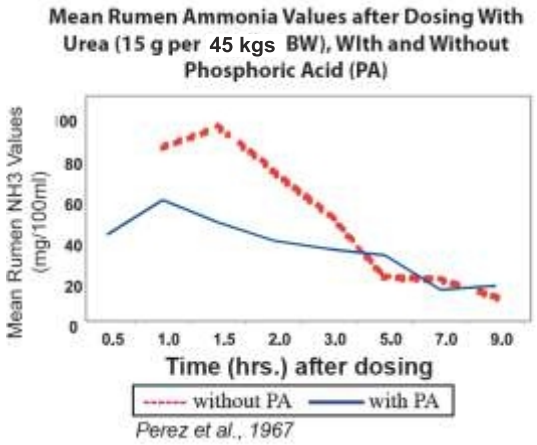
# QLF for Beef: Nutritional Advantges

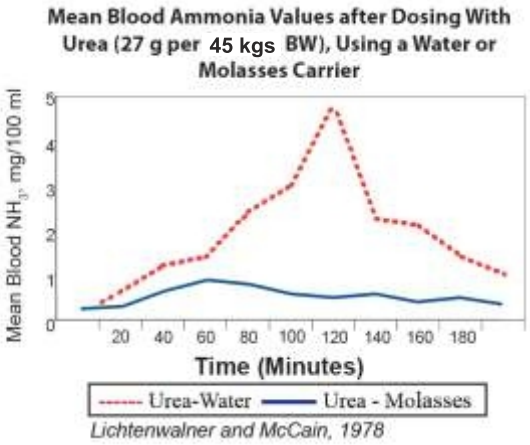
QLF
QUALITY LIQUID FEEDS

## Effect of Phosphoric Acid on Rumen Ammonia:

Binding urea to phosphoric acid slows down the breakdown of urea into ammonia in the rumen. As a result, rumen ammonia values are kept more constant in the rumen and do not peak (as they would should urea be added without phosphoric acid). This leads to a more efficient utilisation of urea, with less being absorbed into the bloodstream as excess ammonia. This is shown in the graphs below:



*Perez et al., 1967*



*Lichtenwalner and McCain, 1978*

## Vitamins and Minerals:

While the liquid protein supplement should NOT be considered a substitute for providing a good, general purpose mineral mix, cattle do receive significant levels of many essential minerals and vitamins at the lick tank. Incorporating dietary minerals in the liquid protein supplement can help ensure consumption by cattle that otherwise may not take minerals.

Many forage-based diets are particularly lacking in phosphorus. The phosphoric acid used in QLF liquid feeds is a highly available source of supplemental P. Phosphoric acid also helps regulate intake, and lower the viscosity of high-molasses formulas and by lowering pH, it aids in product preservation.

A critical concern in mineral nutrition is bio-availability, ie how much of the dietary supply will actually be absorbed by the animal. In the case of phosphorus, environmental concerns about minimising the levels in manure may be nearly as pressing as meeting the needs of the cow. Only about 75% of the P in Di-Calcium Phosphate is absorbed by the animal, compared to 90% of the P in phosphoric acid. If the P requirement is met with phosphoric acid, rather than DiCal or MonoCal, the amount of supplemental phosphorus excreted by the animal is decreased by 67%.

All molasses products will naturally contain relatively high levels of potassium. Other trace minerals critical to health and reproductive performance are added to the feed, as are stable forms of vitamins A, D, and E. Sources of trace minerals can vary significantly in availability; in general, organic forms are more available than inorganic, and sulphates more available than oxides. Most standard QLF supplements contain sulphate forms of copper, manganese, zinc and cobalt. Iodine is supplied in organic (EDDI) form, and selenium as sodium selenite.