

## Eating and Recycling Things We Can't Use...Cows

Cattle are ruminant animals. This means they have a four-compartment stomach that allows them to make nutritious foods out of grass, hay, and other plant by-products. As a cow eats, the food passes from the mouth, through the esophagus and into the rumen (roo'mihn), the largest compartment of the stomach. Here the food is partly digested by tiny bacteria that live in the rumen. The food is then passed to the reticulum (ruh tik' yu lum), which has a membrane with "honeycombed" ridges. These ridges break the food down into smaller pieces. The cow regurgitates those pieces and chews them again. The partly digested food that comes back into the cow's mouth is called cud. The cow rechews the food with its powerful back teeth to break it down even more. This is what the cow is doing when it "chews its cud." As the cow swallows, and saliva washes the cud back into the cow's system, the food now flows into the omasum (oh mah'sum), the third section of stomach. During this process the food breaks down into vitamins and nutrients that the cow's body absorbs to meet its daily nutritional needs. The fourth compartment of a cow's stomach is the abomasum (a bo mah'sum) or may be called the true stomach. The final digestive process takes place here. In the abomasum the cow's system gets all the remaining food value it needs from the food before passing it to the intestines. The intestines store the unused food portions and continue to absorb some nutrients from them until there is enough to be removed as cow manure.

Cows recycle? Yep! Cattle can digest just about any food processing product that we can't use. For example, sometimes cookie factories can burn cookies or they make too many and they get stale. What can the owner do? Well, he or she could take them to a landfill (the dump) and "throw" them away, but cattle are able to eat these not so perfect cookies and turn them into meat, milk, leather, medicine, make-up, lotions, film, and many more products that you use or are around you everyday (like the paint on your walls and the glues under your carpet. Here are just some of the things cattle recycle, basically from our leftovers:

sugar beet pulp (from sugar processing)

fruit and vegetable skins (left-overs from juice and vegetable processing)

Cattle also harvest grass and other plants on our land that wouldn't be used for any other type of farming. Millions of acres of land in the Canada can't be used for growing food crops, so one way to harvest more food for a growing population is to let cattle eat the grass we can't and then use cattle for our food. Carefully grazing our land can ensure enough food for us and our cattle.