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Technical Data Sheet

CHITOSAN OLIGOSACCHARIDE

Specifications:

Item tested	Specification	Tested result
Appearance	Light yellow to light brown powder	Complies
Odor & Taste	Characteristic	Complies
D.A.C	$\geq 85\%$	95.6%
Loss on Drying	$< 10.0\%$	8.75%
Ignition Residue	$< 1.0\%$	0.72
PH Value(1% water solution)	3.0-6.0	5.45
Average Molecular Weight(Da)	≤ 3000	1811
Arsenic (As)	$\leq 5\text{ppm}$	Not Detected
Pb	$\leq 30\text{ppm}$	Not Detected
Hg	$\leq 3\text{ppm}$	Not Detected

Characteristics:

Chitosan oligosaccharide can be used as a plant growth regulator, improve crop yield, and as a soil conditioner. In particular, it plays an important role in inhibiting plant diseases. A large number of studies have shown that chitosan oligosaccharide can induce plants to produce broad-spectrum resistance, enhance their self-defense ability,

inhibit the growth of a variety of plant pathogenic microorganisms, and can be degraded by microorganisms without polluting the environment, which makes it play an important role in agricultural production as a new type of green pesticide.

Functions:

1. Promote root growth

It can promote the early germination of plant seeds. The root system is developed, and the number of root hairs, fibrous roots and secondary roots is greatly increased. The root is the foundation of the plant. The developed rhizosphere will enhance the fertilizer and water absorption capacity of the plant, enhance the drought resistance and lodging resistance, and achieve the purpose of being strong and bearing more fruits.

2. Activated rhizosphere state

Chitosan oligosaccharide can activate the rhizosphere state, dissolve nutrient molecules and quickly form soil solution, so that nitrogen, phosphorus, potassium and other nutrients can be effectively absorbed by plants.

3. Shorten the stem, make it strong and vigorous

It is found that chitosan oligosaccharide has the function of regulating plant development. It is a natural plant growth regulator. It can promote the root and stem, shorten the stem, make it strong and vigorous, and is conducive to the supply of nutrients to the fruit. The trace elements are easily absorbed by the fruit under the sting of chitin, so as to increase the content of protein and amino acids and fundamentally improve the quality.

4. Strong sterilization ability

Chitosan oligosaccharide can protect the normal development of seeds by replacing seed coating agent. For seed storage, it can reduce seed treatment procedures and is economical. Chitosan oligosaccharide and its degradation products have strong bactericidal effect on Soil and seeds, and can strongly inhibit harmful hyphae, such as frost mold, cysts and so on.

5. Improved soil

Using chitosan oligosaccharide as an additive can increase the beneficial bacteria such as actinomycetes by 1000 times and significantly reduce the harmful bacteria such as Fusarium and nematodes, enhance the ability of soil fertilizer supply, fundamentally improve the soil, eradicate hardening, improve the content of soil organic matter and facilitate continuous cropping.

6. Improve crop quality and increase yield

Chitosan oligosaccharide can increase crop yield, improve crop quality, restore natural flavor, store and transport resistance, and reduce pesticide residues,.

7. Improve fertilizer efficiency

Chitosan oligosaccharide has the characteristics of viscous solution and easy film formation. Its strong film-forming function can delay the release of fertilizer elements, reduce the loss of nutrients and greatly improve fertilizer efficiency. In this way, it can fundamentally solve the waste of fertilizer, save funds, protect the environment and be beneficial to human health,

8. Enhance immunity

Chitosan oligosaccharides are known as "plant vaccines", which can enhance the antiviral ability of plants, change the growth mechanism of plants, enhance the immune function of regulating system, thus ensuring the normal growth and development of plants. The seed dressing with chitosan can reduce the incidence rate and disease index of soybean root rot, and control effect can reach 42.6% to 46.9%. At the same time, it can promote the growth of soybean roots, increase the number of individual fruit, grain number and grain weight per plant, and increase output by 11.7%.

Instructions for use

Foliar spraying: the application concentration is 50-100ppm, and the dosage per hectare is only 30-75g, with an interval of 7 days. It is better to use it three times.

Irrigation or drip irrigation: 300-600 g / ha.

Soil conditioner: 3kg-12kg / ha, which can be used together with flushing and fertilization.

Crops: It is suitable for corn, rice, wheat and other field crops, as well as fruit trees such as oranges, bananas and all kinds of fruits and vegetables. It can be used for the production of organic green pollution-free agricultural products

Warnings and precautions for use:

1. Avoid mixing with alkaline pesticides, and can be mixed with other fungicides, foliar fertilizers, pesticides, etc.
2. Do not arbitrarily change the dilution ratio when using. If there is precipitation, shake it well before use, which will not affect the use effect.
3. In order to prevent and delay drug resistance, it should be used alternately with other relevant disease prevention agents.
4. Apply it to the leaves before 10:00 a.m. and after 4:00 p.m. and don't spray it in the sun.
5. It should be used from the seedling stage for better disease prevention effect.
6. The safety interval of general crops is 3 ~ 7 days, and the crops can be used up to 3 times per season.

Package:

In 25kg/cardboard drum.