



## **BREAKTHROUGH CHITOSAN FORMULATIONS IN GREEN BIOTECH ENHANCED SEED GERMINATION, PLANT GROWTH, PLANT PROTECTION AND AEROPONICS**

Chitosan, a derivative of chitin, is the second most abundant polysaccharide on earth. It has numerous applications in agriculture, both alone and in combination with other polymers, but its inherent characteristics limit its use.

Novochizol™ transforms linear chitosan into pure chitosan cross-linked globular particles, overcomes the limitations of chitosan, enhances its existing beneficial properties and displays new properties for first-in-class solutions.

[Watch a 5-minute video presentation of Novochizol™](#)

### **NOVOCHIZOL™ vs CHITOSAN**

#### **Chitosan**

- Solubility only at acid pH
- High viscosity
- Rapid biodegradation
- Low physical stability
- Low chemical stability
- Limited physical states
- Limited carrier possibilities

#### **NOVOCHIZOL™**

- Solubility/dispersibility under all conditions
- High or low viscosity (for sprays, aerosols, nebulizers)
- Slow biodegradation
- High physical stability (resistance to freeze-thaw cycles)
- High chemical stability
- Aqueous suspensions, aerosols, hydrogels, solid states
- Sustained release of small molecules, peptides, proteins, and supramolecular entities. Emulsifies any hydrophobic substance

### **NOVOCHIZOL™ TO IMPROVE SEED GERMINATION AND PLANT HEALTH**

- Faster germination (e.g. 6 days instead of 11 days for *Poa pratensis*)
- Higher viability and more rigorous growth
- Inherent protection against fungal, bacterial, and viral pathogens
- Ease and scalability: Novochizol™ may be and applied as an aerosol
- Absence of premature germination: Novochizol™ formulations may contain very little water

### **NOVOCHIZOL™ TO DELIVER PLANT PROTECTION PRODUCTS**

- Carrier for chemical and biological pesticides, including viral insecticides
- Adherence to plant tissues (no runoff and/or leaching)
- Sustained release
- Biostability (on aerial parts, on roots, in soil)
- Novel application modalities for economical, full coverage (fine mist to cover all plant surfaces)
- May be applied at all stages and at any season (frost resistance)

### **NOVOCHIZOL™ FOR SOIL AMENDMENT, BIOREMEDIATION AND AEROPONICS**

- High water retention
- Captures pollutants to prevent airborne dispersal or leaching
- Light and robust substrate for aeroponics

### **NOVOCHIZOL™ CAN BE LINKED TO OTHER POLYMERS FOR SPECIFIC, UNIQUE APPLICATIONS**

#### **Further Information:**

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