

Smart Select MoliZyme Forte

Smart Select Molizyme Forte is a unique blend of natural plant rooting hormones (auxins and cytokinins extracted from Arcadian kelp - *Ascophyllum nodosum*) and a molybdenum phosphate complex.

Scientifically formulated as a broad acre tank mix adjuvant to improve crop root growth in conjunction with a maintenance application of molybdenum. Plant hormones, amino acid builders and plant health minerals will give your foliar tank mix solution a new dynamic that your crop will reward you for.

Product Analysis

0.5% Molybdenum with 99.8% concentrate of Arcadian Kelp.

1L of product delivers:

- 20ml of a molyphos complex- the most premium and effective molybdenum source available.
- Enough molybdenum for a 10 tonne crop

Summary of benefits

- Compatible with most tank mixes
- Low cost for easy ROI
- Increases root growth
- Improves plant energy
- Improves plant resilience/stress resistance
- Improved crop health & associated benefits

Application Rates

Foliar:

Broad Acre: 0.5 to 2lt per hectare
Horticulture/Viticulture: 5-10L/ha
or 2% of total mix.

In furrow / Fertigation

Broad Acre- 1 to 4L/ha
Horticulture/Viticulture 5-10L/ha

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Key Components

Molybdenum

- Required in approximately 60 enzymes mainly nitrate reductase (Nitrate conversion), nitrogenase (nitrogen fixation in legumes), aldehyde oxidase (production of root hormones and anti-stress hormones).
- Needed by plants for chemical changes associated with nitrogen nutrition.
- Functions in converting nitrates (NO₃) into amino acids within the plant (required for protein production).
- In legumes it is essential to the symbiotic nitrogen fixing bacteria in legumes.
- Impacts copper availability.
- Deficiencies can be seen as nitrogen deficiency, copper deficiency or manganese toxicity (due to stunted growth in acidic soils).
- Generally deficient in acid or sandy soils.

Auxins play a key role in the production of indole acetic acid (IAA) required for root development. IAA may also be known in common terms as “rooting hormone”.

- Root flushing
- Cell Elongation
- Cell Division
- Promotes healing regeneration of vascular tissues (phloem, xylem)
- Fruit/Seed development .
- Delays senescence of flowering.
- Buffer against osmotic changes (wilting).
- Include alginates.
- Improves calcium uptake through the root tip by triggering root movement.

Cytokinins increase photosynthesis and reduce senescence. This will reduce fruit drop and keep annual crops actively growing for longer.

- Reduce senescence/plant dormancy/shut down.
- Reduce the breaking down of chlorophyll and photosynthetic proteins.
- Play a key role in plant responses to biotic and abiotic stresses
- Play a diverse role in plant development and plant growth.
- Act in synergy with salicylic acid to improve the plants defence mechanisms and that cytokinin signalling is prominent around plant infection zones. (Similar to having a pain killer for humans!).



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Frost Resistance

There is some scientific evidence to suggest that seaweed extracts will assist crops with frost resistance. Seaweed extracts have been found to:

- Create a polymer film on the upper and lower surfaces of the leaf called an ant-transparent.
- Reduce damage by increasing cell wall strength (improved calcium uptake) and by increasing the solutes within the plant cells.
- Aid in changing the formulation of the cytoplasm which reduces the freezing point of the cell. In essence it acts like antifreeze and decreases the temperature at which the cell water freezes.
- Aid the plant to recover from the frost event and reduce the time for the plant to return to full production.
- Increases nutrient uptake for improved plant health and resistance.

