



ANN GRO[®]

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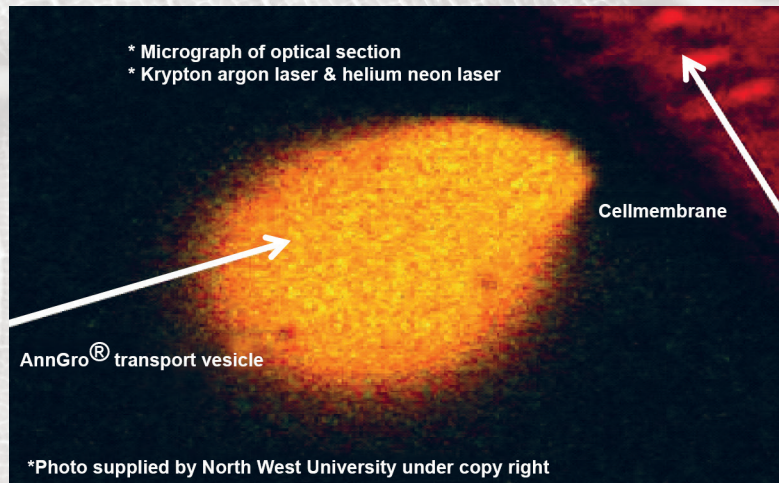


DESCRIPTION

AnnGro[®] is a unique plant- and environmentally-friendly product that enhances the uptake of certain agricultural products e.g. fertilizer. AnnGro[®] consists of transport/carrier vesicles that first pack the chemical it is combined with and then enhances the uptake thereof by the plant. It also facilitates the distribution within the plant itself. The packed molecules are released intracellularly when the AnnGro[®] vesicles are metabolized.

FASTER AND BETTER UPTAKE

Patented by the North-West University (South Africa), AnnGro[®] supports a biologically-based process that comprises of four steps: It is designed to (1) pack hydrophilic and hydrophobic molecules (2), decrease the surface tension of the formulation, to penetrate the waxy layer on leaves through the stomata (3), to translocate between different parts of the plant, to cross cell walls and membranes and to deliver its packaged molecules into the plant cell. Intracellular release (4) of the molecules occurs because the ingredients of AnnGro[®] are metabolized, supplying additional energy to the plant cell.



Micrograph of an optical section of the AnnGro[®] vesicle and a cellmembrane.

MOVEMENT IN THE PLANT

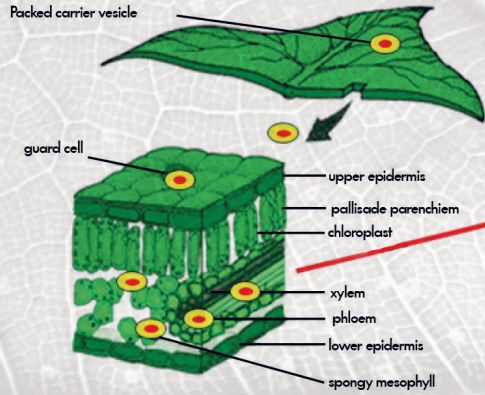


Figure 2: Penetration of packed carrier vesicle into leaf

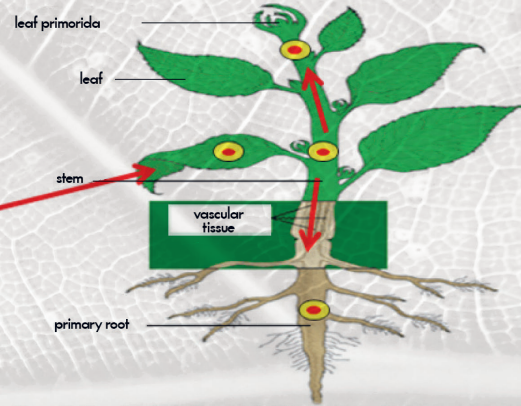


Figure 3: Vascular plant: Movement of the carrier vesicle containing active inside the plant.

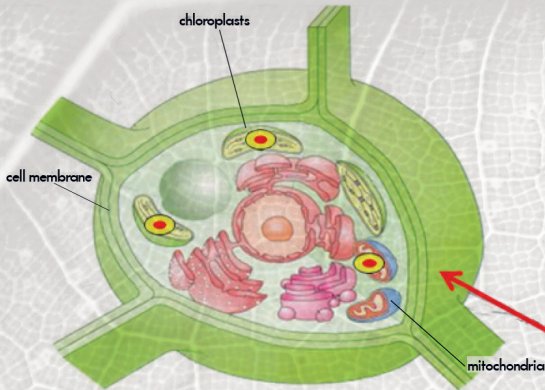


Figure 5: Plantcell: Intracellular releasing of packed chemical

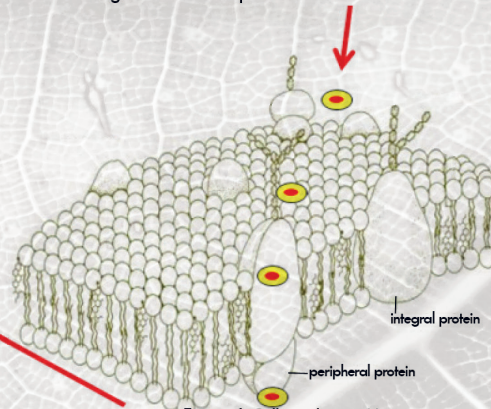


Figure 4: Cell membrane: Movement over cell membrane

BENEFITS

- An adjuvant/penetrant formulated as an emulsion that enhances the uptake and translocation of foliar and soil applied plant nutrients.
- Environmentally friendly product.
- Novel patented carrier molecule.

Manufactured and distributed by BioPher (Pty) Ltd.
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