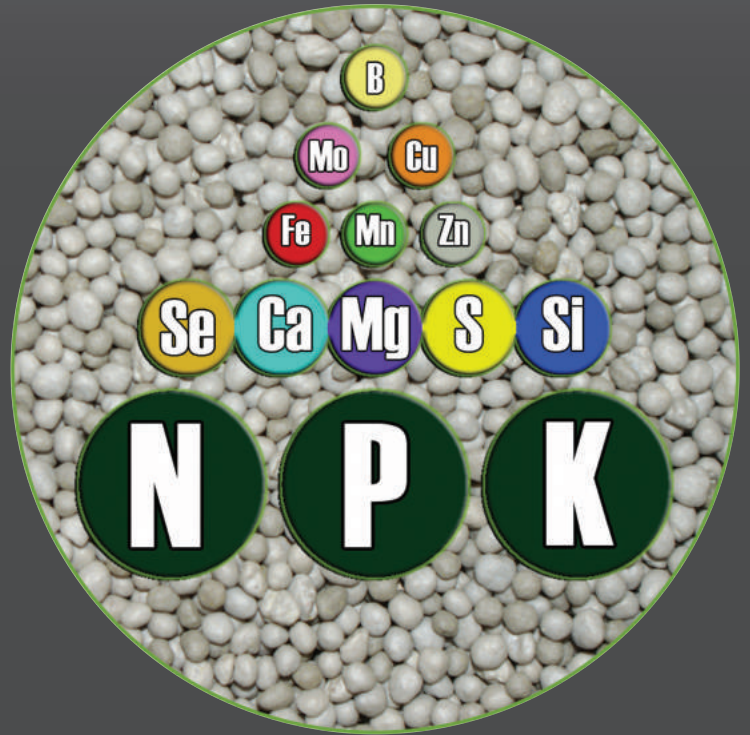


"In a unique & resilient resin coat, fortified with 'phytamins' to help enhance plant physiology"



Macracote[®]
Phytamin Plus



LANGLEY FERTILIZERS



Macracote® Phytamin Plus

“In a unique & resilient resin coat, fortified with ‘phytamins’ to help enhance plant physiology”

Nursery production is an intensive business and is related to better quality and better yields which in turn leads to better profitability. Every grower dreams of achieving this goal. However, the use of fertilisers, herbicides and pesticides alone, is not adequate to achieve this goal. In view of this, Langley Fertilizers is committed to the development of innovative products considering the bioenergetics and biochemical aspects of plants in nursery situation for the use of nursery growers, thus helping them realize their goals.

The role of amino acids in enhancing the plant physiology is well researched, trialled, understood and documented. All living organisms need certain components for growth over and above soil, water, sun and air. The basic component of the living cell is protein; Amino acids are the building block of proteins as proteins are formed by sequences of amino acids.

Plants are able to synthesize amino acids from primary elements. Carbon and oxygen can be obtained from atmosphere and hydrogen from water in the soil, thus forming carbon hydrates by means of photosynthesis. Combining it with the nitrogen that plants obtain from the soil, amino acid is produced.

Under stressed conditions, caused to the plants by various factors, amino acids help plants to endure with stress situations. The absence of amino acid can prevent the plant to carry out the process of protein synthesis or any other process for which that particular type or missing amino acid would be necessary or it must get transferred from some other part of the plant where it is accumulated in the growth organ. These processes are very expensive and require an extraordinary expenditure of plant energy which otherwise could have been utilized for plant growth.

Stress can be caused to plants by various situations as follows:

- ⇒ Hydric (Drought, windy weather, etc.);
- ⇒ Thermic (Frost conditions and high/low temperatures);
- ⇒ Salinity (Due to irrigation water and soil quality);
- ⇒ Pests and diseases;
- ⇒ Atmospheric pollution (Acid rains, high ozone/UV levels);
- ⇒ Pesticides phytotoxicity (caused by pesticides and herbicides);
- ⇒ Cultural Practices (Post transplanting period);
- ⇒ Others—Hail, root asphyxia (plant injury due to oxygen deficiency in the root zone);

Physiological consequences of stress situations are generally as follows:

- ⇒ Reduced photosynthesis;
- ⇒ Decreased starch synthesis;
- ⇒ Increase in respiration;
- ⇒ Lower stomatic regulation;
- ⇒ Increase in proteolysis;
- ⇒ Variation of internal potential water in almost all the plant organs;
- ⇒ Variation in osmotic pressure;
- ⇒ Increase in the production of Abscisic acid which causes the fall of leaves, buds and fruits.

Amino acids are the precursors of phytohormones and other growth substances. They assist and accelerate the metabolic and physiological activity of plant and can be applied before, during and after the stressed conditions.

Macracote® Phytamin Plus range of products are technologically advanced Controlled Release Fertilisers, coated with a unique resin to ensure precision in the release of nutrients in an effective and very predictable manner. Specified longevity is achieved by incorporating a uniquely developed formulation of additives which act as release agents within its tough and flexible resin coating.

The word 'Phytamins' is derived from phyta (plant in Greek) plus vitamins. Essentially phytamins, vitamins and hormones are products of one and the same.

Macracote® Phytamin Plus is also fortified with potent concentrations of amino acid-mineral complex and essential vitamins which are vital to plant growth and can also assist in fighting stressful situations. Most importantly it contains many growth hormones including cytokines, auxin and gibberellins which can assist in stimulating cell division and larger root systems.

Product Range

Macracote® Phytamin Plus	Analysis	Available in		
		3 - 4 Months	8 - 9 Months	12 - 14 Months
General Purpose	16 4 10 + TE	✓	✓	✓
High 'N'	21 4 8 + TE	✓	✓	✓
Native	22 1 12 + TE	✓	✓	✓

For technical Data Sheets and MSDS, please contact our distributor near to your area or contact us at info@sunpalmaustralia.com.au

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