be red and white.
  - A healthy calf weighs 40 to 45 kg or more at birth.
  - A mature Holstein cow typically weighs 580 kg & stands 147 cm tall at the shoulder.

- ❑ Friesians should be bred by 13 to 15 months of age, when they weigh over 360 kg.
- ❑ Breeders plan for Holstein heifers to calve for the first time between 23 and 26 months of age.
- ❑ The gestation period is about nine and a half months.
- 500 -800 Kg
- 450-600 Kg
- Milk production- 28,000lbs./12,700kg (~3260 gallons) per cycle

# MILK PRODUCTION

- The breed currently averages 7655 litres/year throughout 3.2 lactations, with pedigree animals averaging 8125 litres/year over an average of 3.43 lactations.
- By adding, lifetime production therefore stands at around 26,000 litres.



## FEEDS FOR FRIESIANS

- Pasture can be a major source of feed for dairy cows but there are some limitations to its use. Energy and protein supplies are the most essential components in animal nutrition and, in many tropical countries, these components are often the critical limiting factors to animal production.

# JERSEY CATTLE



# ORIGIN

- The Jersey breed originated on the Island of Jersey, a small British island in the English Channel off the coast of France.
- The Jersey is one of the oldest dairy breeds, having been reported by authorities as being purebred for nearly six centuries



# MORPHOLOGICAL FEATURES

## Colouration:

- Jersey cattle coat colour ranges from a light fawn to almost black.
- Some Jerseys may have white on them, from diamond-shaped patches on their shoulders or hips, to white legs and a stripe from the top of the shoulder down to behind the elbows.
- Black Jerseys almost always has a tan-coloured saddle in the middle of their backs, from the withers to the top of the loins.
- They also have lighter colouration around their noses and eyes, and on the inside of each leg. A lot of fawn-coloured mature cattle have a darker face from just below their poll or just above their eye-brows to just before their noses.
- All Jerseys have dark eyes and dark pigmented skin around their eyes and their noses.
- They also have black hooves and a dark tail-switch.

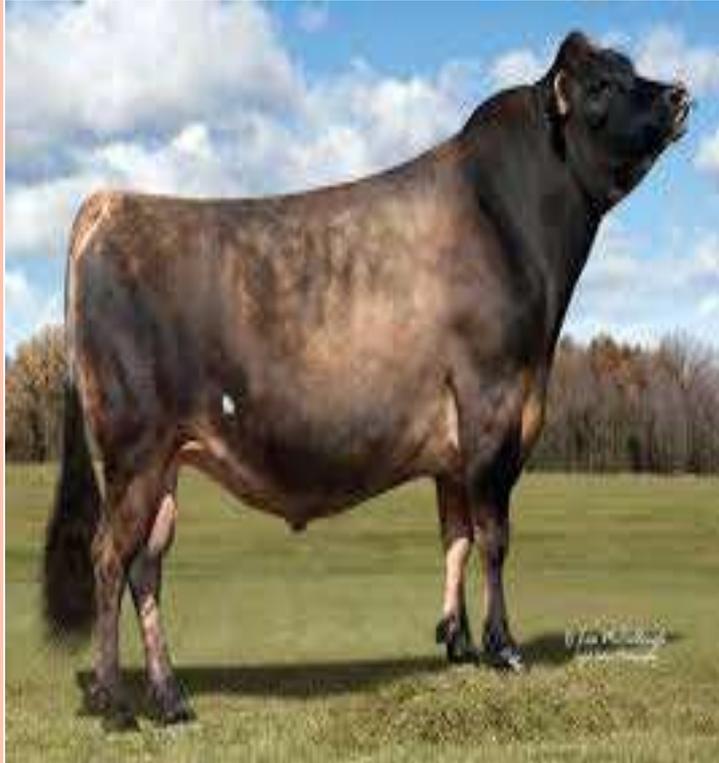
## **Body type and characteristics:**

- Jerseys look to be more finer-boned and bodied than most any beef breed.
- Jerseys are quite angular in body type because they are selected to be a milk-producer and not a beef-producer.
- They have funnel butt characteristics , and are quite thin and bony .
- Jerseys are smaller built cattles

## **Head characteristics:**

- Jersey cows are very feminine looking animals, with a finer, more feminine head
- Jerseys are a naturally horned breed, though there are genetics for polled cattle as well.

# Male :



- Jersey bulls, while small as compared to the other dairy breeds, are extremely masculine.
- They are quite muscular about their crests and shoulders and are considerably less refined throughout than are the females.
- The same general qualities of straight lines and dairy conformation as are found in the cows are desired in bulls.
- Jersey bulls are known for having the least docile temperament of the common breeds of cattle.

# WEIGHTS

- Male : 540 - 820 Kg
- Female : 400 – 500 Kg
- Milk production- 16,000lbs./7,260kg (~1860 gallons) per cycle
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# Milk

- Of all major dairy breeds, the Jersey's milk boasts the richest content. The milk is very high in butterfat, which provides a better-tasting product. It's also used for making cheese and butter. According to the American Jersey Cattle Association (AJCA), compared to the average glass of milk, that produced by a Jersey contains 15 to 20 percent more protein, 15 to 18 percent more calcium and 10 to 12 percent more phosphorus, along with high amounts of vitamin B12.

# MILK PRODUCTION

- Jersey cows are outstanding milk producers, producing more milk per each pound of body weight than other types of bovines. The record for milk production by one cow is held by a Jersey. The Jersey produces more milk on less feed than other dairy breeds, eating about 80 percent of a Holstein's normal daily intake Milk yield – 5000-8000 kg
- Dairy milk yield is found to be 20 liter whereas Problem of milk fever in older cows
- High fat and protein yield (4.0-5.0% fat and 4.0% protein)
- Yellow color milk due to high fat
- cross bred jersey, cow gives 8-10 liter per day.

# SPECIAL FEATURES

- The ability to carry a larger number of effective milking cows per unit area due to lower body weight, so lower maintenance requirements, and superior grazing ability.
- High fertility
- The ability to thrive on locally produced food.
- Adaptable to hot climates.
- Jerseys produces a pound of milk components at a lower cost compared to the other major breeds.
- Has little or no calving problems, greater fertility, a shorter calving interval, and earlier maturity

- Stay in the herd longer than any other dairy breed.
- Jersey milk has greater nutritional value, plus the highest yield and greater efficiency when processed into cheese and other value-added products.
- Milk commands a premium price in many markets.
- Jerseys perform well under a wide range of systems and are well-known for their high feed conversion efficiency
- Jersey milk is in many ways unique. As a product it contains:- 18% more protein, 20% more calcium, 25% more butterfat than "average" milk.
- Jerseys are well-known to be less susceptible to lameness because of their black hoof colour which makes their hooves very hard and are a lighter breed.
- Jerseys are thought to have the one of the best temperaments among, the dairy breeds, although a lot of this depends on the handling the animals receive.

# AYRSHIRE CATTLE



# INTRODUCTION

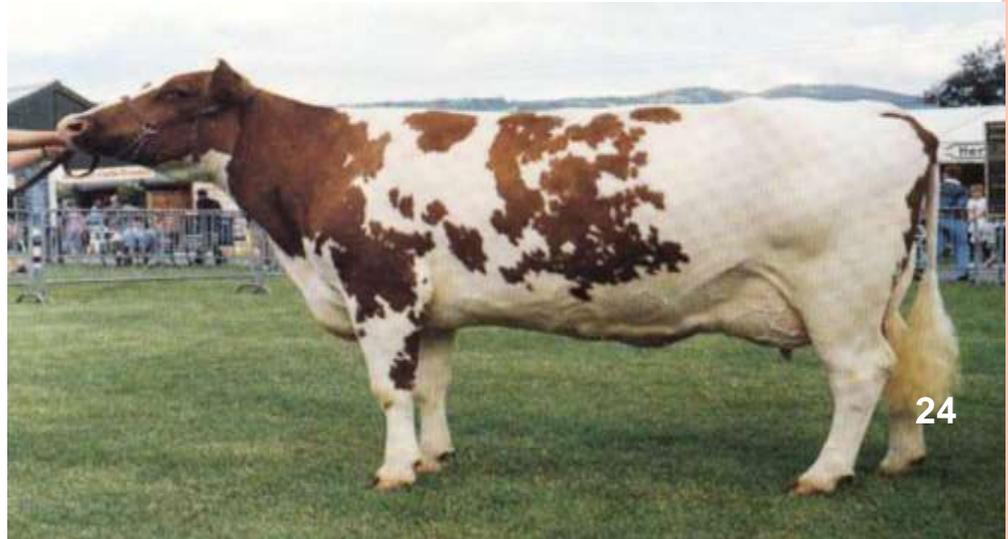
- Ayrshire cattle are breed of dairy cattle originating from Ayrshire in south west Scotland.
- They are known for their ability to convert grass into milk efficiently & their hardiness.
- The breed was traditionally known as Dunlop cattle or Cunninghame cattle.

- They were exported to all parts of the world & extensive cattle docks used to exist at Cunningham head station for loading & export purposes.



## MORPHOLOGICAL FEATURES

- Body color:- Brown and white patches in almost equal amounts with some cows tending to dark mahogany colour. The skin is pliable & soft with fine silky hair . The bone structure is fine & flat being proportionate to body weight.



- Average body size:- Large (average live-weight 450kg.
- They are strong, rugged cattle
- Weight:- Male: 635 to 900 kilograms .
- Female: 450 to 600 kilograms
- Milk production- 17,000lbs./7,711kg (~2000 gallons) of milk per 305 day-cycle/year

# MILK PRODUCTION

- Ayrshire milk is referred as "the ideal drinking milk"; it is not excessively rich, not lacking adequate fat, and it possesses desirable quantities of proteins.
- Potential yield: 30 Litres/day
- Annual dairy production-3000 litres with butter fat of 4.7%

## Distribution in Sri Lanka

- Many factors influence the distribution of cattle farming in Sri Lanka such as, the agro-ecological zones, proximity to markets and feed resources. Milk production systems vary between and within agro-ecological zones. Based on the rainfall pattern and altitude, the country is divided into three main agro-ecological zones namely, low country, mid country and the up-country and, the low and mid country regions again being divided into wet zone, intermediate zone and a dry zone. The wet mid- and up-country areas are often perceived as the main dairy producing areas of Sri Lanka (Census of Agriculture, 2002).

- Up-country region receives >2000mm mean annual rainfall and temperature ranges from 10oC to 32oC which is a suitable climatic and topographical environment for European breeds (Ibrahim et al., 1999). The government and private sectors have large cattle farms of European breeds, primarily the Ayrshire, Jersey and Friesian in the up-country wet and intermediate zone areas that have a high dairy potential.
- Jersey and Friesian are also suitable in mid country.



# COMPARISON

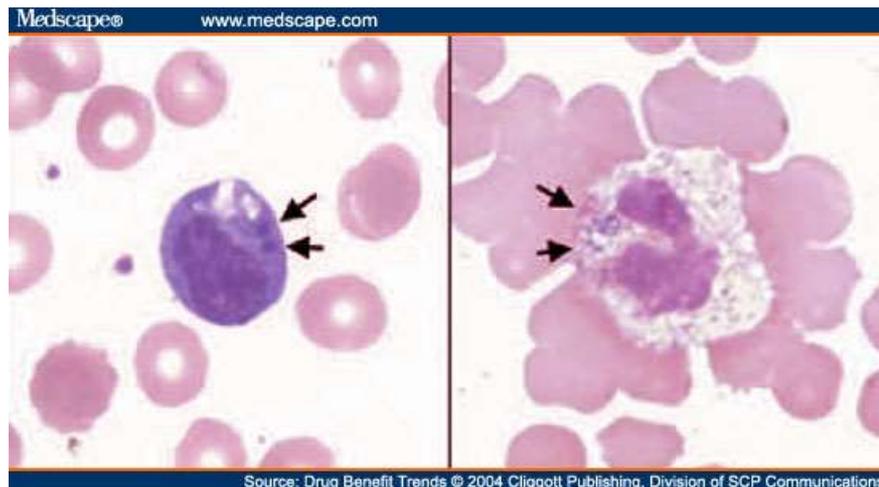
	Friesian	Jersey	Ayrshire
Origin	Netherlands	Jersey	Scotland
Weight (male)	500 -800 Kg	540 - 820 Kg	635 to 900 Kg
Weight (Female)	450-600 Kg	400 – 500 Kg	450 to 600 Kg
Milk production	28,000lbs./12,700kg (~3260 gallons) per cycle	16,000lbs./7,260 kg (~1860 gallons) per cycle	17,000lbs./7,711 kg (~2000 gallons) of milk per 305 day-cycle/year
Butterfat (Milk)	2.5-3.6%	4.9%	3.9%
Protein content (milk)	3.2%	3.7%	3.3%

# **DISEASES**

- **ANAPLASMOSIS**
- **ANTHRAX**
- **RINGWORM**
- **BLACKLEG**
- **BRUCELLOSIS**

# ANAPLASMOSIS

- Anaplasmosis is a vector-borne, infectious blood disease in cattle caused by the rickettsial parasites *Anaplasma marginale* and *Anaplasma centrale*. The intracellular parasite destroys red blood cells. It causes anemia, fever, weight loss, breathlessness, uncoordinated movements, abortion and death



# ANTHRAX

- Anthrax, a highly infectious and fatal disease of mammals and humans, is caused by a relatively large spore-forming rectangular shaped bacterium called *Bacillus anthracis*. The predominant sign in cattle with anthrax is a progression from a normal appearance to dead in a matter of hours. Most animals are simply found dead

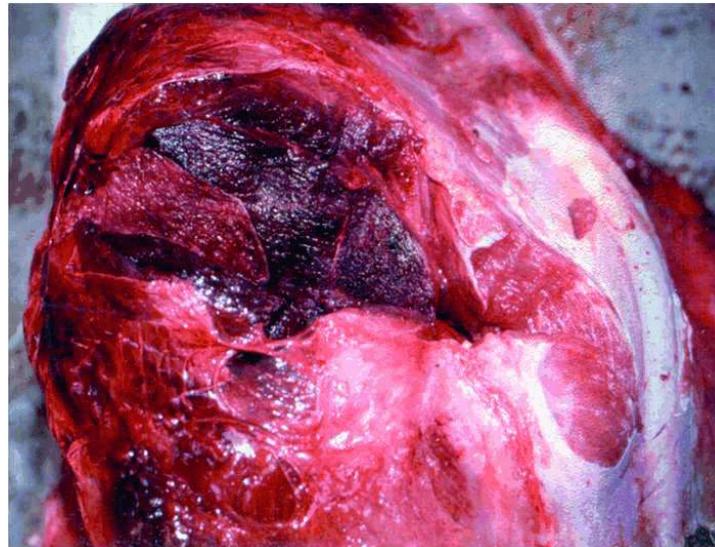


# RINGWORM

- Ringworm is a transmissible infectious skin disease caused most often by *Trichophyton verrucosum*, a spore forming fungi.

# BLACKLEG

- Blackleg is a highly fatal disease of young cattle caused by the spore forming, rod shaped, gas producing bacteria *Clostridium chauvoei*. Cattle that are on a high plane of nutrition, rapidly gaining weight and between 6 months and 2 years of age are most susceptible to the disease.



# BRUCELLOSIS

- Brucellosis of cattle, also known as "contagious abortion" and "Bangs disease", is caused by infection with the bacterium *Brucella abortus*, which can also cause a disease of humans known as "undulant fever". Infected cows frequently suffer from retained afterbirth, are difficult to get rebred and sometimes become sterile.





**THANK YOU**