



# DEPARTMENT OF LIVESTOCK PRODUCTION MANAGEMENT



## IDENTIFICATION OF BODY PARTS OF FARM ANIMALS (LPM-Unit-I)

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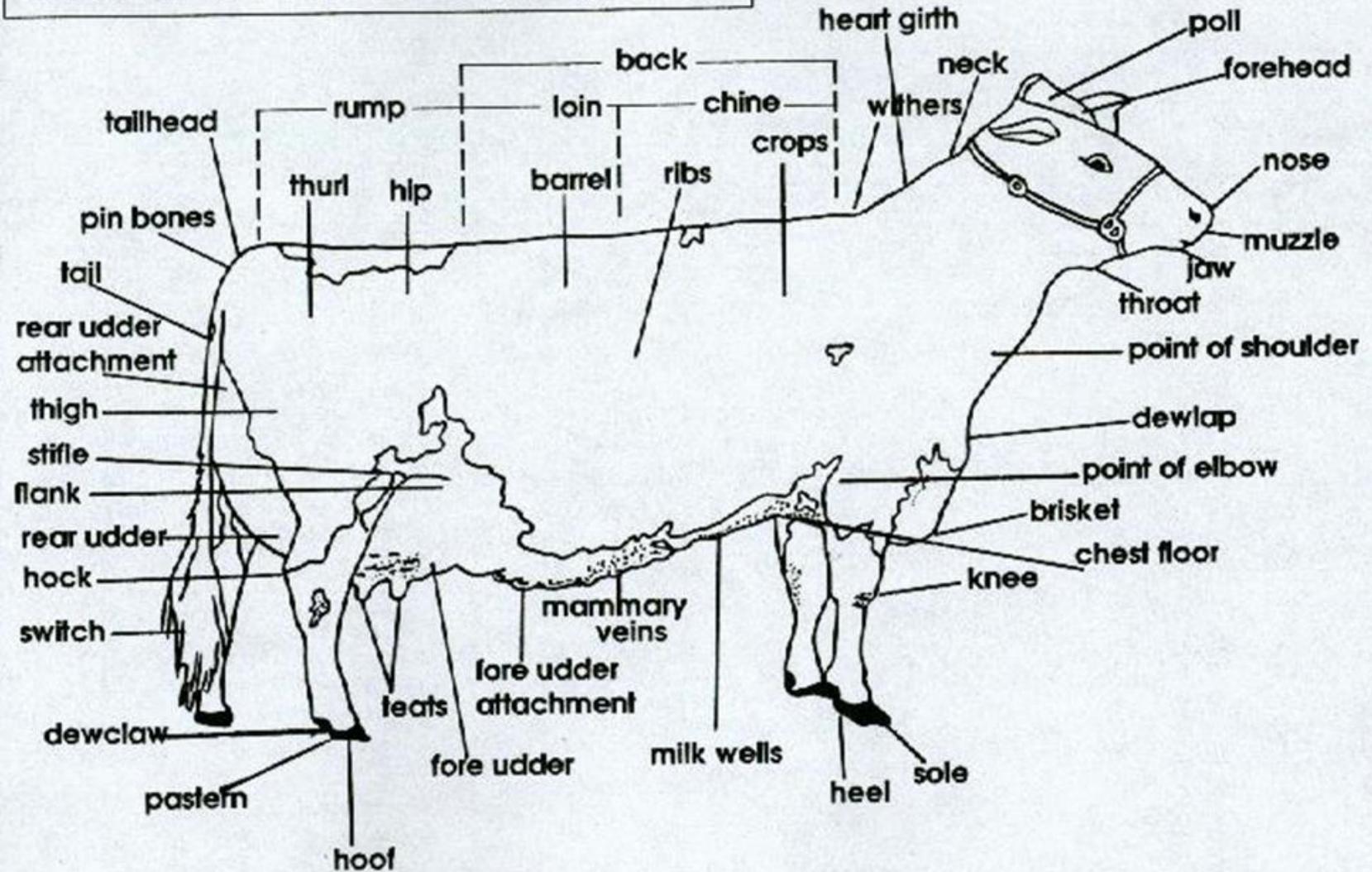
**Bihar animal sciences university, patna**

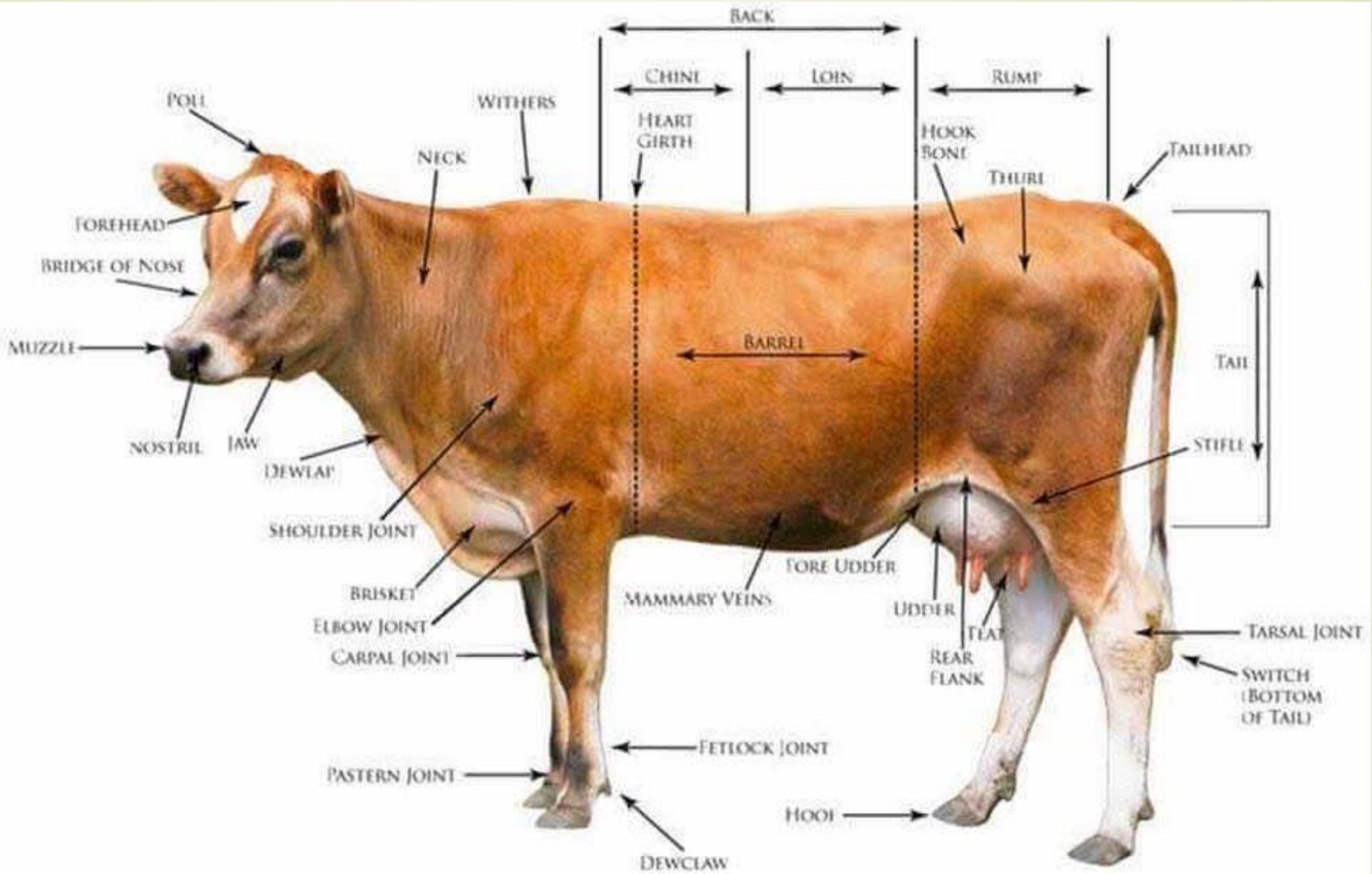
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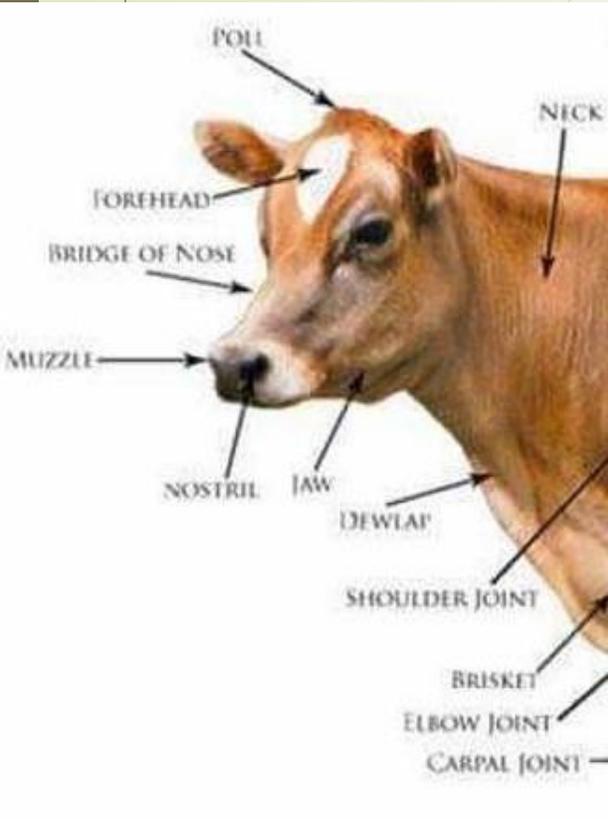
# CATTLE

## Know the Parts of A Dairy Cow

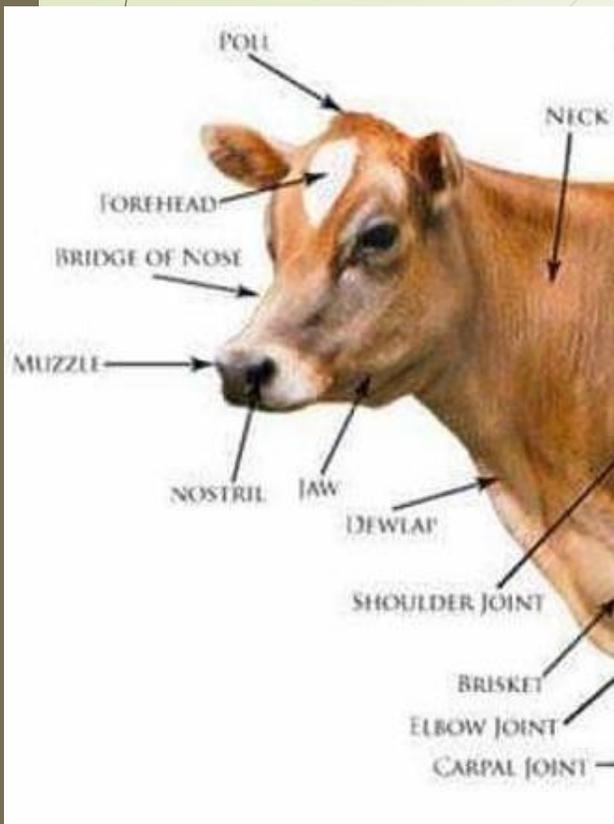




## HEAD

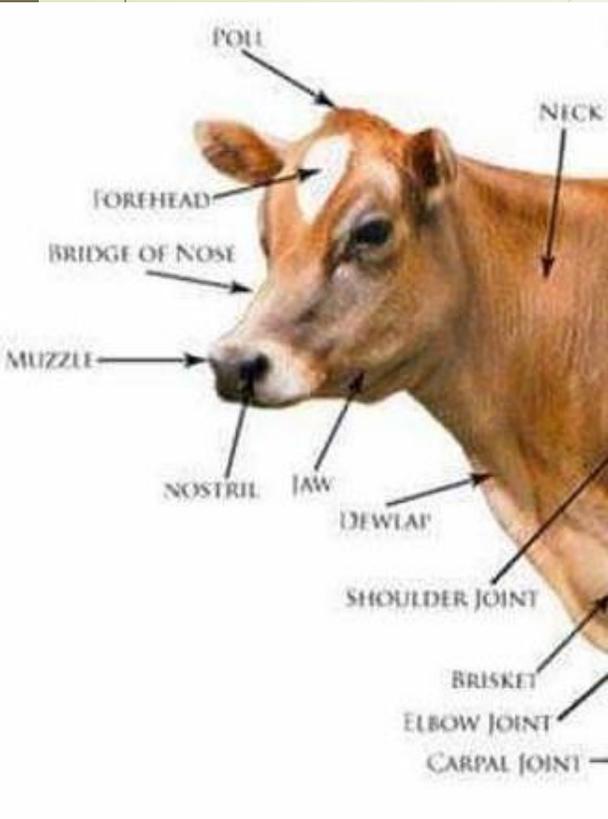


- **Poll:** The part immediately between and behind the horns.
- **Horns:** Paired bony processes that emerge from either side of the poll.
- **Ears:** The organ of hearing, situated just behind and below the horns.
- **Fore head:** From the poll down to the level of the eyes.
- **Face:** From the level of the eyes downward to the nostrils.
- **Bridge of nose:** Area of nasal bone.
- **Nostrils:** Two natural openings for breathing.
- **Temporal fossa:** Depression between the base of the horn and outer angle of the eye.



- **Muzzle:** The lower part including nostrils, mouth and a chin
- **Muffle:** Area between the nostrils, which is generally hair-less and black in colour.
- **Eyes:** An organ of sight.
- **Jaw:** Upper jaw is formed by maxilla and premaxilla, and lower jaw by mandible bone.
- **Cheeks:** Area of masseter muscle, the side of the face below the eye and above and to the side of the mouth.
- **Jowl:** Space between the branches of the lower jaw.
- **Throat:** The upper part of the esophagus just behind the jowl.

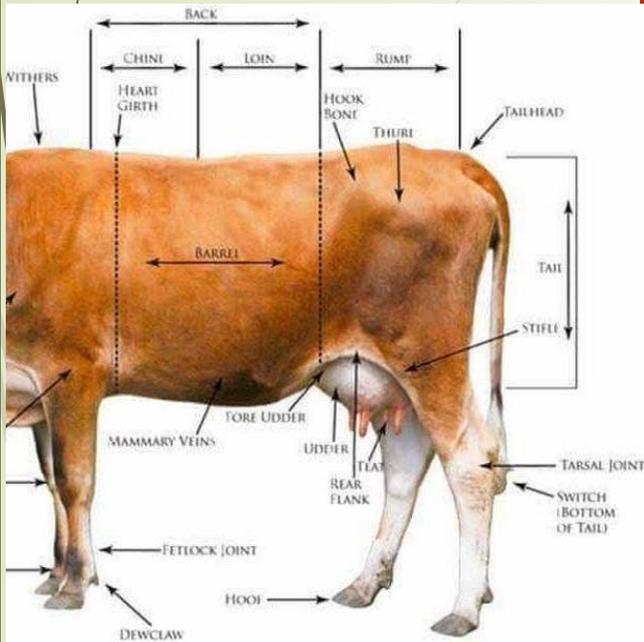
## NECK

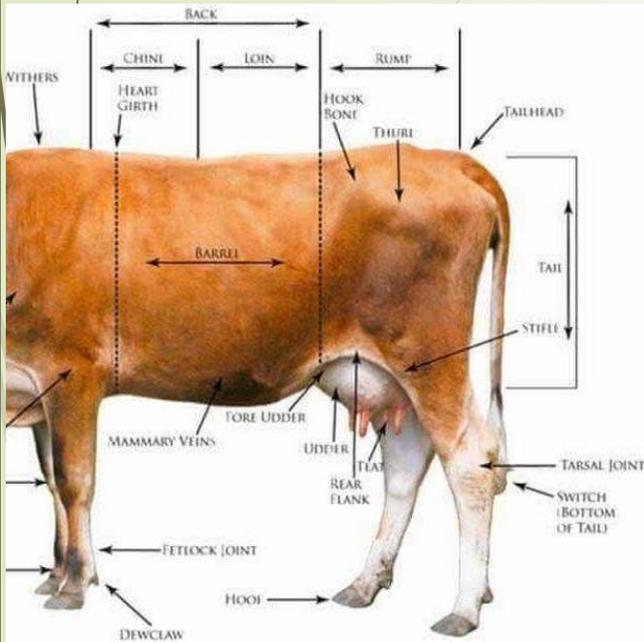


- **Crest:** Upper ridge of the neck, starting from poll.
- **Base of the neck:** The place where neck joins the body.
- **Apex of neck:** Attachment of the neck to the head.
- **Hollow of the neck:** Hollow area at the base of the neck.
- **Jugular groove:** Running down the lower part on each side of the neck from the angle of the jaw to just in front of the shoulder.
- **Dewlap:** A pendulous fold of the skin hanging down the lower part of the neck.

## TRUNK (BODY)

- **Hump:** Fleshy protuberance on the top or shoulder of the animal.
- **Withers:** Just behind the hump.
- **Back:** Just behind the withers to the head of the last rib.
- **Loin:** The part of the body lying on each side of the spinal column between the hip bone and last rib.
- **Rump:** Region of sacrum, point of rump is the highest point formed by the sacral tuber.
- **Dock:** The part of the body of animals adjacent to the base of the tail.
- **Tail:** The posterior extremity of an animal.
- **Switch of tail:** Tuft of hair at the end of the tail.
- **Breast:** Lower part of the neck where it joins the body.





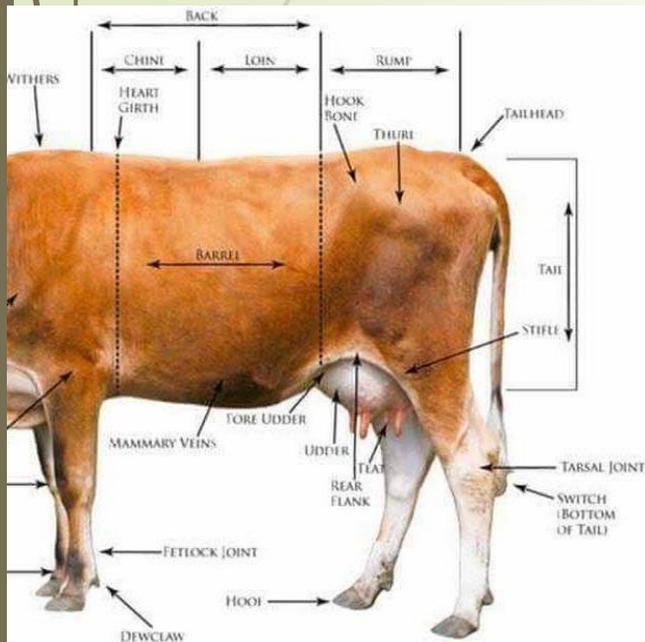
- **Brisket:** The part of the lower chest of the animal between the two fore legs.
- **Chest:** Ribs springing from the backbone above and attached to the breastbone below.
- **Girth:** Circumference around the chest, it is just behind the point of elbow.
- **Belly (Abdomen):** The area behind chest carrying alimentary canal and other organs.
- **Flank:** Hollow area between the ribs and hip or hook bone.
- **Fold of flank:** The flap of the skin on its lower border.
- **Body:** Comprises the chest, belly and flank.
- **Barrel:** Comprises belly and flank.
- **Anus:** The posterior opening of alimentary canal under the root of the tail.

## POINTS PRESENT ONLY IN MALES

- **Sheath (Prepuce):** Flap of skin in the abdominal region.
- **Penis:** The male organ of copulation.
- **Scrotum:** Pouch of skin in which the testicles are lodged.
- **Testicles:** Male generative glands, which lie in the scrotum.

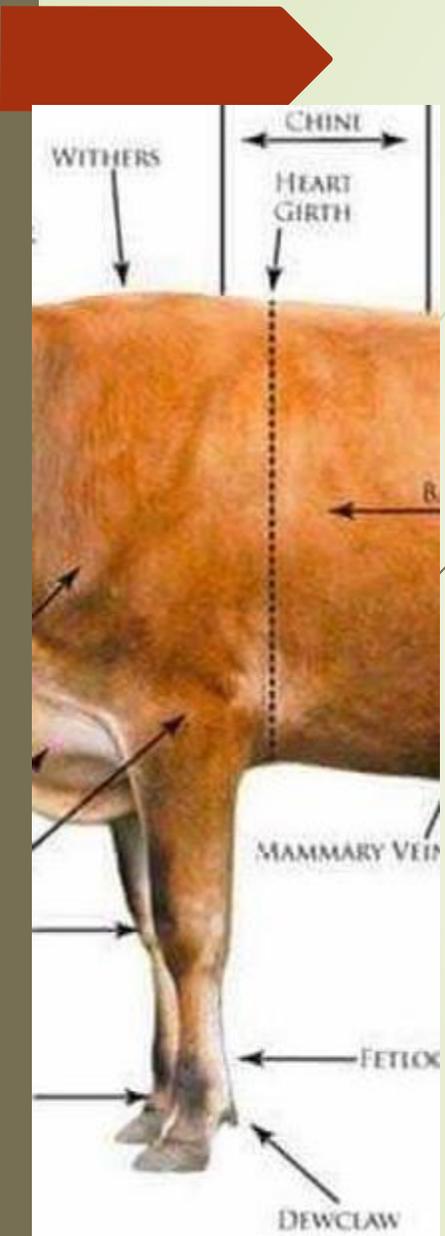
## POINTS PRESENT ONLY IN FEMALES

- **Naval flap:** Loose skin below the abdomen.
- **Udder:** Mammary gland, the anterior part is called the fore udder and posterior as rear udder.
- **Teats:** Through which the milk is drawn.
- **Milk vein:** Veins on the udder.
- **Vulva:** External opening of the female genital organs situated below the anus.
- **Escutcheon:** A triangular pinkish area below the vulva extending on both sides upto pin bones.
- **Milk well:** The place from where the milk veins enters into the abdominal wall.



## FORE LIMB

- **Shoulder joint:** The joint formed between the scapula and upper end of the humerus. It includes the point of shoulder and shoulder blade.
- **Elbow joint:** Formed by the dorsal end of humerus and proximal end of radius and ulna.
- **Arm:** The region of massive muscle lying over the humerus.
- **Fore Arm:** Region of radius and ulna between elbow and knee joint.
- **Axilla:** The cavity beneath the junction of the arm (region inside the elbow).
- **Knee-joint:** Formed by radius, carpal bones and metacarpal bones.



- **Fetlock joint:** Joint formed by the lower end of the metacarpal bone and the first phalanx with its sessamoides.

- **Shank, shin or fore cannon:** Portion of the limb below knee joint to fetlock joint.

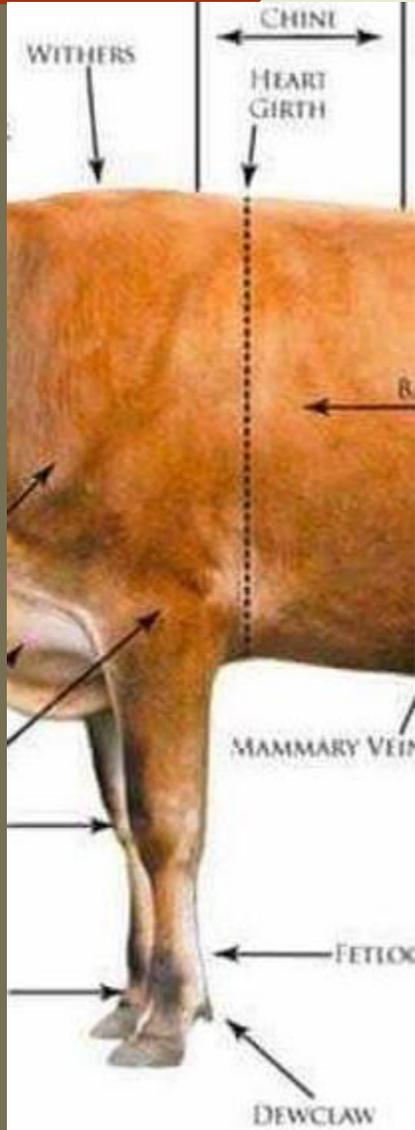
- **Dew claws:** Two horny callosities behind the fetlock joint.

- **Pastern:** The region below fetlock and above coronet.

- **Coronet:** Region round the top of the hoof.

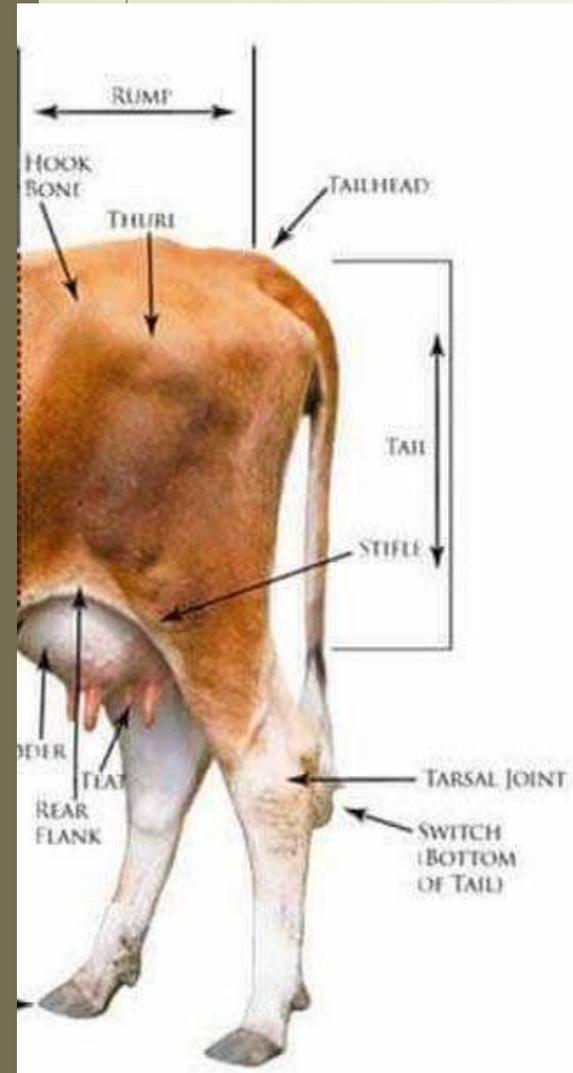
- **Hoof:** The outer horny covering of the foot, which is divided into two parts called claws.

- **Cleft of the hoof:** Space between the two claws.



## HIND LIMB

- **Hindquarter:** Region bounded by rump and dock.
- **Buttocks:** The mass of muscles lying on either side of anus and extending down-wards to the level of stifle to behind and flank in front.
- **Hook bones:** Bony prominence formed by the external angle of ileum.
- **Pin bones:** The projection of the quarter just below the root of the tail.
- **Thurl (Hip joint):** Midway between hook bones and pin bones (formed by ischiatic tuber).
- **Thigh:** Region of femur bone, which runs from the hip joint to the stifle joint.
- **Stifle joint:** The joint formed by femur, patella and tibia.
- **Groin:** The Inner aspect of thigh.
- **Hock:** Joint formed between the tibia, tarsal bones and metatarsal bones.
- **Point of hock:** The upper most extremity of hock formed by tuber calcis.
- **Hamstring:** The strong tendon running from the muscles of the back of the thigh to the point of hock.

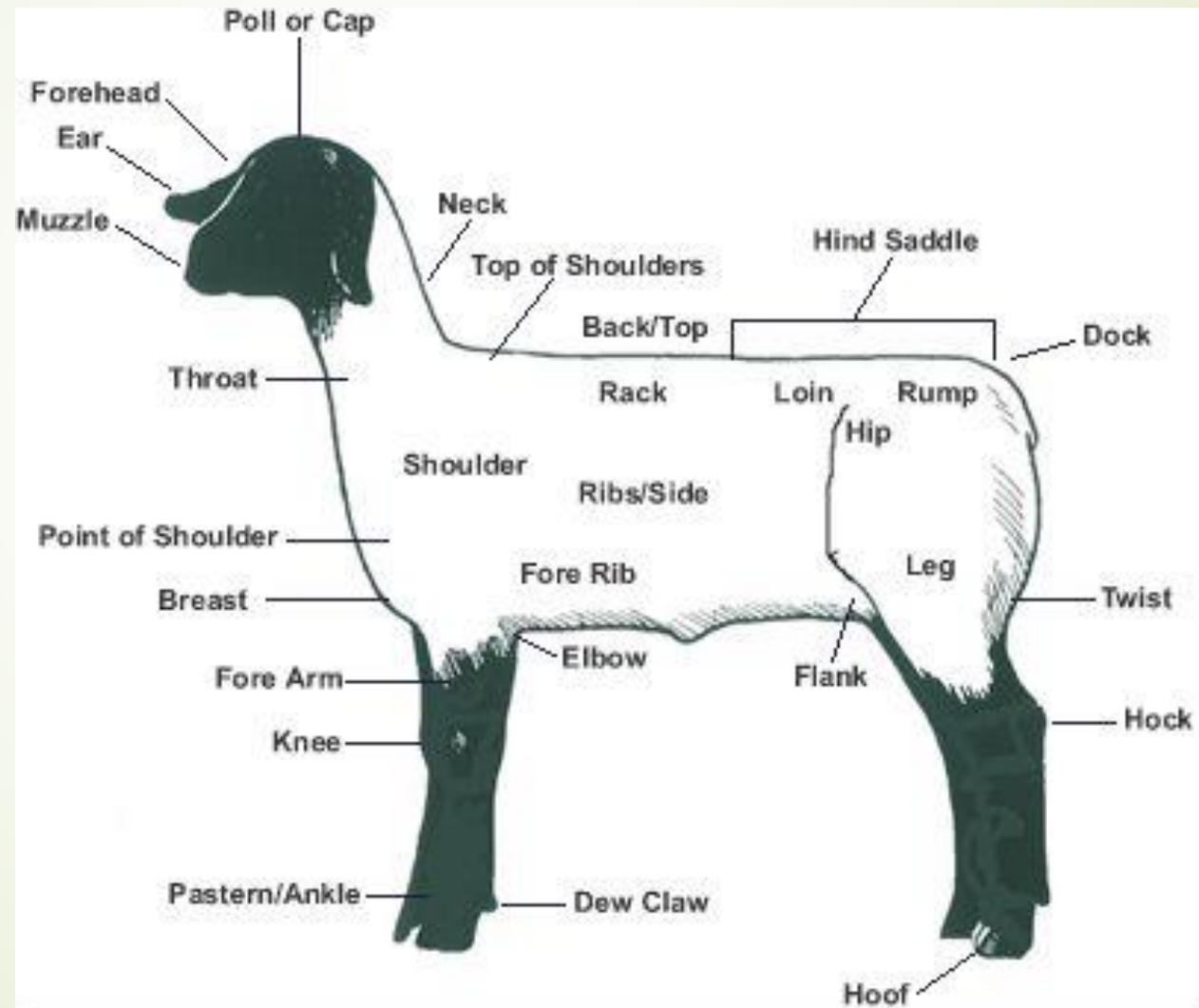




## **BUFFALO**

- Hump and dewlap are not present in buffaloes.
- Brisket is more developed in buffaloes as compared to cattle.
- Rest points are same as in cattle.

# SHEEP



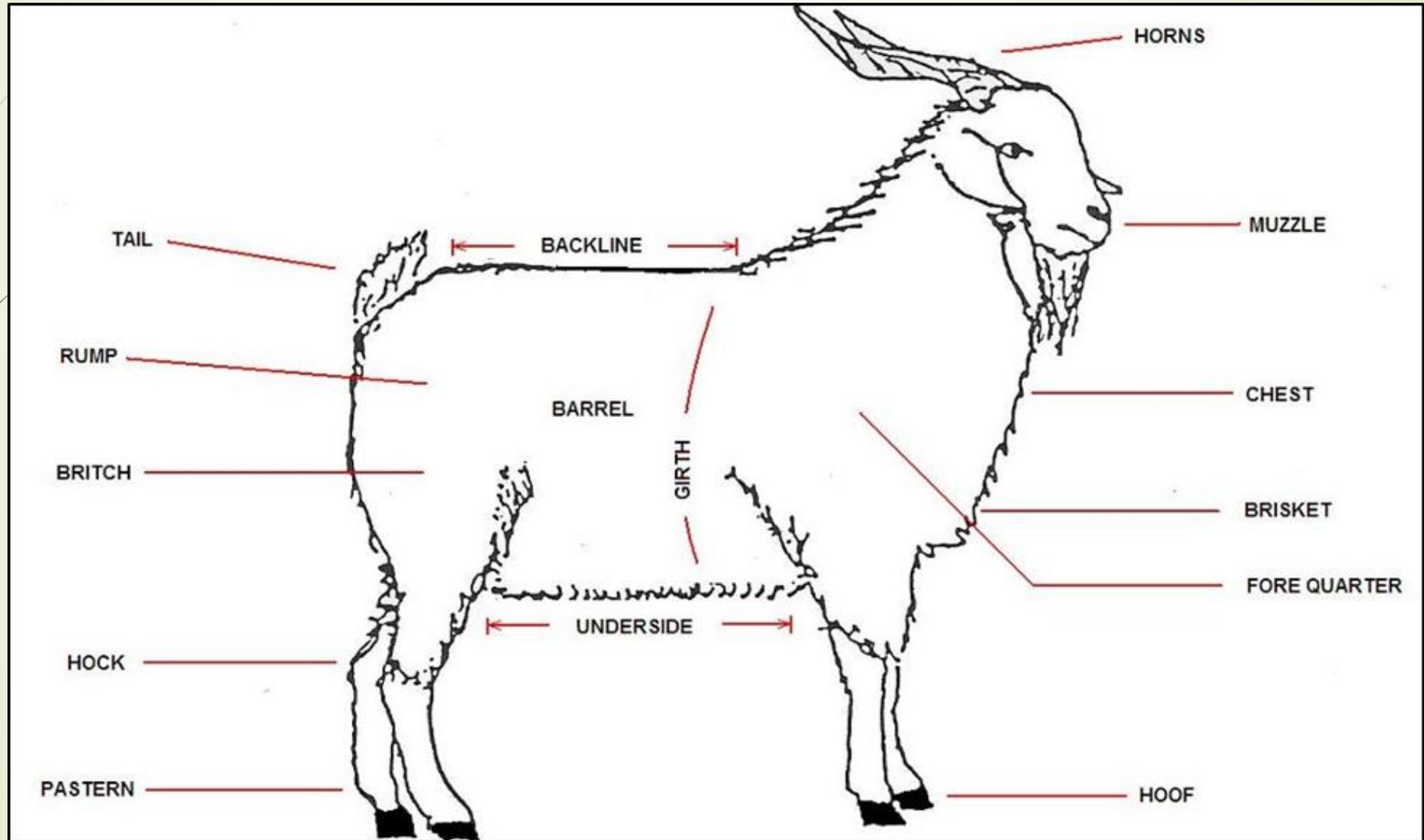
## The points peculiar to sheep are:

- **Lachrymal pouch:** A pouch situated below the inner canthus of the eye, about  $\frac{1}{2}$  inch deep. The lining of this pouch has glands which produces a waxy secretion, which on drying forms a yellow sticky covering on the skin.
- **Tassels:** These are two appendages of skin hanging from the throat, also called as Doddles or Wattles in certain breeds of sheep only.
- **Inguinal pouch:** A shallow depression in the inguinal region in both sexes. It produces a similar secretion as that of lachrymal pouch.
- **Inter digital pouch:** A pouch situated in the inter-digital space. The lining of this pouch is pale and thin having fine colourless hairs. The secretion is colourless and waxy in nature.

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- Horns are generally absent in both sexes, but when present they are found in males.
  - The tail of sheep may have thin tail or fat tail, long tail or short tail.
  - **Gigot:** The name applied to the thigh of sheep.
  - **Knob:** The ram has an increased growth on the nose just above the nostrils.
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# GOATS-BUCK





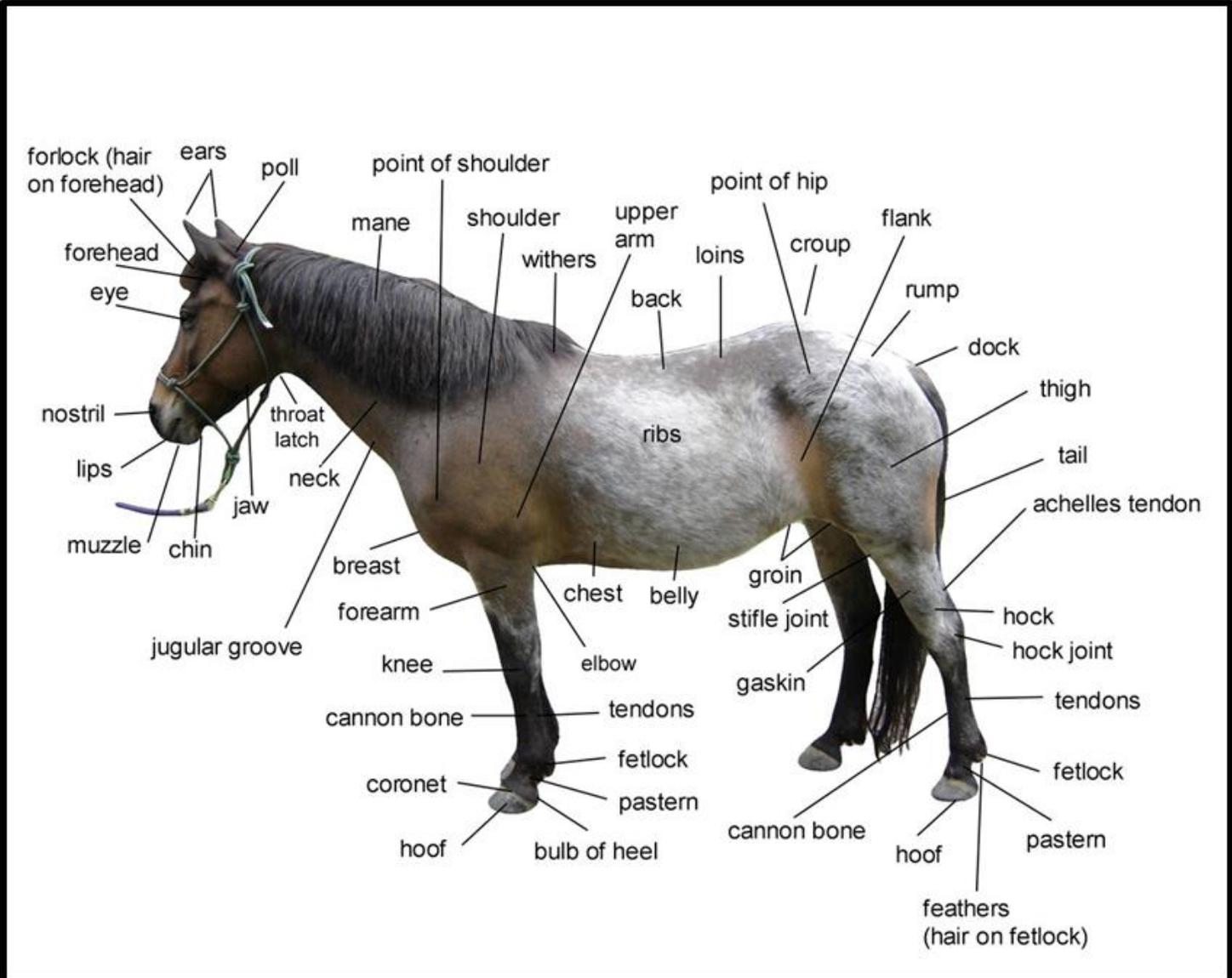
## The points not found in goat are:

- Muffle, dewlap, hump, switch of tail, escutcheon and naval flap.

## The points peculiar to goats are:

- **Tassels:** Throat folds found in certain breeds only.
- **Mane:** Hair springing from the crest of the neck, found in certain breeds only.
- **Beard:** A bunch of hairs hanging from the chin, generally seen in male goats of certain breeds only.
- **Scrag:** Name given to the crest of the neck.
- **Bag:** Term applied to the udder of goats.

# HORSE





## **The points not found in Horse are:**

- Horns, muffle, dental pad, dewlap, hump, switch of tail, naval flap, milk vein, milk well, dewclaws, inter digital space.

## **The points synonymous to that of cattle are:**

- Croup (Rump), point of croup (point of rump), mammary gland (udder), point of hip (hook bones), point of buttock (pin bones), hip joint (thurl).

## **The points better developed as compared to cattle are:**

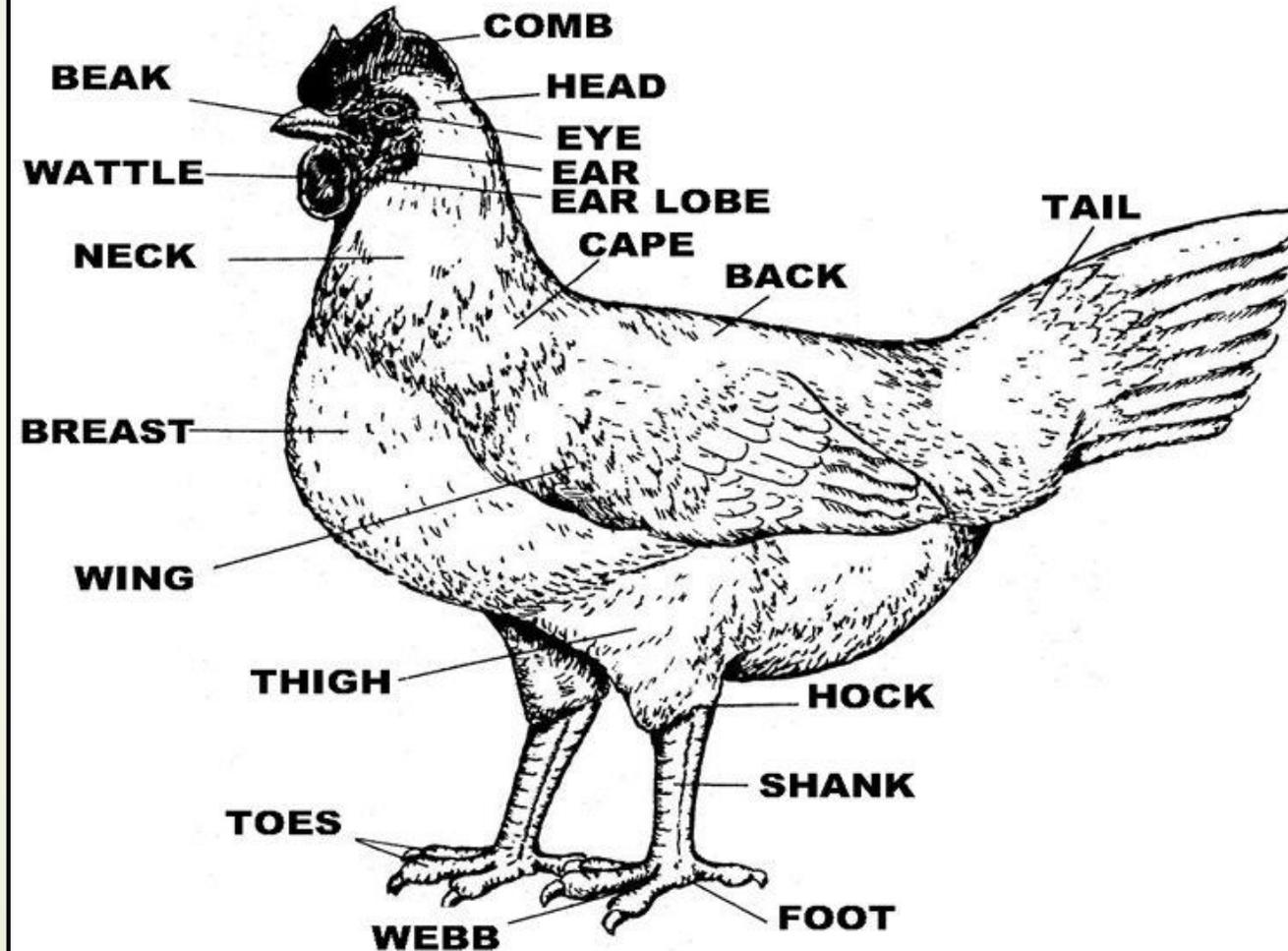
- Facial crest and nictitating membrane (third eyelid).

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- **Poll:** Region lying between the ears.
  - **Forelock:** Tuft of hairs, which hangs forward from the poll.
  - **False nostrils:** A blind pouch on the upper angle of nostril.
  - **Feet:** The foot of a horse has a solid one hoof consisting of wall, sole, frog, bars, white line, cleft of frog (central and lateral) and bulb of heel.
  - **Chin groove:** Depression behind the chin.

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- **Mane:** Long hairs springing from the crest of the neck.
  - **Mammary gland:** Only one gland secreting milk with two teats.
  - **Withers:** It is the highest point of the trunk formed by spinous processes of 4<sup>th</sup> & 5<sup>th</sup> thoracic vertebrae.
  - **Ergot:** Horny callosity situated at the back of the fetlock joint.

# CHICKEN

## PARTS OF A CHICKEN



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- The body of a fowl can be divided into four major parts for the study of its points. These are head, body, legs and wings.

## HEAD

- **Comb:** The fleshy part on the head, which is a colourless and featherless body.
- **Face:** The area in front of, behind and around the eyes.
- **Eye:** The organ of sight.
- **Eye ring:** The name given to the bony ring at the union of cornea and sclera of the eye ball peculiar to the birds.
- **Ear:** In birds it does not form any external appendage to the head and an opening surrounded by a fringe of feather leads into a canal.

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- **Ear lobe or Deaf ear:** A colourless and featherless fold of skin attached on either side of the head below ears.
  - **Cap:** Feathers above the eyes forming a cap.
  - **Nostrils:** Two narrow oval openings on the base of the upper part of the beak, their margins being guarded by small feathers.
  - **Mouth:** In birds it is characterized by the absence of lips and cheeks. The jaws are replaced by BEAK which is a dense horny structure. The teeth are absent in fowl.
  - **Tongue:** It is shaped like an arrow.
  - **Wattles:** Two fleshy coloured, featherless fleshy fold of skin hanging below the beak.

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- **Throat:** The area between the wattles.
  - **Beard:** Bunch of feathers beneath the throat found in certain breeds.
  - **Crest:** A tuft of feathers on the head of fowl in certain breeds.

## **BODY**

- **Neck hackles:** The feathers around the neck.
- **Cape:** The bottom of the neck hackles.
- **Back:** The area of the thoracic vertebrae.
- **Saddle:** The part behind the back reaching upto the tail (corresponding to **cushion** in female fowl).

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- **Saddle hackles:** The long slender feathers, which droop from the saddle of the cock (**CUSHION FAETHERS** in female).
  - **Parson's nose:** The portion of the body to which tail is fixed at the end of the body.
  - **Oil gland:** Under the tail in the muscles in which the feathers are attached, glands are situated which secret oily secretion used by the birds occasionally to dress up its feathers for giving a glossy appearance.
  - **Main tail feathers:** Stiff and straight feathers. Sometimes the two top ones are slightly curved.
  - **Sickles:** The top pair of curved feathers on a cock's tail. Sometimes one or two pairs falling below are termed **Lesser Sickles**.

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- **Tail coverts or Hangers:** The soft covered sickles like feathers at the base of the cock's tail.
  - **Breast:** The parts of the body from the point of breast bone upto the throat.
  - **Brisket:** Region between the legs.
  - **Chest:** The area surrounded by the ribs and covered by wings.
  - **Abdomen:** The part beneath the vent and down to the loose end of breast bone.
  - **Keel:** The posterior end of the breast bone
  - **Cloaca:** The last tubular structure of the large intestine opening on the exterior.
  - **Vent:** The opening of the cloaca, which is common for the digestive, urinary and genital systems.

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- **Fluff:** The fine under coat feathers covering abdomen and upper part between pubic bones and legs.
  - **Pubic bones:** The bones projecting backwards below the vent and can be felt easily.

## LEGS

- **Thigh:** Formed by the bulge of gastrocnemius muscle on tibia.
- **Hock:** Joint between the thigh and the shank.
- **Shank:** Formed by metatarsal bone and is covered by the scales.
- **Spur:** Bony protuberance on the inside of the cock's shank not developed in female fowl.
- **Toes:** Four in number and formed by phalanges having toe nails on their ends.

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- **Scale:** The name given to the horny covering of the shank and toes.
  - **Web of the foot:** The skin in between the toes of the fowl.
  - **Pads:** The cushions on the planter side of the toes for absorption of the shock.

## WING

- **Wing:** The organ of flight.
- **Shoulder:** The region where wings join with body.
- **Flight feathers:** They consists of **PRIMARIES**, the first ten big feathers in a fowl wing; **SECONDARIES**, the second lot of stiff feathers from the outside of the wing which are fourteen in number in an average fowl and nearer to the body; and **AXIAL**, a short feather situated in between primaries and secondaries.

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- **Wing bar:** Any dark line of colour or marking across the middle of the wing caused by lower wing coverts.
  - **Wing way:** The three cornered part of the folded wing above the bar.
  - **Wing butts:** The end or corners of the wing. The upper end is called SHOULDER BUTT and the lower end as LOWER BUTT.
  - **Wing coverts:** These are the broad feathers covering the roots of secondary feathers.



## POINTS OF A FEATHER

- **Axis:** A typical feather consists of a straight structure called AXIS to which other parts called VANE is systematically arranged.
- **Quill:** Lower part of the axis, which is round, transparent and hollow.
- **Shaft:** The term applied to the axis other than quill to which vane is attached. It is solid, four sided, tapering and elastic with a longitudinal groove running along that surface which looks towards the body when the feather is in position.
- **Barbs:** These are narrow slender lamellae springing from the vane and sloping obliquely outwards and the tip of the feather.

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- **Barbules:** It is a part of the barb, which grow from that side of barb, which looks towards the tip of the feather. They have fine hooklets, which hook on to the BARBICEL the growth on the opposite side of barbules on the barbs of the proximal row.
  - **Accessory Plume:** It is small variable tuft found in mature feathers at the junction of quill and vane. The vane consists of two rows of narrow slender lamellae or barbs springing from the axis of the vane (shaft) and sloping obliquely outwards and towards the tip of the feather.

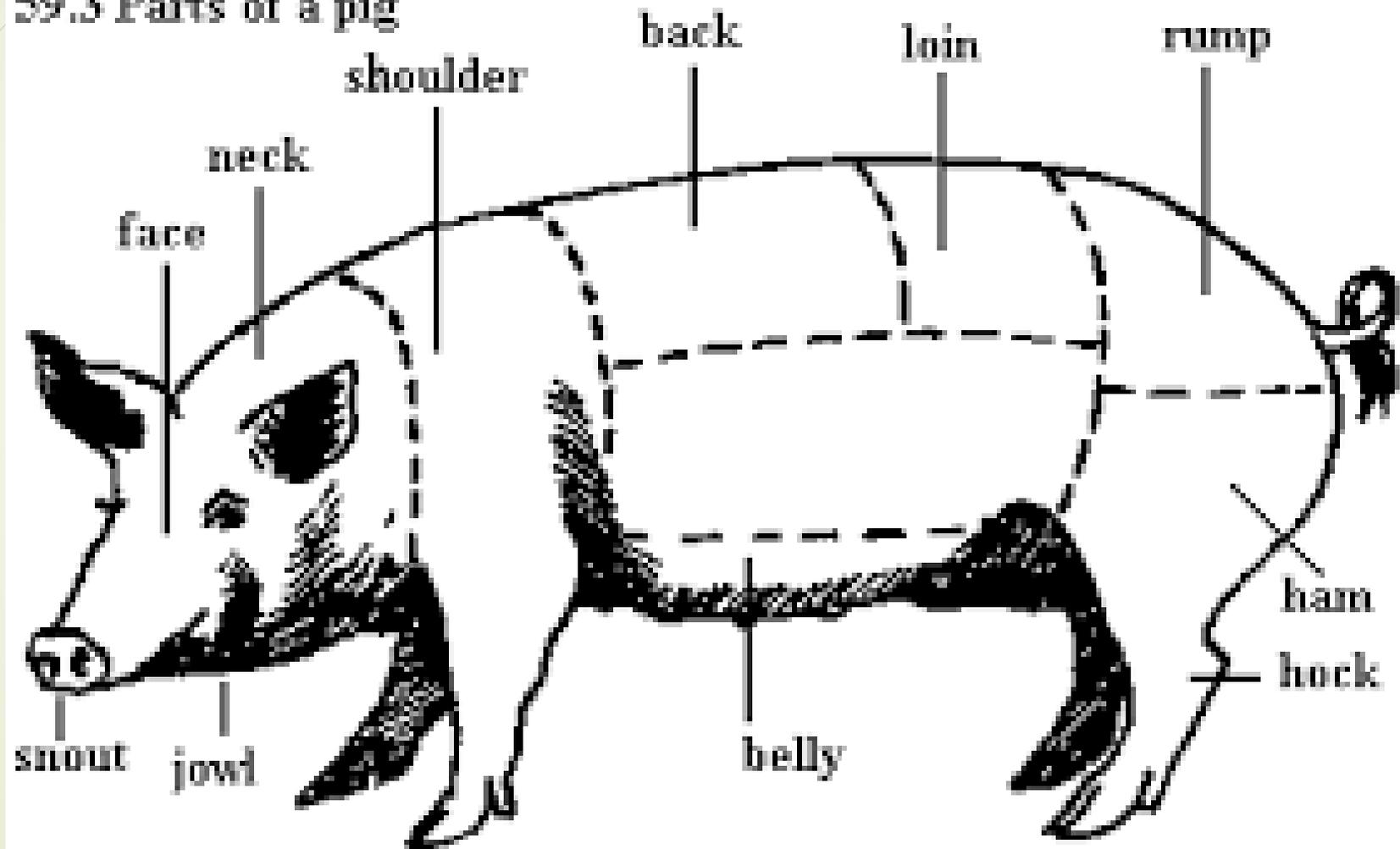


## Definition and classification of feather:

- **Feather:** These are epidermic structures partly embedded in follicles of the skin and forming the covering of a bird.
- **Plumage:** The whole feathers of a bird.
- **Down:** Initial hairy covering of the baby chicks.
- **Fluff:** The downy part of the feather, soft fur or down-feathery stuff given off by blanket.
- **Coverts:** Covered, concealed or secret feathers on the wings and tail.
- **Hangers:** The short sickle like feathers at the base of the cock's tail also termed coverts.
- **Hackles:** These are narrow lance shaped feathers on the neck of fowl and the saddle of a cock. All cocks have pointed hackles e.g. neck hackles, saddle hackle.

# PIG

## 59.3 Parts of a pig





**THANKS**