

# WHEAT QUALITY TESTING

## Protein content

Protein content is one of the important constituents of the wheat grain. Depending on the intended end use of the grain a range of protein contents are utilised providing other required attributes are present. For example, bread making wheat requires a minimum protein content of 13 g/100g whereas biscuit wheat requires protein levels to be in the region of 10.5-11.5 g/100g. Protein content is measured by either Dumas gas analysis or Near InfraRed (NIR) spectroscopy.



## Specific weight

Grain specific weight is measured in kg/hectolitre, and is an indication of the density of the grain. Many markets require wheat grain to be at a minimum specific weight to be utilized. For example, some millers require a minimum of 76 kg/hl, whilst some animal feed producers require a minimum value of 72 kg/hl.

## Hagberg Falling Number

For the milling wheat market, the Hagberg Falling Number value of grain samples is very important. This value is primarily a measure of the alpha-amylase enzyme activity in grains which can be a varietal characteristic or caused by sprout damage due to poor conditions prior to harvesting. Alpha-amylase activity is crucial for final product quality of bread, pasta, noodles etc. Values in excess of 250 are required for wheat samples destined for bread making; lower values may be acceptable for other wheat flour based products.

