



Pasture Maintenance

June 2009

Once capital levels have been achieved (and on most farms exceeded) an annual maintenance application is all that is required. The following figures are indicative requirements to maintain the capital levels. These figures can be strongly influenced by sand or clay soils and monitoring is suggested.

There are 16 chemical elements required for the growth of healthy vigorous plants. Three of these Carbon, Hydrogen and Oxygen are found in water and air, the remainder are mineral nutrients sourced from the soil. These are divided into major nutrients which are required in larger quantities and micro-nutrients or trace elements which are required in lesser amounts but are equally important to plant growth and reproduction.

Major Nutrients

Nitrogen (N) is critical for plant growth and is contained in all living cells. It is a major constituent of chlorophyll and essential in the formation of amino acids and hence protein.

Most nitrogen in the soil is bound up in organic matter but it can also be fixed from the atmosphere by leguminous plants.

Phosphorous (P) is also essential for plant growth and plays a role in photosynthesis, energy storage, plant growth and root development.

Most Australian soils are naturally deficient in Phosphorous.

Potassium (K) plays many roles in regulating plant development rather than forming organic compounds in a plant. It is particularly important for plant metabolism and reproduction.

Sulfur (S) is essential for nitrogen fixation by legumes, is a vital constituent of certain enzymes, vitamins and amino acids and is necessary for the formation of chlorophyll.

Calcium (Ca) promotes plant growth and mechanical strength of the plant. It also plays a role in plant regulatory systems and is particularly important for reproduction and nitrogen fixation by legumes.

Magnesium (Mg) is the second major constituent of chlorophyll and plays a vital role in phosphate metabolism. It also plays a role in plant respiration and regulatory systems.

Micro-Nutrients (trace elements) are equally essential for plant growth but required in much smaller amounts. They include Boron (B), Cobalt (Co), Copper (Cu), Chlorine (Cl), Iron (Fe), Manganese (Mn), Molybdenum (Mo), Selenium (Se) and Zinc (Zn).

HEYTESBURY FOCUS PROJECT
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Major Nutrients

Rule of thumb

Once capital conditions have been reached maintenance dose of phosphorus is 3kg P per tonne dry matter

Nitrogen at 20—30 kg per tonne dry matter

Potassium 20 kg per tonne dry matter

Key Messages:

- Have the highest number of species possible
- Select parasite control chemicals, insecticides and other farm chemicals for dung beetle friendliness
- A neighbourhood program will be more effective than individual farm approach

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