

## Using Manure as an Indicator of Rumen Health- The 3 “C’s”.

Sheep manure (faeces and urine) can be used to gauge general animal health, rumen fermentation and digestive function. When feed is not properly fermented and/or gut flow is too fast excessive amounts of nutrients and/or feed particles are excreted in the manure.

Checking manure can give producers an indication of overall animal health and feedlot efficiency.

### **Colour**

- Manure is generally a dark green when sheep graze fresh pasture
- Brown-olive with increasing hay intake
- Yellow-olive with increasing grain intake
- Grey generally indicates a degree of acidosis and poor rumen functioning

### **Consistency**

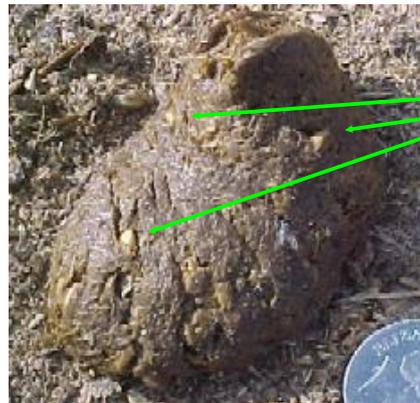
- Depends on water content which is determined by moisture within the feed, amount of time feed remains in the digestive tract and rumen health
- Diarrhoea or scouring may indicate extensive hindgut fermentation and increased acid production (sub-clinical acidosis is common)
- Loose faeces may indicate an excessive protein intake or high levels of rumen degradable protein or heat stress. Excess protein generally leads to an increase in water consumption (in an attempt to excrete excess nitrogen in urine)

### **Content**

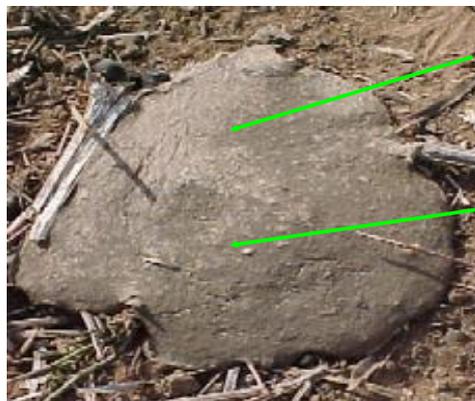
- Undigested grain and long fibre particles in manure may indicate poor rumen fermentation and (possibly) extensive hindgut or large intestine fermentation. Generally occurs if fibre intake is inadequate and/or a high flow rate of digesta through the tract (common with pelleted or starch-rich grain diets where fibre is limiting)
- Pale white colour on dried manure surface may indicate undigested starch (occurs if high flow rates and poor rumen function)
- Mucus indicates inflammation or injury to gut tissues (usually damage to large intestine due to excessive starch fermentation and acid build-up). The mucin is produced by the cells lining the intestine in an attempt to heal affected areas
- Foam or bubbles in fresh manure may indicate acidosis or excessive hindgut fermentation that results in gas production



Manure firm, pelleted and no signs of grain, mucus or other symptoms of acidosis



Undigested grain may indicate fast gutflow, acidosis or inadequate fibre



Grey, runny manure and evidence of gas bubbles or undigested starch (white patches) indicates excessive hindgut fermentation (**acidosis**)

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