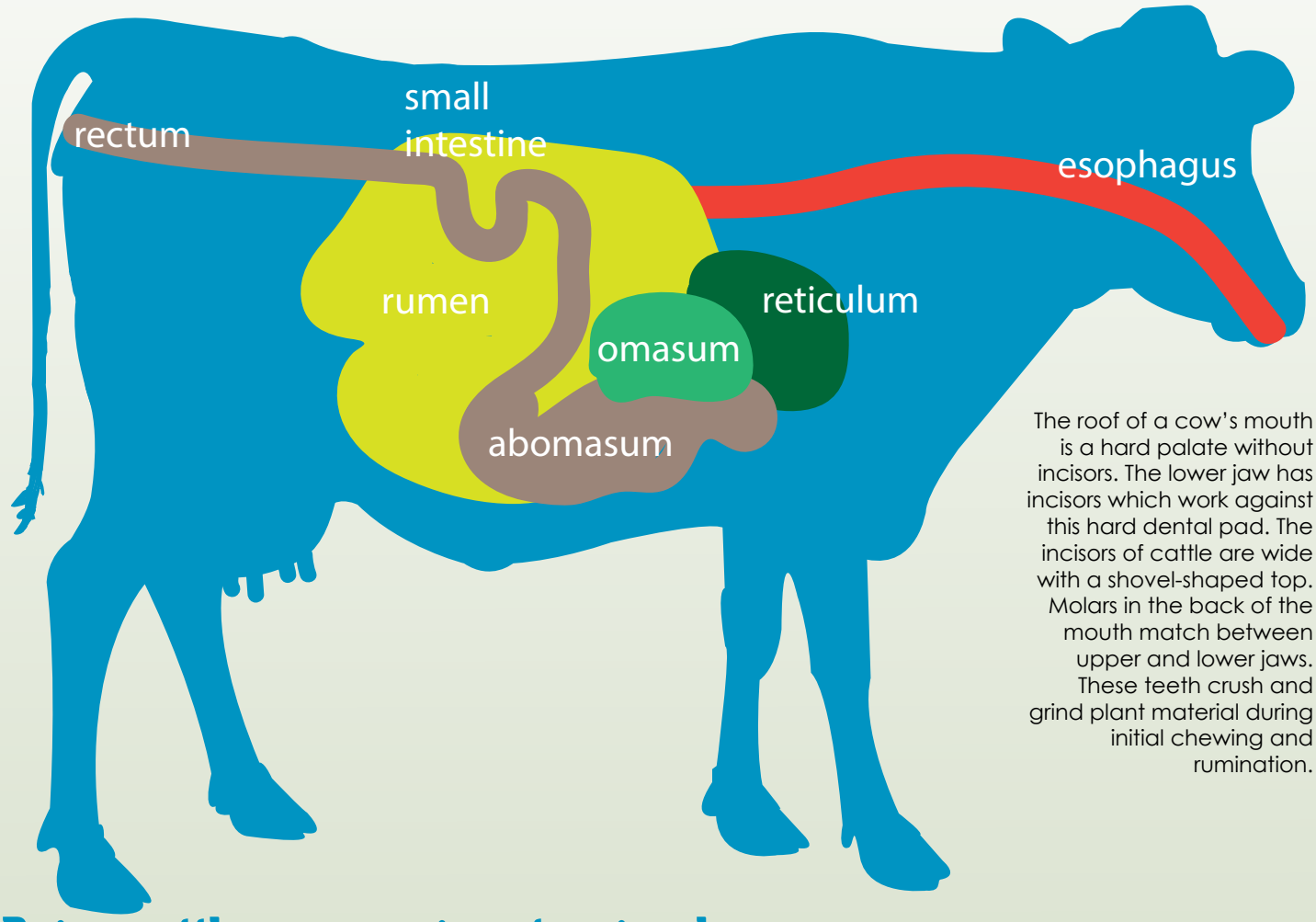
HOW A RUMINANT'S STOMACH WORKS



The roof of a cow's mouth is a hard palate without incisors. The lower jaw has incisors which work against this hard dental pad. The incisors of cattle are wide with a shovel-shaped top. Molars in the back of the mouth match between upper and lower jaws. These teeth crush and grind plant material during initial chewing and rumination.

Dairy cattle are ruminant animals. Their digestive system has four compartments.

rumen

The first compartment of a ruminant, which receives food from the esophagus, partly digests it with the aid of rumen fluid and passes it to the reticulum.

reticulum

This is where the digestate is formed into cud. Cud are small compacted balls of food sent back through the rumen to be further chewed.

omasum

This compartment is a filter for the final stomach. It has lots of folds. Small particles go through the folds but larger particles get passed back to the reticulum.

abomasum

This final compartment is much like the human stomach. Acid and enzymes break down the food and send it through to the small intestine.

Dairy cows are fed approximately 29 kilograms of feed daily consisting of total mixed ration, hay, silage, haylage, and minerals. They consume more than 100 litres of water daily.