

Introduction to the Digestive System





Digestive System

- Large complex molecules broken down into simpler molecules
- Long tube beginning with mouth and ending with the anus



Digestive Systems

- Man and pig have a simple stomach with an extensive intestinal system
- Ruminants have a complex stomach with a simpler intestinal system
- Horses and rabbits have a simple stomach with an extensive intestinal system and an enlarged cecum



Digestive System

- Mouth: “Prehension” tool (grasps food)
 - Salivary glands secrete juices containing enzymes (digest food)
 - Chewing food breaks down
- Esophagus: muscular tube that connects mouth to stomach
 - Peristaltic Movement: sequential contraction of ringlike muscles
 - Reverse Peristalsis = vomiting



Simple Stomach

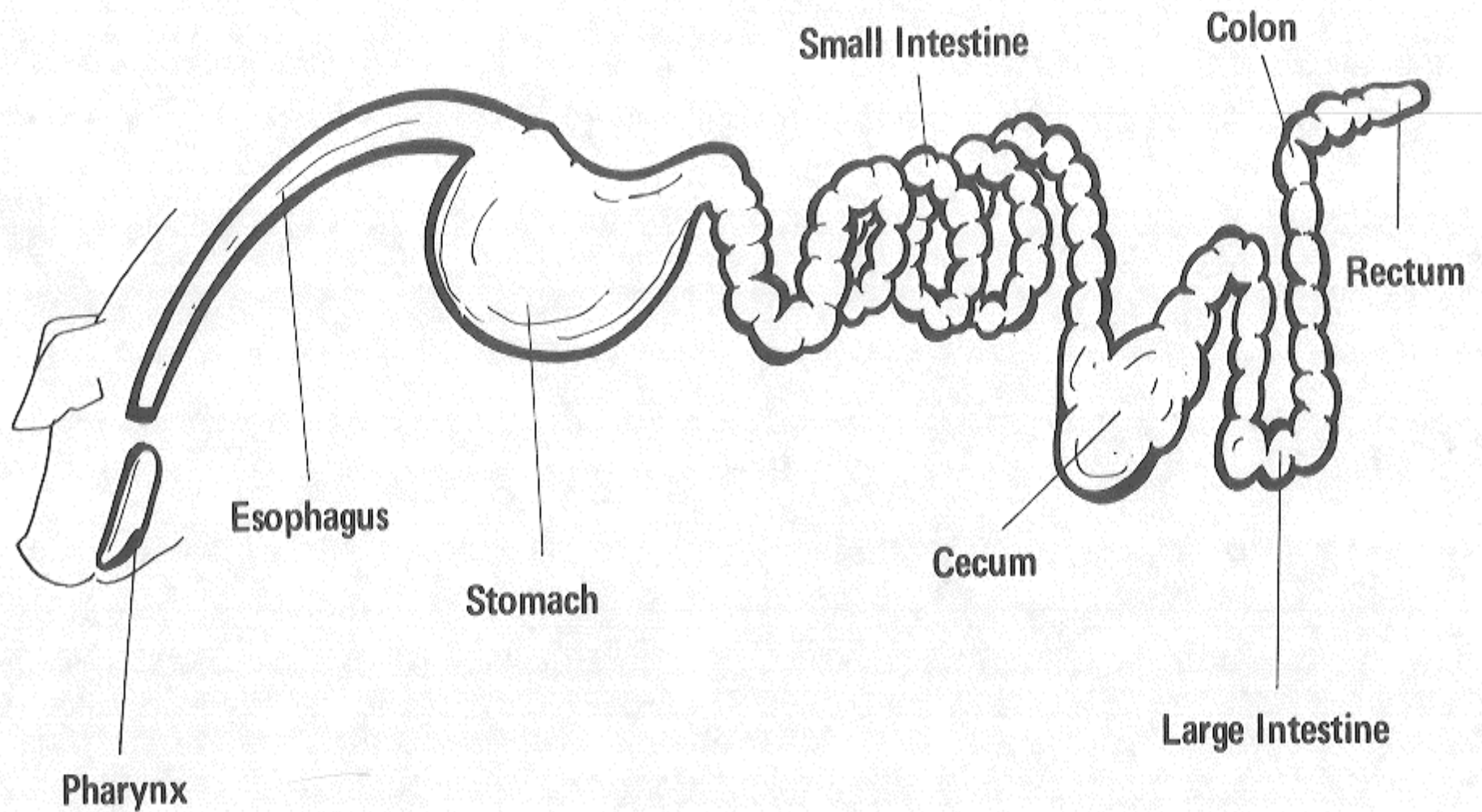
- Muscular contractions break down food
- Enzymes break down food:
 - Gastric: proteins
 - Liver and pancreatic: fats

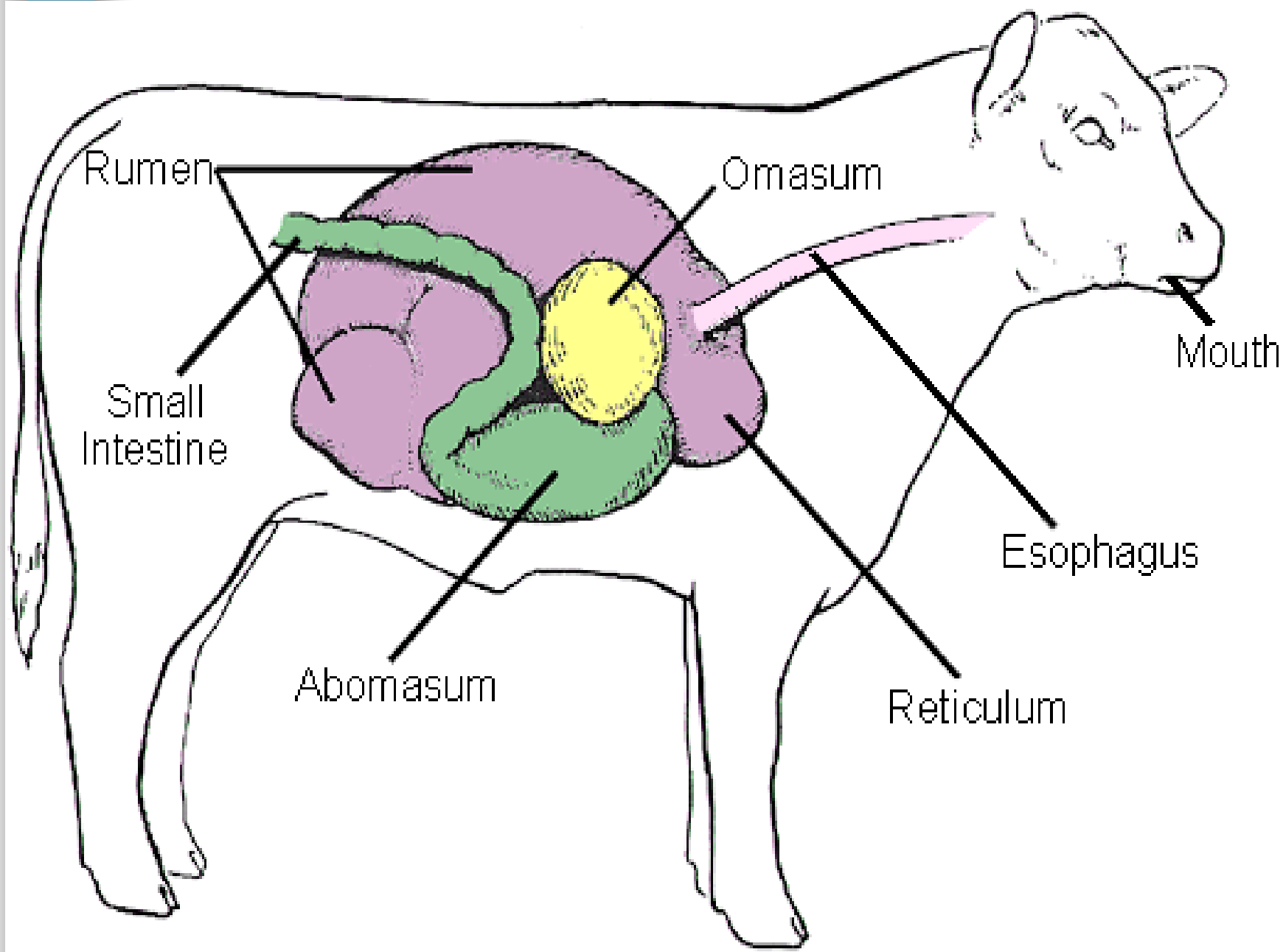


3 Major Digestive Systems

- All 3 systems will be addressed in detail in the lesson to follow:
- Ruminants—have four stomachs
- Monogastric—have one stomach
- Modified Monogastric—have one stomach but the ability to digest roughages

Simple Digestive System of Swine







Digestive System

- **Small Intestine:** long coiled tube connecting stomach to large intestine
 - rest of the digestion and absorption takes place here
 - surface covered with villi (surface area)
- **Large Intestine:** Cecum, colon, rectum
 - absorbs water (makes feces more solid)
 - some vitamins and minerals absorbed here
 - Cecal Fermenters (Horse): similar to rumen



Digestive System

- Accessory organs:
- Pancreas secretes enzymes to break down fat
- Liver (largest internal organ) secretes bile, which digests fats
 - also stores iron

Introduction to the Digestive System





Digestive System

- Large _____ broken down into simpler molecules
- Long tube beginning with _____ and ending with the _____



Digestive Systems

- Man and pig have a _____stomach with an extensive intestinal system
- Ruminants have a _____stomach with a simpler intestinal system
- Horses and rabbits have a simple stomach with an extensive intestinal system and an enlarged_____



Digestive System

- Mouth: “Prehension” tool (grasps food)
 - _____ secrete juices containing enzymes (digest food)
 - Chewing food breaks down
- _____: muscular tube that connects mouth to stomach
 - Peristaltic Movement: sequential contraction of ring like _____
 - Reverse _____ = blowing chunks



Simple Stomach

- Muscular contractions break down food
- Enzymes break down food:
 - Gastric: _____
 - Liver and _____: fats



3 Major Digestive Systems

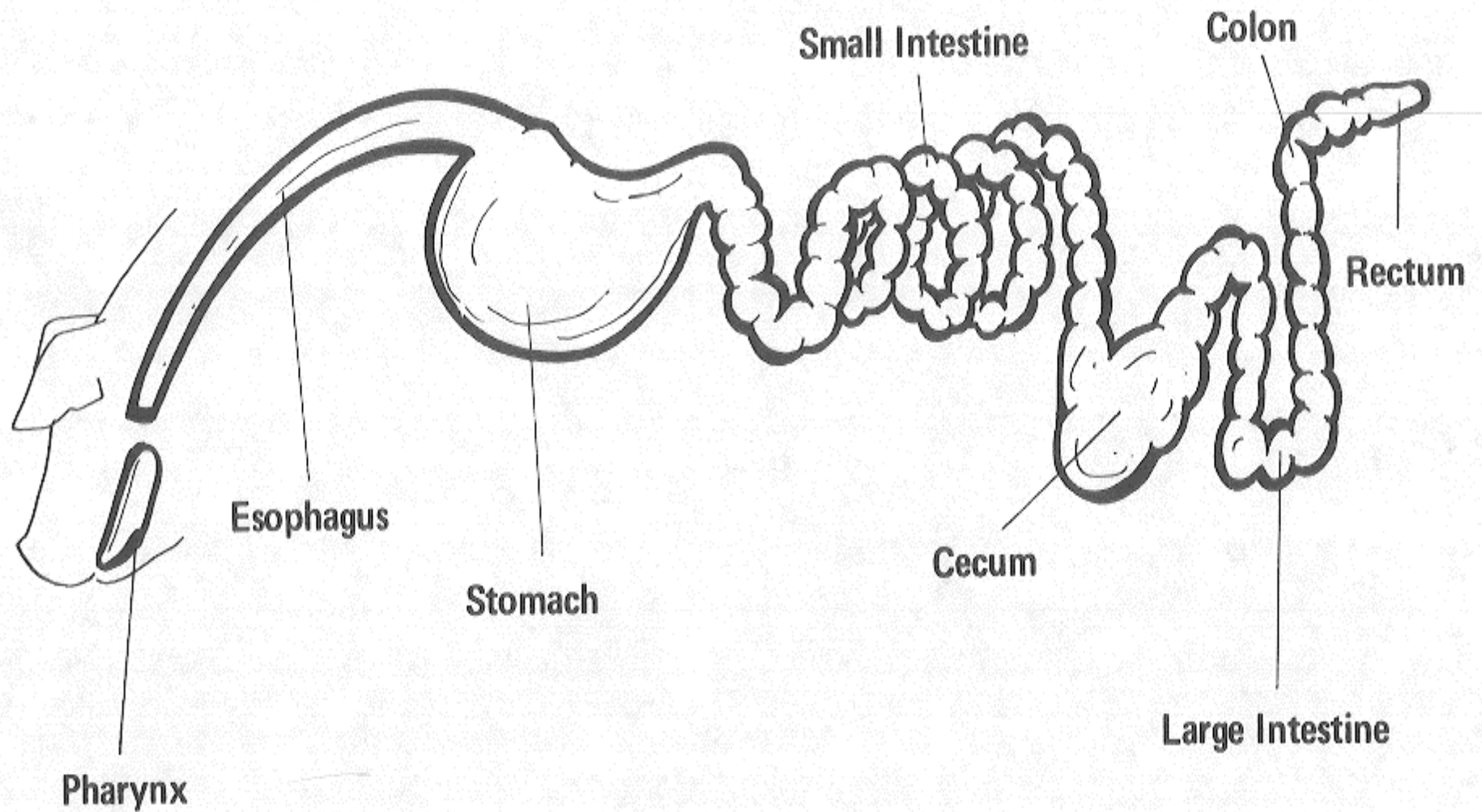
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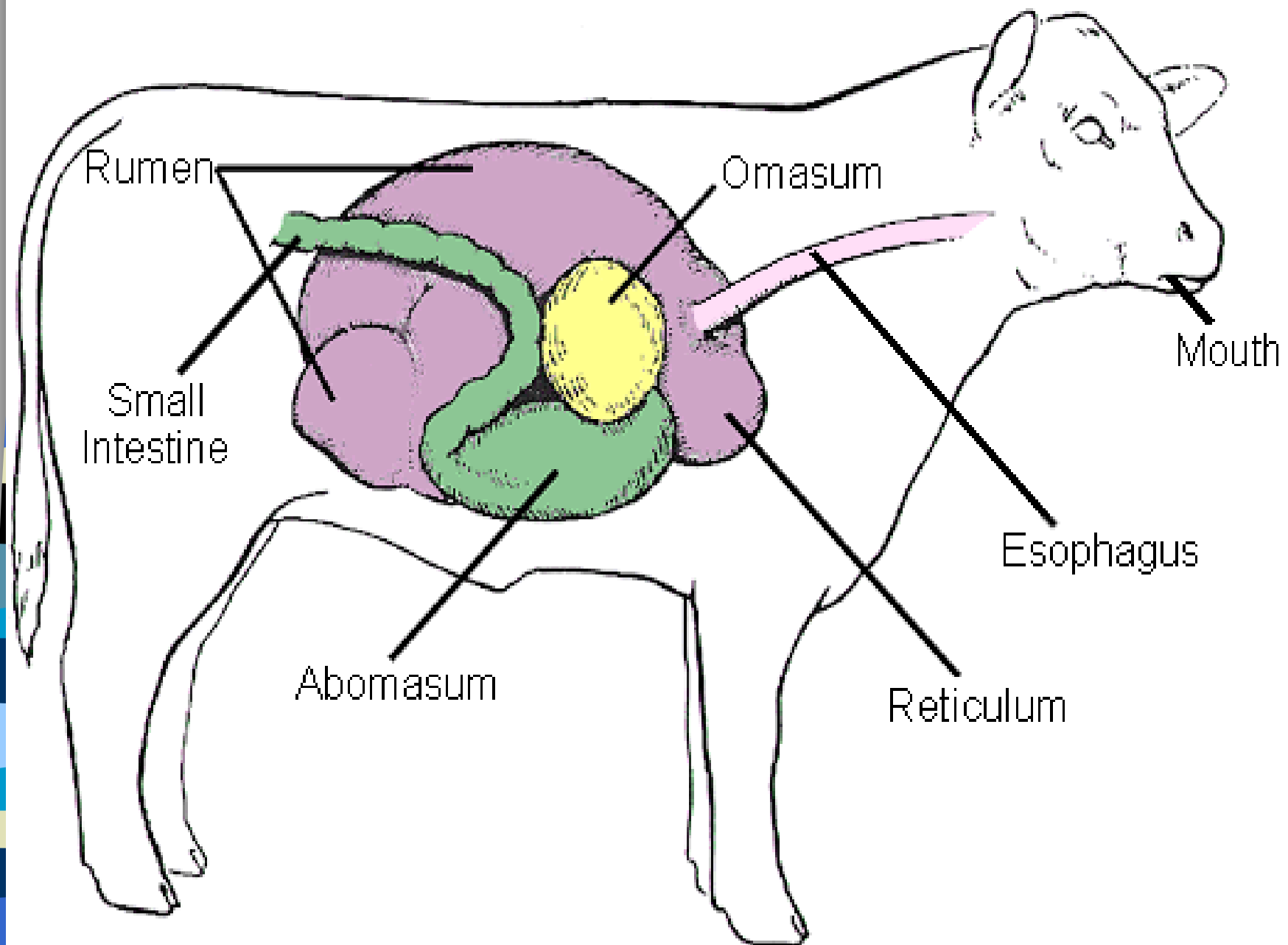
- _____

- _____

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Simple Digestive System of Swine







Digestive System

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