

# Stomach of Various Animals Unit-5

Directed by – Dr Manoj Kumar Singh

# Stomach of Horse

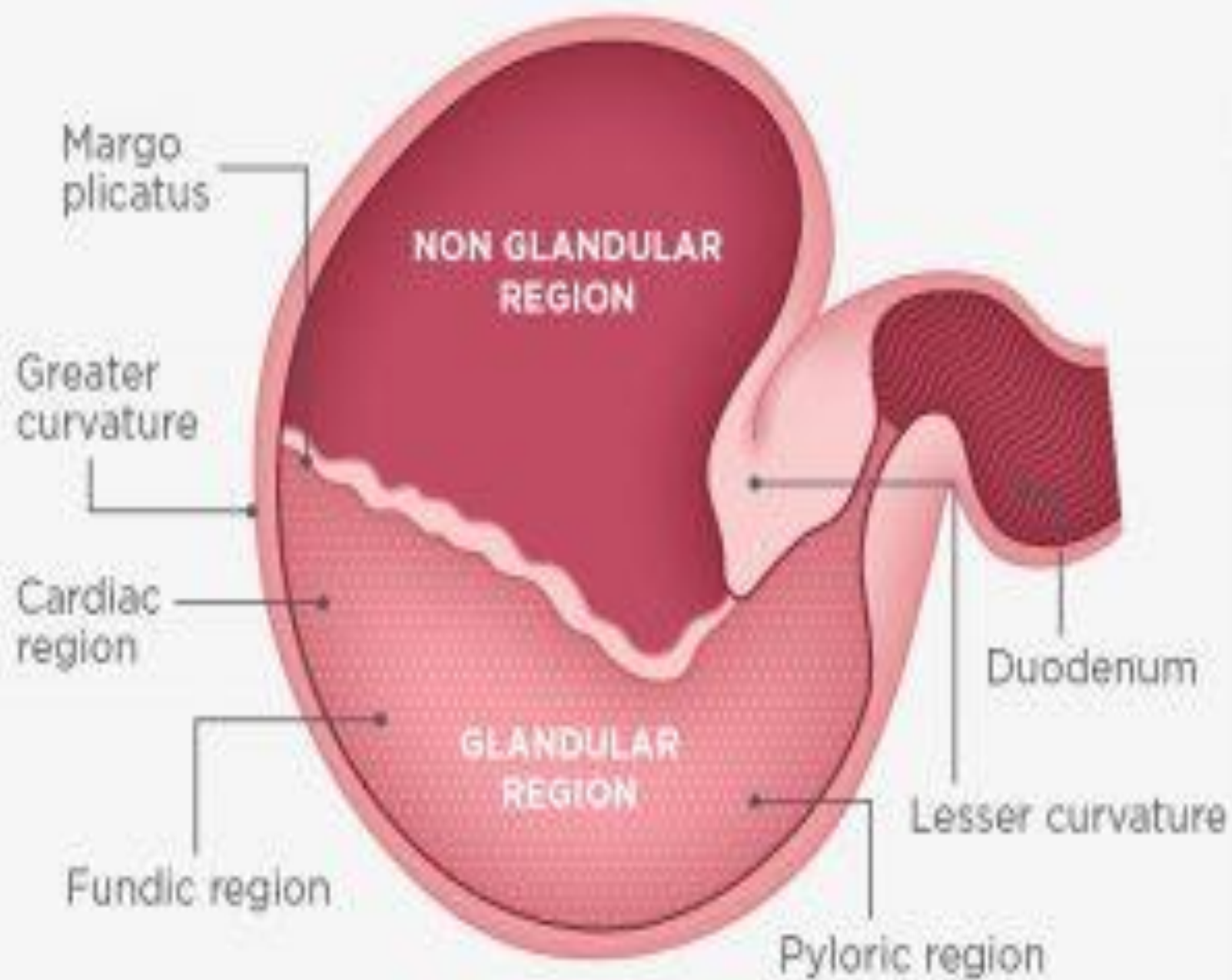
- The stomach is in the form of a simple saccular structure The capacity is about 8-16 litres
- It is placed at the left side on the median line on the dorsal aspect of the abdomen behind liver and diaphragm
- It is curved and J shaped sac
- The lesser curvature is short. The cardia and pylorus are very close

- At the left extremity of the stomach, close to the entrance of the oesophagus, there is a rounded cul-de-sac known as saccus caecus
- The pyloric end is comparatively smaller
- The right extremity is smaller and is continued by the duodenum. It is attached by,
  - Gastrophrenic ligament
  - Greater omentum
  - Gastrosplenic omentum
  - Lesser omentum
  - Gastropancreatic fold

# Internal structure

- The mucous membrane is divided into oesophageal (non-glandular) and glandular parts, which are separated by a rough irregular line .
- The glandular part is divided into cardiac, fundic and pyloric regions according to the presence of different types of glands in the mucous membrane
- The part on the left extremity is non-glandular being the extension of the oesophageal mucous membrane-oesophageal region and the remaining is glandular .

- The glandular part is subdivided into three zones, according to the type of glands present, but no distinct line of demarcation exists
- A narrow zone along the margoplicatus (separating glandular and non glandular portion) is the cardiac gland region
- Adjacent to it is the large fundic gland region
- Remainder of the mucous membrane is the pyloric gland region



# Stomach of pig

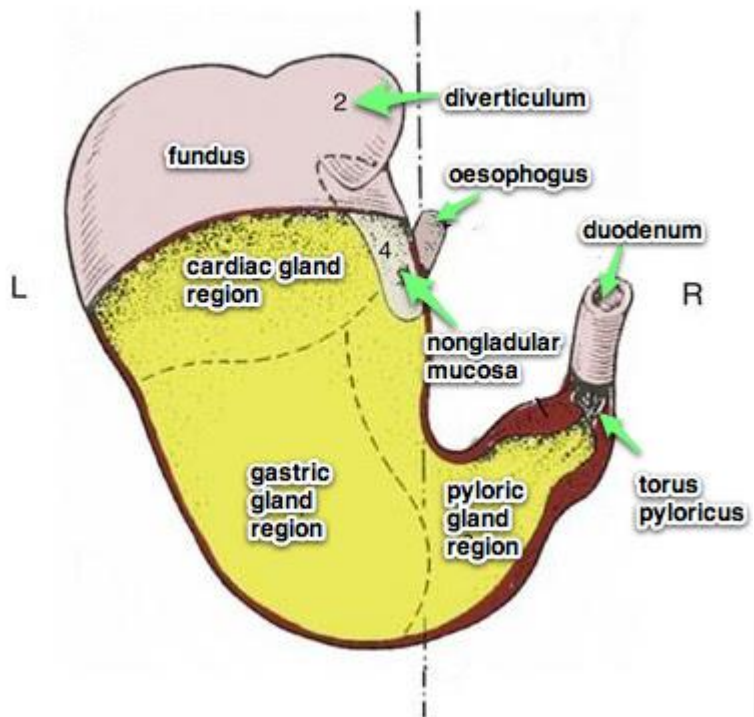
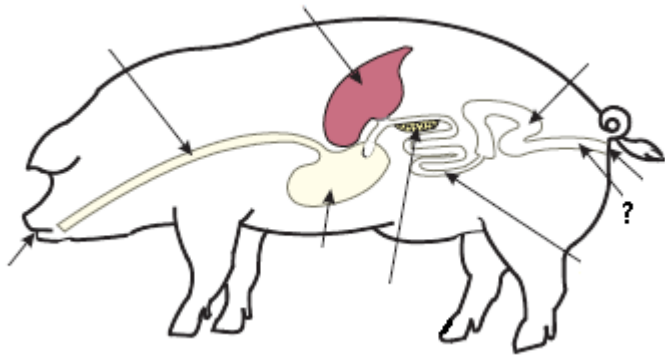
- The stomach is simple and comparatively large
- Capacity is 6 litres.
- The left part is large and presents a conical diverticulum known as ***diverticulum ventriculi***
- When full, its long axis is transverse and its greater curvature extends on the floor of the abdomen, midway between xiphoid cartilage and the umbilicus
- The cardiac opening is slit like and is bounded by a fold

# Internal structure

- Mucous membrane is divided into four regions
- Over the quadrilateral area around the cardia, it is glandless and presents a number of folds
- A sharp line demarcates this above area from the rest of the mucous membrane
- The cardiac gland region is pale grey in colour and extends about the middle of the stomach.



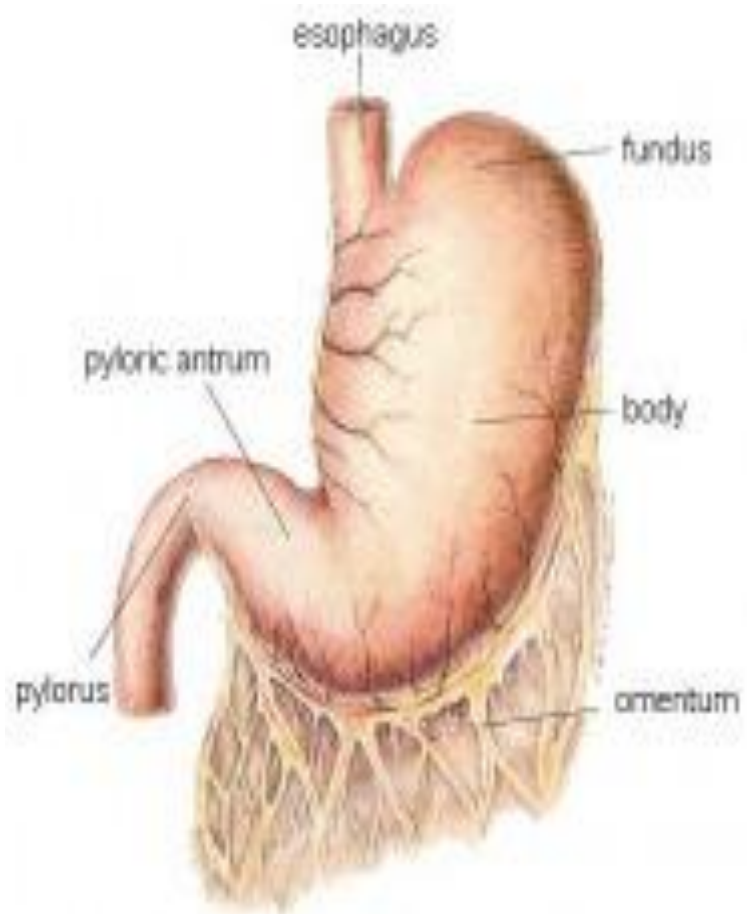
- The fundus gland is distinguished by its thickness and mottled appearance
- The pyloric region is thinner and presents a number of irregular folds
- At the pylorus, a remarkable prominence, *the torus pyloricus* projects from the wall of the lesser curvature



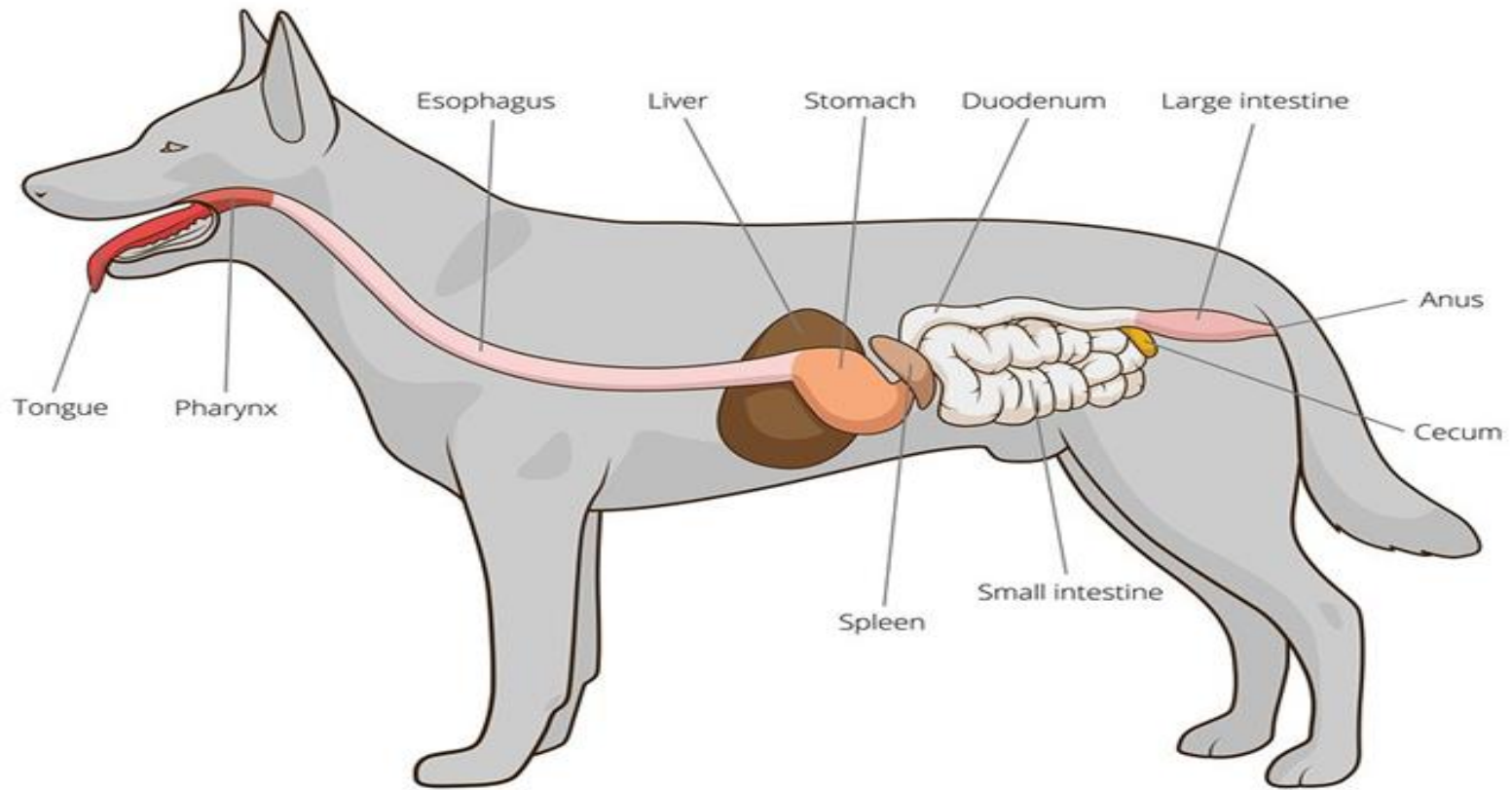
# Stomach of dog

- Capacity is about 3 litres. When full it is pyriform in shape
- The left part is large and rounded while the right part is small and cylindrical
- The parietal surface is extensive, convex, faces forwards, downwards and to the left
- It is related to the liver; diaphragm and left ventral and lateral abdominal wall as far as the level of the 2nd or 3rd lumbar vertebra
- The visceral surface is less extensive and is related to the intestine, pancreas and left kidney

- The lesser curvature is nearly straight above but below it makes a sharp bend forming an angle
- The greater curvature is extensive and it extends, when the stomach is full behind the costal arch
- Ventrally it lies on the abdominal floor about midway-between xiphoid cartilage and pubis



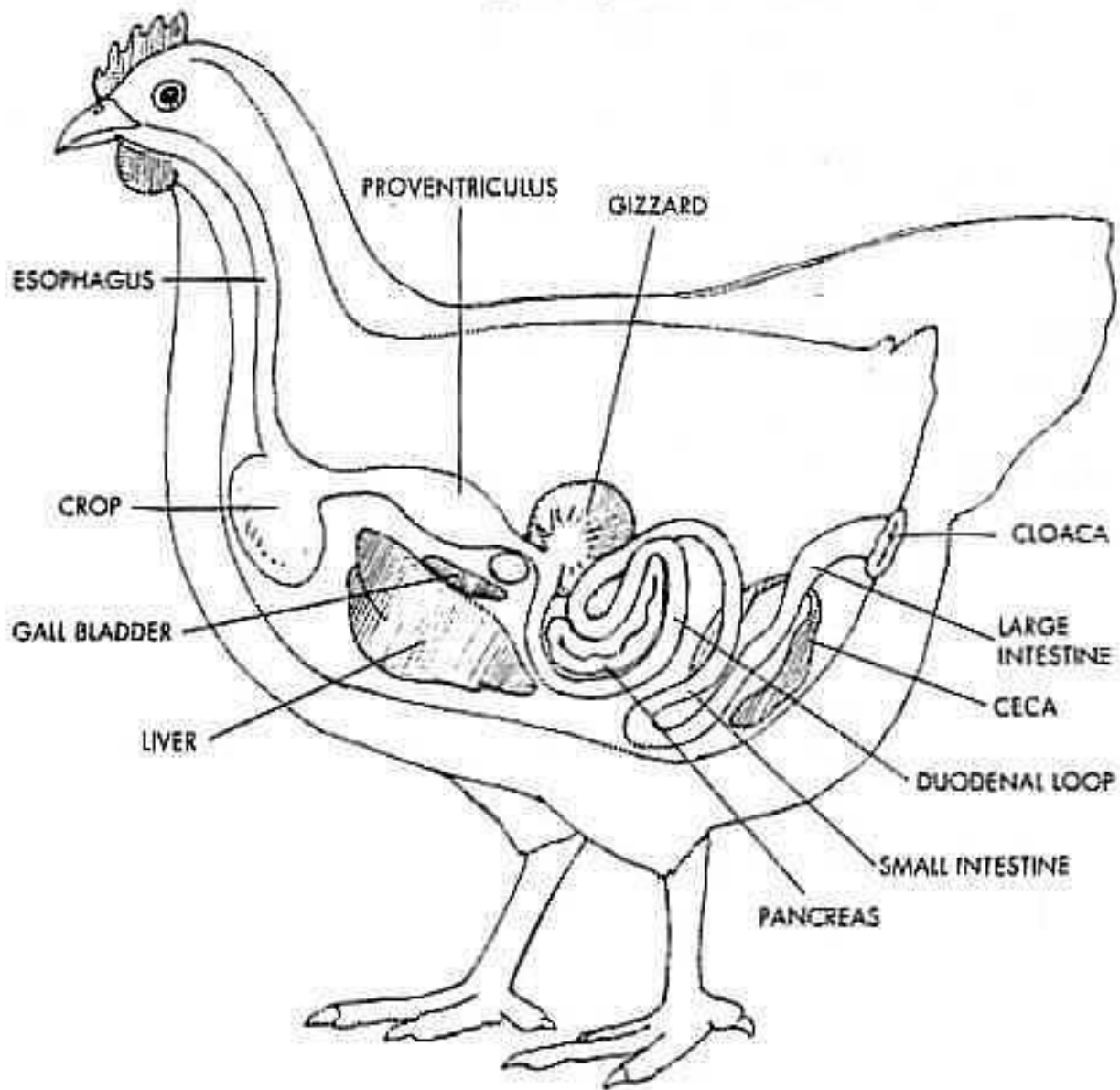
# Digestive System of the Dog



# Stomach of fowl

- It is made up of two parts
  - Proventriculus (*glandular*) and
  - Gizzard (*muscular*)
- The *proventriculus* is an elongated fusiform thin walled tubular organ, related laterally and ventrally to the liver and the spleen at its supero-caudal aspect
- It is connected in front with the oesophagus and behind with the gizzard
- Its mucous membrane is lined by glandular epithelium
- The *gizzard or muscular stomach* is a thick walled muscular disc with two orifices placed close together on the antero-dorsal aspect of its circumference
- It is situated behind and partly between the two lobes of the liver
- The mucous membrane, lining the gizzard is thrown into ridges and is covered by dense horny substance, secreted by the glands lying beneath the epithelium

## Digestive System







THANKS