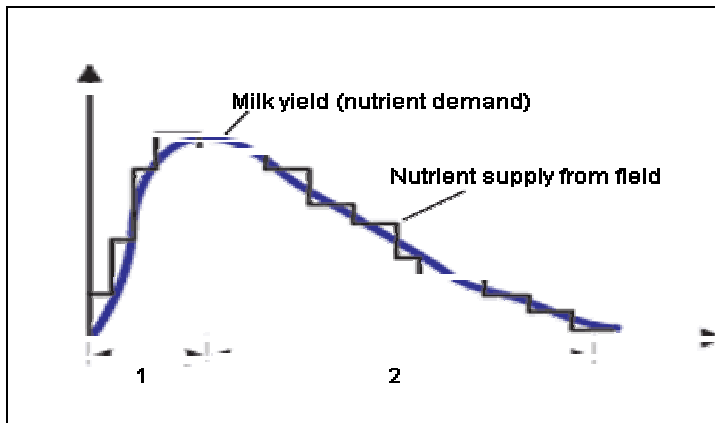


Challenged Feeding

With challenge feeding/feeding to yield, feeding is adjusted to match milk yield.



Diet with too much of easily digested carbohydrates

If the sugar content in the feed is raised too sharply eg: by giving large amount of easily digested carbohydrates or grains, there will be outgrowth by *B.lactis*, causing rapid formation of lactic acid and dropping of the pH of the rumen fluid from normal. This change in the ratio of volatile fatty acids proportions affects normal rumen function as well as general metabolism.

Depending upon the severity the clinical signs may vary from reduction of milk yield to death of the animal. This condition is called as “Rumen acidosis”. Based on etiology and severity of the disease it is classified as:

- ™ Acute rumen acidosis
- ™ Subacute rumen acidosis
- ™ Chronic latent rumen acidosis

Acute Rumen Acidosis

Acute rumen acidosis is due to consumption of large quantity of easily digested carbohydrates either accidentally or due to feeding out of ignorance.

Symptoms

- x Sudden complete refusal of fodder
- x Sudden fall of milk yield
- x Colic signs
- x Mild or moderate tympany. Later the animal become recumbent in coma (like milk fever)
- x Milky gray colour rumen fluid with a pH below 5

Chronic latent Rumen Acidosis

When milking animals are fed with grains regularly for the sake of higher production, the lactic acids produced in the rumen may not be to the level of producing acute acidosis. But, the other organs in the body will be affected adversely. In this condition pH of rumen fluid ranges from 5.0 – 5.5. The other changes noticed will be:

- x Picture of subclinical ketosis

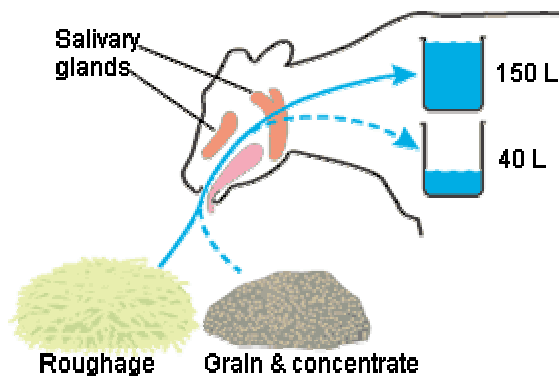
BUFFERS AND ACID/BASE BALANCE IN DAIRY COWS

Introduction

Dairy cows are unique among farm animals in the amount of acid produced in the digestive tract and found in commonly consumed feeds. Each time dairy cows approach the feed; they expose themselves to acid from several sources. This acid can be present in the feed when consumed, or can be generated from the feed during digestion. For example, corn silage ferments during storage, yielding a pH below 4. Its acid content is very high. Therefore, consumption of silage by the cow causes rumen pH to immediately drop. Moreover, in addition to the natural acid content of silage, more acid is produced when nutrients, such as starch and cellulose in the silage, are broken down into volatile fatty acid end products.

POSSIBLE REASONS FOR ACIDOSIS...

I. Insufficient Endogenous Buffering



II. Feeding strategy

a. Phase Feeding strategy

