

SEED COATING - NEW MANAGEMENT TOOL FOR
PASTURE ESTABLISHMENT

R.G. Northway

Hodder and Tolley, Toowoomba

Establishment is the most important phase of a pasture's development because it will determine the pasture's production potential. Seed coating is a management tool that protects the seed from the damage caused by insects, reduces the competition from weeds and supplies seed with the required nutrients for maximum growth.

The seed coat can include, Apron 35DSD^R to control damping off and downy mildew in lucerne and sub clovers, FicomW^R to control harvesting ants in various pastures and Lorsban^R to control soil insects in various pastures.

Vigorously growing seedlings will withstand weed competition and diseases as well as pest attack. Although the seed contains its own nutrient reserves, maximum seedling growth is achieved if adequate nutrients are available to the seedling. The Hodder and Tolley seed coat includes an adequate supply of the following nutrients:

Phosphorus

Phosphorus is vital in energy conversion and cell function. Seeds commence absorbing phosphorus as early as four days from the seed taking in moisture but the soil water will contain 0.2 to 0.4 ppm soluble phosphate which may not be enough for maximum root and shoot growth. The phosphorus in the seed coat is instantly available to the seedling and is utilized 3-4 times more efficiently than the phosphorus from the soil.

Potassium

Potassium is important to the seedling because it is necessary for carbohydrate synthesis. It is the dominant cation in young plant tissue and increases resistance to disease.

Calcium

Calcium, the important component of plant cell walls is supplied as lime in the seed coat.

Other Nutrients

The seed coat also contains nitrogen, sulphur, zinc molybdenum, magnesium, manganese, iron and boron. Copper may be added to coated grasses but not legumes because it is toxic to the rhizobium bacteria which are also added in the seed coat.

The nutrients are added in the correct balance and in readily available forms so that seeds coated in the Hodder and Tolley process have an ideal environment in which to germinate and establish. Better establishment means more productive pasture.