When should we apply lime?

A soil becomes more acid concentrations of toxic elements (aluminium and manganese) increase and availability of plant nutrients (phosphorus, calcium, magnesium, potassium) can decrease.
Decisions concerning lime application need to be made when pH reaches the following points.

Below pH 4.4 (CaCl2): Lime it or lose it! Aluminium levels in the soil become toxic at this point and are detrimental to plant growth. It is essential to apply lime.

pH 4.4 to 4.9: Danger! Acidity will affect acid-sensitive species. If you want to establish lucerne, phalaris or canola you will have to apply lime.

pH 4.9 to 5.5: Maintenance liming is required to replace the alkalinity that is removed after products are harvested.

pH >5.5: lime is not required.

Benefits of lime: lime application will increase soil pH and:

- improve legume nodulation
- reduce aluminium toxicity
- increase availability of Mo, Ca and P
- provide a favourable environment for soil microbes
- improve nutrient cycling
- increase pasture and crop options

It is difficult to suggest exact lime requirements at a given pH. The amount of lime required varies according to the type of soil and concentrations of aluminium and manganese. Heavier soils require higher amounts of lime to bring up the pH. This is because heavier soils have a higher buffering capacity. Sandier or lighters soils require less lime to alter pH. **As a general rule, apply lime to bring the pH (CaCl2) up to at least 5. This may mean applying up to 5 t/ha in heavy soil or 2 t/ha in a light, sandy soil.**