Creative Enzymes®

γ-Polyglutamic Acid, γ-PGA (Agricultural grade)

Cat. No. CEFX-290

Lot. No. (See product label)

Introduction

Description

Polyglutamic acid (γ-PGA) is a water-soluble anionic biopolymer amino acid polymer produced by microbial fermentation. Characteristics: Water retention: Polyglutamic acid molecules contain more than 1,000 super hydrophilic groups, moisturizing and water locking effect is 500 times that of hyaluronic acid. Compatibility: Polyglutamic acid contains a large number of amide bonds and free carboxyl groups, the unique molecular structure gives it good biocompatibility. It can be used in combination with various fertilizers and biostimulants. Molecular Weight: Molecular weight ranges from 50,000 to 2 million Daltons. Biodegradability: Completely degradable in natural environment. Safety: Non-toxic, non-hazardous, friendly to human body and environment.

Product Information

Appearance

Powder or liquid

Function

The hydrophilic group - carboxyl group in γ-PGA molecule has the function of maintaining soil moisture content, improving soil bulkiness and voidness, improving sandy soil, and promoting the enhancement of soil's ability to retain fertilizer and water. γ-PGA can promote the development of crop root system, stimulate the growth of root hairs and root system, and improve the ability of crop nutrient absorption. γ-PGA can combine with the receptor protein on the surface of the root cell membrane, initiate the antiretroviral switch through signaling, increase the proline content and osmotic pressure regulation ability of the crop cells, which can effectively ensure the normal absorption of water and nutrients under the adversity conditions such as drought, waterlogging and low temperature. γ-PGA has good buffering capacity for acid and alkali, and can balance the soil pH value. γ-PGA contains a large number of hydrogen bonds between the molecules, which can keep the water in the soil, improve the soil's porosity and bulkiness, and enhance the soil's water retention capacity. γ-PGA has excellent integration effect on heavy metals such as chromium, aluminum, lead and cadmium in the soil, which can effectively prevent crops from absorbing toxic heavy metals from the soil, affecting crop safety and food safety.

Storage and Shipping Information

Storage

The product should be sealed and shielded from light, avoid high temperature, stored in a dry, cool, well-ventilated place.