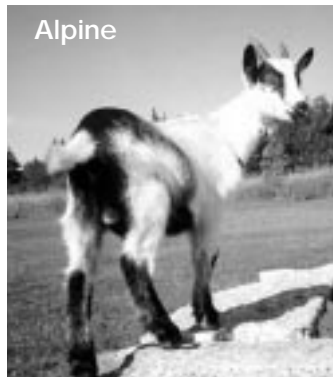
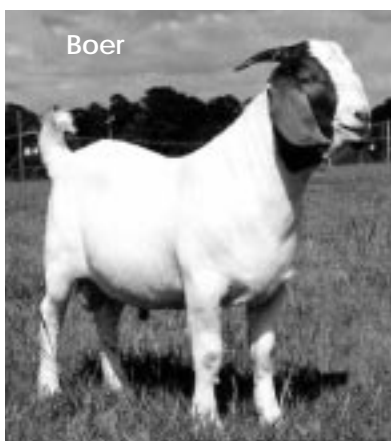


# Breeds of Goats



Many meat goats are crosses of more than one breed.



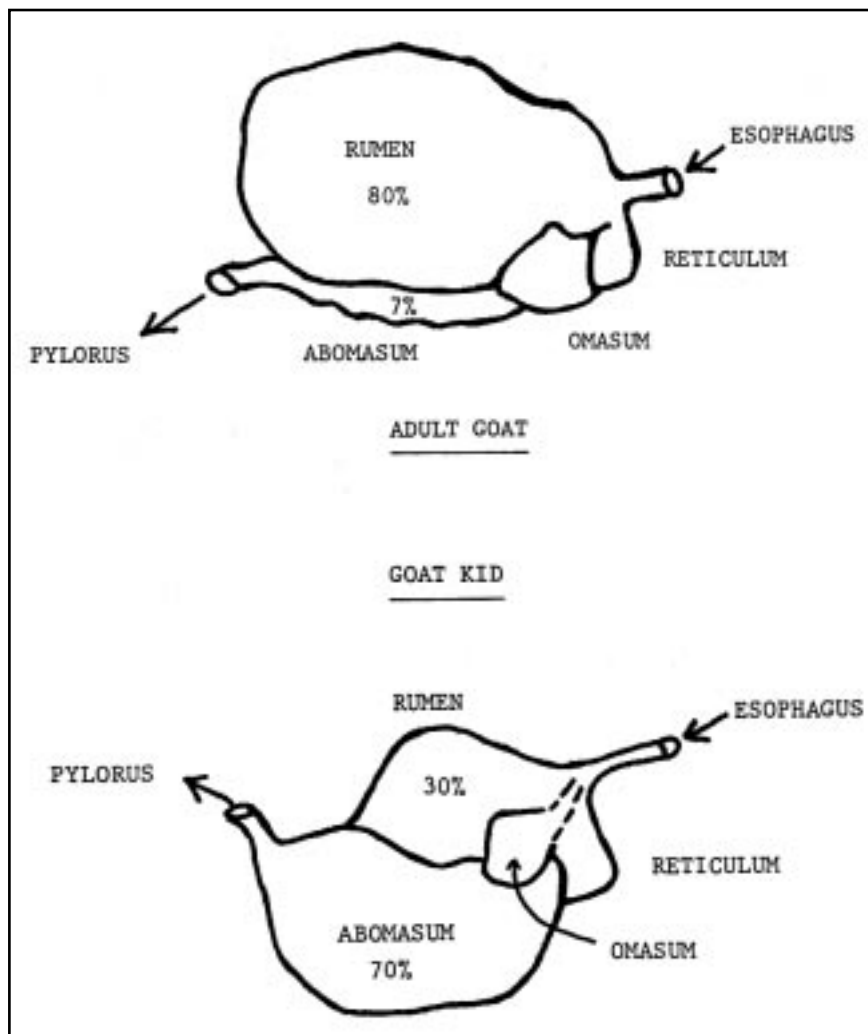
Photos courtesy of Oklahoma State University,  
[www.ansi.okstate.edu/breeds/goats/](http://www.ansi.okstate.edu/breeds/goats/).

# Introduction

Proper nutrition for goats is important at all ages in order to maximize profit potential in the kids, yearlings or adult animals. Nutrient requirements differ in various stages of maintenance, growth, pregnancy and lactation, but it is important to feed a balanced ration at all times as goats that are too fat, too skinny or receiving too much or too little of specific nutrients are more prone to other health problems (see FSA4006, *Herd Health Program for Dairy Goats*). Conversely, goats that are sick, wormy or injured also will not benefit maximally from proper nutrition.

Goats are ruminants. The stomach of a goat is divided into four compartments: rumen, reticulum, omasum and abomasum. This combination of compartments allows ruminants to digest cellulose and other complex carbohydrates that cannot be digested by non-ruminants. Microorganisms in the rumen and reticulum possess the cellulase enzymes that break down cellulose to more simple compounds which the animal uses as an energy source. The abomasum functions as the true stomach by secreting digestive juices (enzymes, etc.) similarly to the simple stomach in non-ruminants such as man and swine.

When a goat kid is born, the abomasum is functional, but its rumen, reticulum and omasum are small and non-functional. The kid depends on low fiber milk, not forage, for its source of nutrition. When the kid swallows milk, the milk goes directly to the abomasum



The four stomach compartments of young and adult goats, showing relative changes in dimensions from pre-ruminant status. Drawing courtesy of D.L. Ace, Pennsylvania State University.

through the esophageal groove. Every time the kid swallows, this flap of skin at the entrance to the reticulo-rumen folds over to form a groove that bypasses the reticulum and rumen. This diversion sends the milk directly to the abomasum to be digested by stomach acids. As the kid gets older, it starts consuming forage. Then the rumen with its microorganisms becomes active and starts to

enlarge. Its population of microorganisms increases, which slowly and more efficiently allows it to digest forages. The reticulum and omasum also respond to the changes in diet by getting bigger. **By the time the kid is an adult goat, forage is the main source of food, and the rumen is much larger than the abomasum.**