



## Rolled maize

Rolled maize is a unique product of a specialised process to gently roll whole maize. This is regarded as one of the best sources of bypass starch and highly beneficial to both rumen function and development.

Feeding starchy concentrates can often reduce intake of forage. However, the response to starch supplementation varies depending on type of forage and concentrates fed and method of feeding. When starchy concentrates are fed, the fermentation of large amounts of starch over short periods of time can lead to production and absorption of large amounts of VFA's, with associated increases in ruminal VFA concentration, resulting in acid build up in the rumen. This will also depress fibre digestion and thus dry matter intake. This problem can be minimized with TMR feeders, but will cause reduced forage intake and acidosis in parlour fed cattle.

Starch types such as wheat and barley cause a greater depression in rumen pH and fibre digestion than when more slowly digested starch types such as maize are fed. In dry matter terms, barley is 57% starch, compared with maize at 68% and wheat at 67%.

Another consideration when feeding starch to lactating dairy cows is the extent to which starch escapes the rumen and is digested in the small intestine or the hindgut. Research suggests that 42% of insoluble starch in maize escapes the rumen compared to 8% for wheat and barley. Studies have shown that 94% of barley starch was digested in the rumen compared to 74% for maize starch. Studies have also shown that the body weight gains in calves during wk 1 to 12 were higher (0.80, 0.70 kg/d) for calves fed maize than for those fed barley.

### Key Nutrients

|                  |      |
|------------------|------|
| DM content       | 87%  |
| Estimated energy | 14MJ |
| Crude protein    | 10%  |
| Starch           | 70%  |

Maize grain has the highest energy cereal and the starch it contains is digested slightly more slowly in the rumen than that of wheat or barley.

### Disclaimer

Rations should be carefully balanced in terms of nutrient content. They should contain sufficient forage to maintain rumen function and be fortified with an appropriate vitamin and mineral supplement on farms where this is needed. Animals must have constant access to clean water. Suggested feeding rates are produced as a guide only and many other factors may have an overriding effect on animal response; no performance guarantee can be given. Ingredients are generally as in the table above, but are subject to change.

