

What is Optimum Gluco Mn

Optimum Mn is an organic fertilizer. Mn is chelated by gluconic acid, which makes an easier uptake and transport through the plant. This way it keeps or corrects the ideal levels of Mn in the crops. Manganese deficiency is shown leaves, black spots on the leaf, light green mottling between main veins, loss to quality, eg. Poor skin finish in potatoes.

Manganese is used in plants as a major contributor to several biological systems including photosynthesis, respiration and nitrogen assimilation. Manganese is also involved in pollen germination, pollen tube growth, root cell elongation and resistance to root pathogens.

Transport of Mn within the phloem is limited. Therefore any deficiency symptoms will generally be visible first on the younger leaves. Severe deficiency symptoms can lead to interveinal yellowing with brown or grey flecks (grey speck in oats) and the brown discoloration of cotyledons and seeds of legumes.

Delayed maturity is another deficiency symptom in some species. White / Gray spots on leaves of some cereal crops are a sign of Manganese deficiency.

Once applied, either into the soil, hydroponics or foliar, product is readily assimilated by plants, and Mn on it moves free into floem.

Composition

	%w/v
Manganese (Mn)	6,0
pH 6-7	
Density: 1,3	

Natural Chelating Agent (Gluconic Acid)

Characteristics of Optimum Gluco Mn

- Can be used in fertigation
- It's especially suitable for foliar application, as it is very gentle and acts without phytotoxicity
- It's highly water-soluble
- It's stable in the pH value range 2 - 12
- It's suitable for use in organic agriculture
- It is completely Biodegradable
- Offers very good cost-effectiveness

Storability

- Keep cool, dry and frost free
- Shelf life 24 months

Optimum Gluco Mn essential for:

- Activation of enzymes for the synthesis of chlorophyll
- The assimilation of nitrogen.
- Synthesis of ascorbic acid
- Oxidation reduction reactions in photosynthesis

Compatibility

Optimum Gluco Mn is compatible with the common plant protection products. Since not all the influences appearing in practice are predictable, a miscibility test with small amounts of the products provided for the spraying is always useful. In case of mixture with fertilizers or plant protection products fill sprayer up to 2/3 with water and add products separately. Add Optimum Gluco Mn as the last component.

Mixture with Fertilizers

In case of mixture with fertilizers or plant protection products fill sprayer up to 2/3 with water and add products separately. Add Optimum Gluco Mn as the last component. Apply immediately and stir constantly.

Foliar Application



Crop	Aim/Problem	Recommendation	Time
In all crops	To provide Mn	1-3 L/Ha (with foliar fertilizer in at least 200 L water. Upon application with backpack sprayer 0.5% - 1% numerous applications of small amounts increase effectiveness)	When required
Cereals	Yield, N efficiency, photosynthesis rate, winter hardiness	2-3 L/ha (recommendation for winter cereals)	In autumn from the 3 leaf stage
Cereals	Tillering, yield, N efficiency, stability	2-3 L/ha (recommendation for winter cereals)	In spring from the start of vegetation
Cereals	Tillering, yield, N efficiency, stability	2 times, 2-3 L/ha (recommendation for summer cereals)	From 3 leaf stage
Potatoes	Reduction in susceptibility to scab	2-3 L/Ha	From 3 leaf stage
Potatoes	Skin quality, resilience	1-2 times, 2-3L/Ha	From the beginning of row disclosure
Legumes (soy included)	Yield, photosynthesis rate, resilience, winter hardiness	1-2 times, 2-3L/Ha	From 6 leaf stage
Oilseed rape	Yield, photosynthesis rate, resilience, winter hardiness	2-3L/Ha	In autumn from the 4 leaf stage
Oilseed rape	Yield, photosynthesis rate, resilience, winter hardiness	1-2 times, 2-3L/Ha	In spring from the start of vegetation through to the beginning of flowering
Sugar beet	Yield, photosynthesis rate, resilience, winter hardiness	3-5 times, 2-3L/Ha	From 6 leaf stage
General vegetables	Improvement on leaf quality, photosynthesis rate, N efficiency	2-3 times, 3-7L/Ha	Once sufficient leaf mass has developed