



AMBIOTECO

AMBIOGEL

Innovation of water management
and fertilizer input in agroecosystems

Supports plant water management
and reduces total fertilizer input

AMBIOGEL

- ⇒ Water saving superabsorbent
- ⇒ Soil conditioner
- ⇒ Fertilizer synergist
- ⇒ Eco-friendly compound

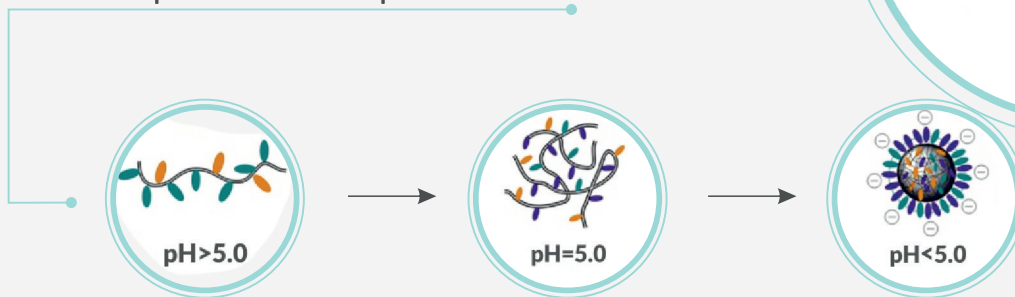
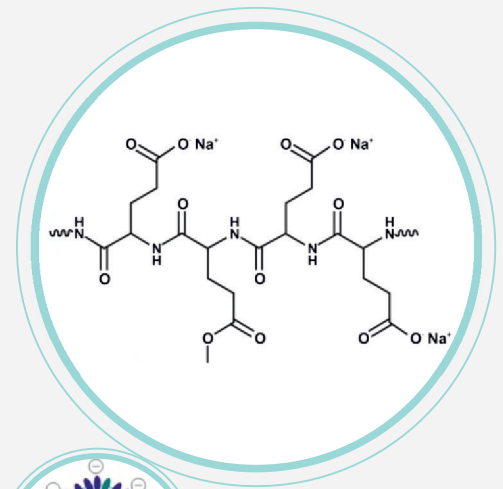


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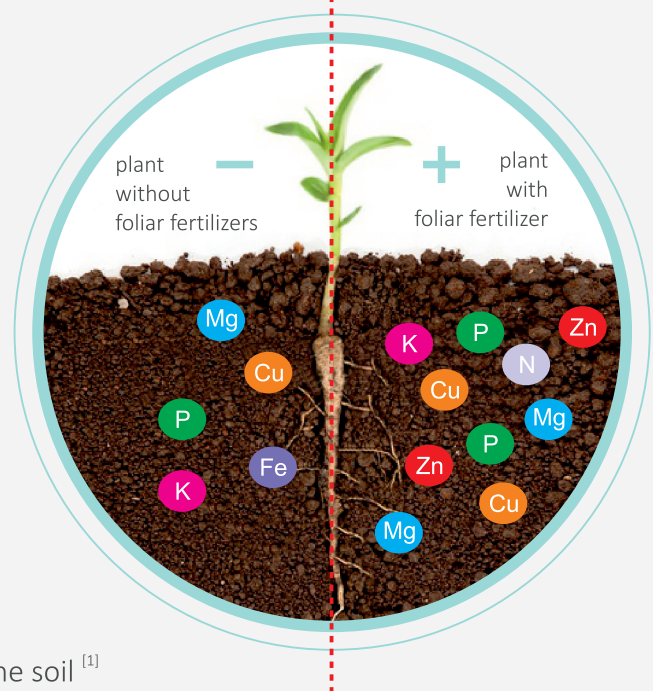
CHEMICAL CHARACTERISTIC:

Anionic homopoliamide

Molecular structure depends on pH



water-saving
superabsorbent



PROPERTIES:

non-immunogenic
non-toxic
biodegradable
water soluble

- significantly improves the water balance and microretention of the soil ^[1]
- promotes the formation of soil aggregates and prevents soil erosion ^[2]
- regulates the nutrient availability through changing microbial and enzymatic characteristics ^[3]
- significantly increased plant yield and N, P, K nutrient uptake ^[4]
- effectively balances the acidity and alkalinity of the soil while avoiding acidification and compaction of the soil caused by long-term use of chemical fertilizers ^[5]
- significantly increases the crop yield reducing the fertilizer ammonut up to 40% ^[6]

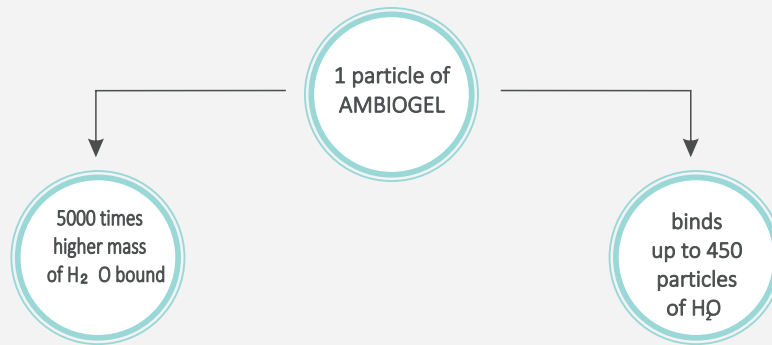
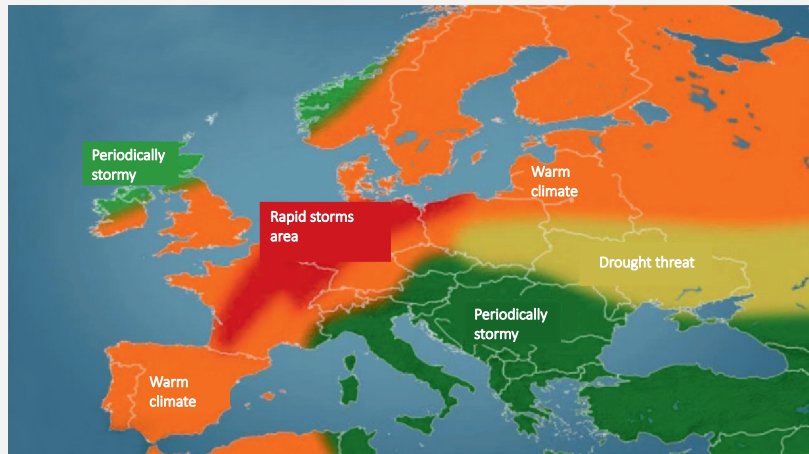


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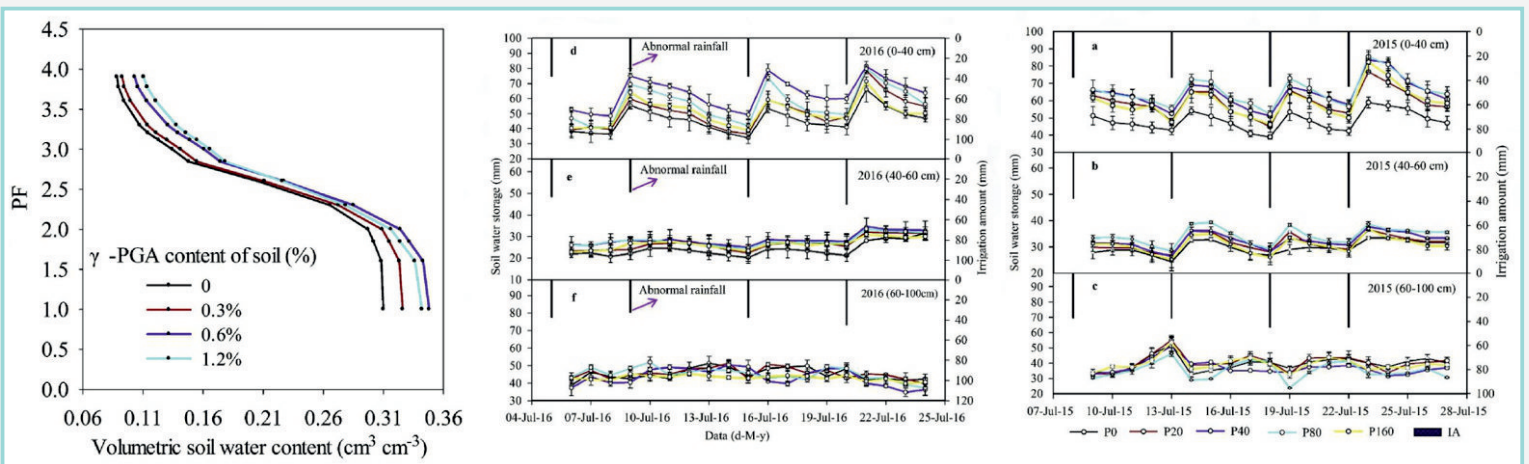
AMBIOGEL SMART PARTNER OF PLANT WATER MANAGEMENT

Prevents drought and its negative effects through multidirectional action: rainwater and irrigation storage, bioavailability during deficit and drought.

Climate zonation in Europe



IMPACT ON THE WATER BALANCE FROM SOIL RESOURCES



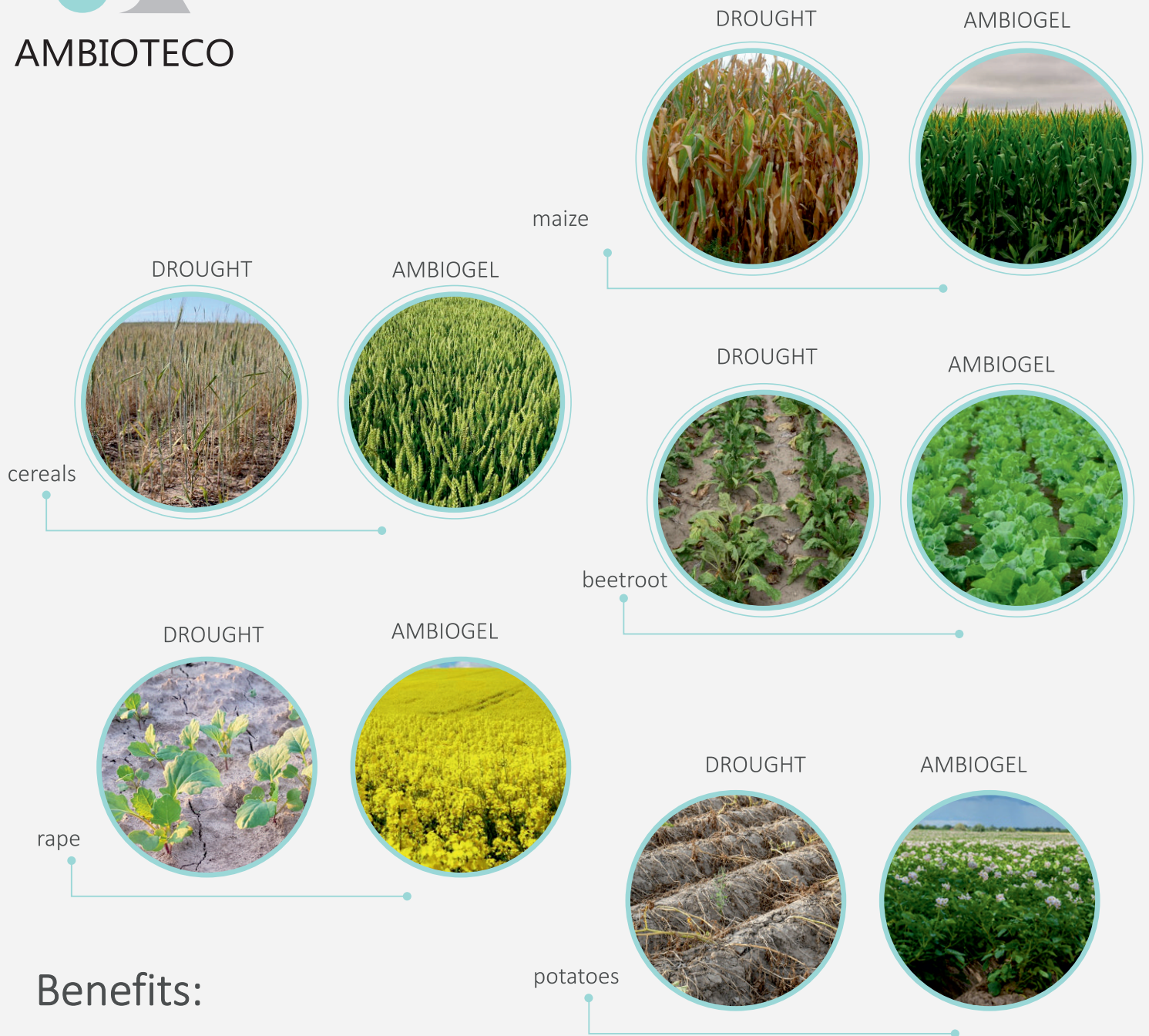
The effect of different γ -PGA concentrations on soil water holding capacity. After Liang et al. 2019

Dynamics of soil water storage in 0–100 cm depth under different γ -PGA application amounts in 2015 and 2016 in southern Xinjiang, China. after Liang et al. 2019.



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FIELD CROPS



Benefits:

- stabilization of soil natural biofilm ^[1]
- increase of the root biomass and plant fertility ^[2]
- induction of plant resistance to environmental stress and pests attacks (minimalization of usage of pest control products) ^[3]
- increase of crop yield and biomass ^[4]
- decrease of crop losses ^[5]
- reduction of mineral fertilizers consumption and tissue accumulation ^[6]
- reduction of irrigation frequency and its costs ^[7]
- increase of seed and grain sowing value ^[8]



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ORCHARDS, FRUITS AND VEGETABLES



Benefits:

- extension of flowering time and its intensity balancing environmental conditions ^[1]
- increase of effective seedlings growth ^[2]
- increase of weight, durability and quality parameters of fruit and vegetables ^[3]
- reduction of irrigation frequency and water consumption costs ^[4]
- reduction of doses of fertilizers and pest control products ^[5]
- increase of pest resistance and defence ^[6]
- stabilization of leaf biofilm and reduction of susceptibility to fungal diseases ^[7]
- improving of soil quality ^[8]



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LANDSCAPE ARCHITECTURE

DROUGHT

AMBIOGEL



court



lawns



parks



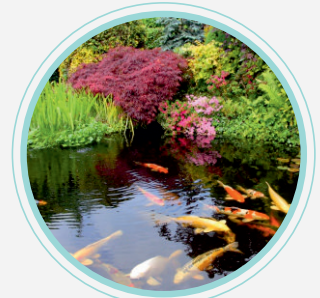
fountain



national roads-
hydro-seeding, protection
and strengthening of the slopes



squares



ponds

Benefits:

- water treatment: heavy metals absorbent or chelating agent ^[1]
- wastewater treatment - flocculant biopolymer, polyacrylamide substitute ^[2]
- improvement and stabilization of soil structure, with its aeration and erosion prevention ^[3]
- increase of sensory attributes of lawns including colour intensity and turgour ^[4]
- biomass and volume increase of grass root systems improving lawns stabilization in the ground ^[5]
- improvement of the trees root system growth preventing seedlings and young trees drying ^[6]
- decrease of seedlings mortality and improvement of plant growth dynamics ^[7]
- reduction of irrigation frequency optimizing the crop costs ^[8]
- improvement of plants resistance to stress and pest attacks ^[9]



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BENEFITS

soil conditioner

Increase of resistance to environmental stress

Improvement of macro and trace elements intake by plants

Stabilizes the natural biofilm in the soil

Prevents soil erosion

water absorbing agent

Up to 40% reduction of water consumption in the crop production

Improves the water balance in crop systems

Maximizes microretention processes

Water and wastewater treatment

eco-friendly

Fully biodegradable

Neutral to most metabolic pathways

Prevention of heavy metals accumulation in plant tissues

Pesticide amount reduction and optimization of insect pest control

fertilizer synegist

Synergistic to NPK fertilizers (reduces to 50% of required doses)

Minimizes nitrogen accumulation in plant tissues

Up to 40% increase of crop yields and biomass



STABILITY



It can be stored up to
7 months in liquid form

(With addition of mineral fertilizers up to 1.5 years)



It can be stored up to
2 years in crystal form

Recommendations for application:

- Use 5 - 40% of total volume as a component of activators, biostimulators, growing mediums and fertilizers with the recommended dose of 2-5 kg/l per 1 ha, i.e. 0,2 - 0,5 g/ml per 1 m² (crystallizing powder or liquid form). To the manufacturer's decision to determine the doses of crystalline powder.
- Doses for crop irrigation: 2-5 l / 200-500 l of water.
- In combination with pest control products, the recommended dose is 1 l/100-200 l of spray liquid.

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The first biotech company with innovation system of polyglutamine acid extraction and purification technology in Europe.