## Post operative pain

Assessment of pain in ruminants can be difficult because of their stoic nature.

• Behavioral changes associated with pain include decreased appetite, sluggishness, indifference to the surrounding, and avoiding human contacts.

• Changes of body temperature, respiratory rate, heart rate, and blood pressure can also be used to assess pain. These signs, however, are not always reliable indicators of pain.

• Due to the difficulty of accurately determining pain levels in ruminants, the routine use of analgesic therapy prior to and following painful or surgical procedures is recommended.

• Several types of drugs have been used to provide analgesia in ruminants including opioids,  $\alpha^2$ -adrenergic agonists, local anesthetics, and nonsteroidal anti-inflammatory drugs (NSAID's).

• Significant variations exist in regards to duration of action and quality of analgesia provided by these agents.