



**Pearl**

Information bulletin

# Pearl

## Water Dispersible Micro-Granule

**Pearl is a water dispersible micro-granule developed as a highly soluble formulation. With activated lignin sulphonates\* the fertiliser will supply both Potash and Magnesium with high percentage Boron and Zinc. Pearl will support grain, seed, fruit and tuber development and helps plants overcome temporary deficiencies when uptake is low.**

Pearl has proved useful in fruit and vegetables where quality is an issue; Potatoes when roots are developing to maintain leaf area and at bulking to keep leaves green, aid N metabolism and increase movement of assimilates to tubers; Maize at early growth stages to develop good roots and leaf size; OSR during rapid growth to reduce stem splitting and good pod development to aid seed production; Sugar, Fodder Beet and Brassicae crops where there is a high demand for Boron throughout rapid growth phases.

**\*Activated Lignin Sulphonates: Natural vegetable products with equal to or better complexing efficacy as EDTA with no toxicity issues.**



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# Made from quality raw materials

## the benefits of Pearl are:-

### **Potash**

- Deficiencies often occur at periods of rapid growth
- Increases the plants resistance to pests and diseases
- Helps plants maintain turgor and hence increases drought resistance
- Deficiency may reduce rooting and plant size

### **Magnesium**

- Essential for chlorophyll formation and photosynthesis
- Magnesium may have effects on pigments such as carotene
- 300 enzyme reactions influenced by Magnesium

### **Boron**

- Essential for good root development
- Increases cell wall strength
- Aids nitrogen metabolism
- Can aid pollination
- Can increase movement of assimilates from leaves and stems into grains, fruit and tubers

### **Zinc**

- Zinc deficiency can reduce leaf size
- Deficiency causes stunted plants
- Deficiency therefore reduces photosynthesis



# Oilseed Rape

**Brassicae species have a high requirement for B, removal of crops and leaching of B is leading to a decrease in soil B levels – over 60% of soils tested by Lancrop were below the threshold level. Cold, wet weather reduces root growth and hence nutrient uptake.**

## EFFECTS OF B DEFICIENCY

Boron deficiency inhibits root growth.

Uptake of P is lower in the root tips of B deficient plants.

B deficiency can result in cracked stems. In some plants insect damage has been shown to be higher in B deficient plants.

B is required for pollen tube growth and pollen viability and thereby for seed development.

B deficient crops are more susceptible to frost damage.



Boron deficiency in Brassicae plant. Leaves yellowing and curling at edges.





## POTASH REQUIREMENT

Potash is required for healthy root and top growth. At times of maximum growth in spring uptake can be in the region of 12kg/ha/day – where conditions for growth are not ideal (poor soil structure, thin soils, very wet or dry conditions etc.) the plant may not be able to extract its full needs even though the total quantity in the soil is theoretically sufficient.(PDA)



Potash deficiency.

Pearl is ideally suited to providing the nutrients required to maintain healthy growth apply at 2kg/ha and follow up with further applications at 10-14 day intervals.

**With a composition of 18% K<sub>2</sub>O, 6% MgO, 6% S, 1.5% Zn, 6% B, Pearl places essential nutrients exactly when the plant needs them.**



# Pearl Key Points

- Water Dispersible granules – Highly soluble formulation.
- With activated lignin sulphonates- natural vegetable products with equal to or better complexing efficacy as EDTA with no toxicity issues.
- Quality raw materials.
- Concentrated source of nutrients, no water to transport.
- Supplies both Potash and Magnesium with high percentage Boron and Zinc.
- Supports grain, seed, fruit and tuber development.
- Helps plants overcome temporary deficiencies when uptake is low.



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# Application

**With a composition of 18% K<sub>2</sub>O, 6% MgO, 6% S, 1.5% Zn, 6% B, Pearl places essential nutrients exactly when the plant needs them.**

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Crop:	Rate:	Timing:	Application:
Fruit	2 - 3 kg/ha	Flowering and fruit set	3 - 4
Vegetables, Sugar Beet, Fodder Beet	1 - 2 kg/ha	Rapid growth and fruit set	3 - 4
Cereals, Maize, OSR	2 - 3 kg/ha	During grain/seed set and fill	1 - 3



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