

UNLOCK YOUR SOIL'S POTENTIAL WITH K-HUMATE® 26

HIGHLY CONCENTRATED LIQUID HUMATE

- Improves soil moisture and nutrient retention
- Reduces nutrient lock-up in the soil
- Improves soil structure
- Stimulates plant root growth and soil biological activity



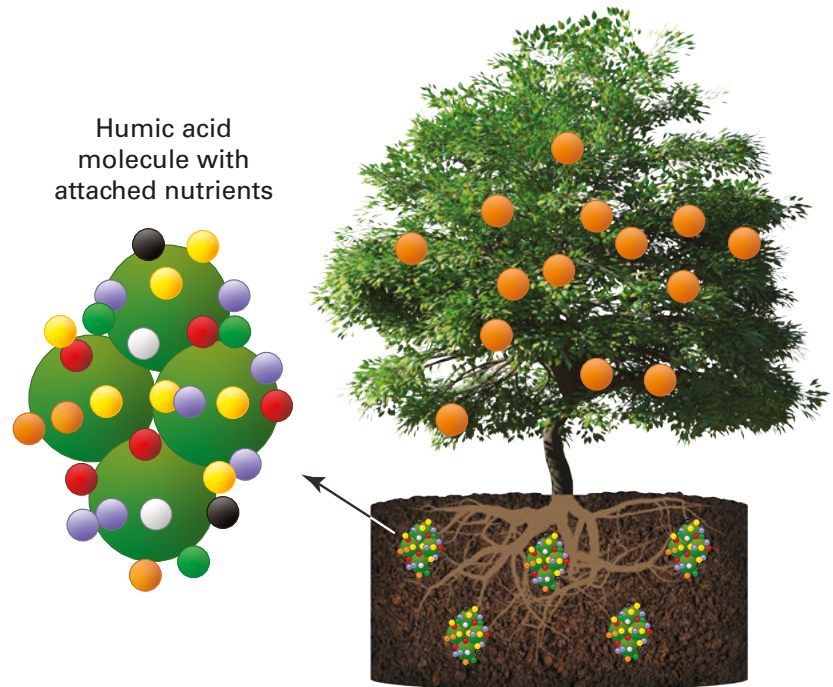
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WHAT ARE HUMIC ACIDS?

Humic acids are naturally derived from the breakdown of plant and microbial matter. Humic acids are the foundation of all fertile soils. Over the years, these humic acids accumulate in the soil. This provides the soil with greater nutrient retention, water holding capacity, readily available carbon food source for beneficial soil microorganisms and better soil structure. This is nature's way of minimizing nutrient losses to maintain long-term soil fertility and to ensure sustainable plant growth.

Humic acids present in the soil hold a wide range of micronutrients and macronutrients around plant roots. This provides all the essential nutrients for quick root uptake and optimum plant growth. Humic acids also improve the wetting ability and water holding capacity of the soil.

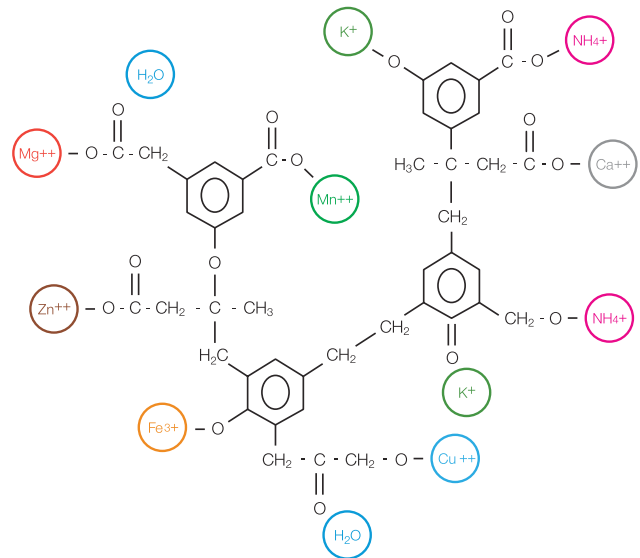


K-HUMATE® 26 holds onto a wide range of nutrients from applied fertilizers in the soil until plants are ready to use them. K-HUMATE® 26 also helps unlock bound nutrients in the soil, making them available to the plants.

WHAT IS K-HUMATE® 26?

K-HUMATE® 26 is a highly concentrated source of humic acid sourced and produced in Australia. The product's high quality and proven performance is now well recognized all over the world.

K-HUMATE® 26 provides a helping hand to growers to achieve greater crop production through a more effective use of applied fertilizers and maintaining long-term soil fertility.



Humic acids are very effective in chelating many plant nutrients and more importantly, in retaining water (see illustration above). This enables humic acids to retain a wide range of nutrients, all in close proximity to plant roots to provide more balanced nutrients for growth.

BENEFITS OF USING K-HUMATE® 26

Biological

- Provides a readily available source of carbon for the growth of soil microorganisms.
- Improves roots development for an increased resistance to biotic and abiotic stress conditions.

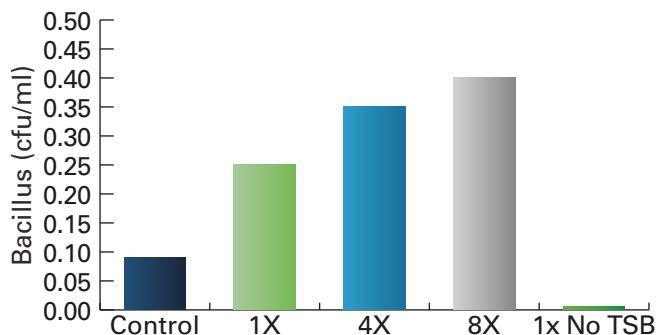
Chemical

- Improves the soil chelation properties by reducing nutrient loss due to leaching and run-off.
- Releases soil-bound nutrients, particularly phosphorus and calcium.
- Locks-up aluminum in acidic soils which is harmful to plant growth.
- Improves the soil buffering capacity which leads to the stabilization against pH changes.

Physical

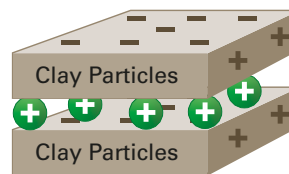
- Promotes soil aggregation and creates better soil structure facilitating improved root penetration enabling better access to available minerals and nutrients.
- Opens up heavy clays and compacted soils.
- Improves soil wetting capability which reduces surface soil crusting and improves water penetration and retention in soils.

BACILLUS GROWTH WITH K-HUMATE® 26

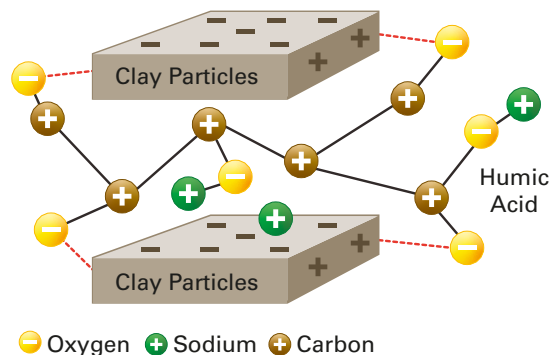


Humic acids promote beneficial soil microbial growth by providing active carbon for their energy and biomass requirements. Recent studies have shown that the addition of K-HUMATE® 26 significantly stimulated growth of *Bacillus* spp in vitro. *Bacillus* are one of the most important groups of bacteria that work with the plant to enhance growth.

Poor Clay Soil: Compact, hard and impenetrable to roots, water and nutrients



Good Clay Soil: Open, friable and penetrable to roots, water and nutrients



K-HUMATE® 26 rejuvenates heavy clays which are compact and impenetrable to water and nutrients. When soils dry out, water is removed from between the clay particles, causing them to move very close together, shrink in volume and form cracks in the ground. This cracking in the ground is a common feature in clay soils which are poor or lack of organic matter. Humic acids in nature interact with the clay particles and prevent them from sticking closely together when they dry out in the summer. The more open clay structures the higher is the water retention for plant use.

IMPROVING GROWING CONDITIONS

SOIL MOISTURE

Humic acids, like most forms of plant organic matter, improves the water holding capacity of most soils. In sandy soils, humic acids form a hydrophilic (water-attracting) coating on the sand particles which increases their wetting ability and moisture retention properties. In clays, humic acids open up the clay structures to enable greater water penetration and retention.

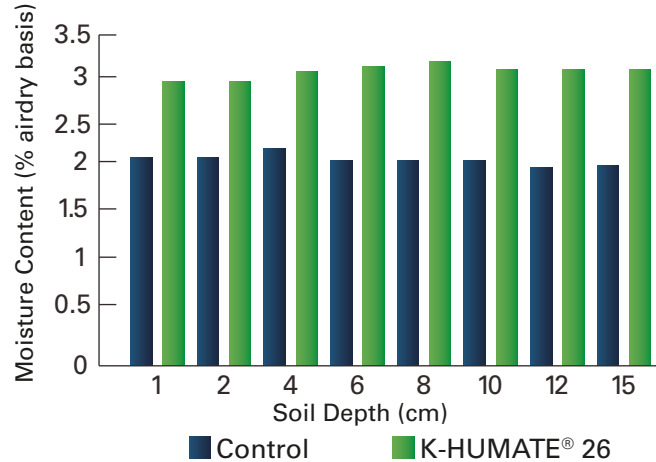
Better soil wetting ability and greater soil penetration reduces water losses from run-off and drainage and improved water usage and reduction in labor requirement and costs.

NUTRIENT RETENTION AND AVAILABILITY TO PLANTS

Soil organic matter (humus) has a great ability to hold nutrients in the soil until they are required by plants.

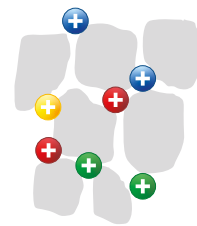
It is the humic acid molecules in the humus which hold most of the nutrients from applied fertilizers.

K-HUMATE® 26, which has a cation exchange capacity of 1900 meq/100g (1900 cmolc/kg), greatly improves the ability of sandy soils to hold many essential nutrients such as ammonium, potassium, calcium, magnesium and the trace elements.



A compact, acidic brown-grey clay loam topsoil, with very low organic matter, was much easier to wet after treatments with water containing less than 0.25% K-HUMATE® 26. The soil treated with K-HUMATE® 26 was also found to retain up to 50% more water than the untreated soils.

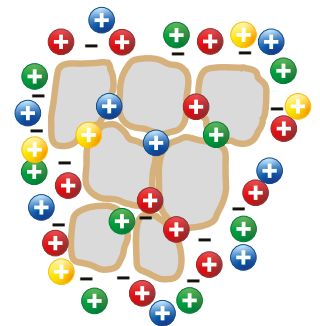
CATION EXCHANGE PROPERTIES



Uncharged surface of sand particles cannot hold nutrients




Large amounts of nutrients not held in soil and lost to leaching



Coating of humate provides charged surface to hold nutrients



More nutrients held in soil and not lost to leaching

 Ca, Mg, K, Zn, Cu, Mn, Fe, B

Humic acids, which are trapped in cracks and pores and adhered to the surfaces of sand particles, hold onto many important nutrients which would have otherwise been lost to leaching.

IMPROVING CROP QUALITY AND YIELD

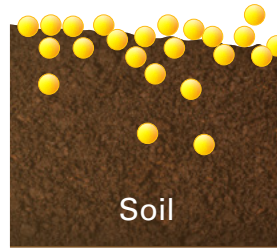
SUSTAINING BALANCED NUTRITION

The saying goes, “You are what you eat”. Similarly, the well-being of plants depends not only on what you feed your plants, but also on the availability of the nutrients in applied fertilizers and how successfully the plants are able to take these nutrients through their root system and foliar.

Scientific studies have shown that a large proportion of your fertilizers are locked-up in the soil soon after application, particularly phosphorus.

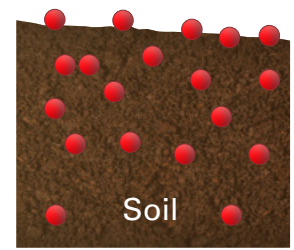
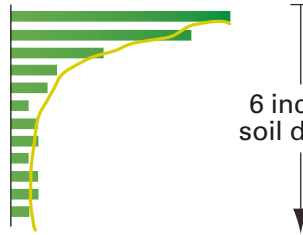
K-HUMATE® 26 can improve the solubility of the bound phosphates in the soil by decreasing phosphorus fixation. It also enhances soil microbial activity that releases phosphorus.

K-HUMATE® 26 stimulates greater root growth in seedlings and mature plants resulting in higher nutrient uptake in plants and a greater ability to tolerate extended dry spells between irrigations or rainfall. A more extensive root system growth promotes greater plant vigor and better crop yield and quality.



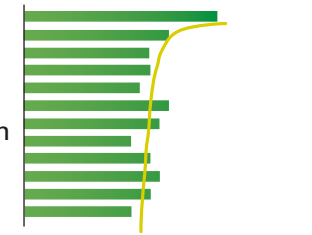
● Calcium Only

Calcium Concentration



● Calcium-Humate

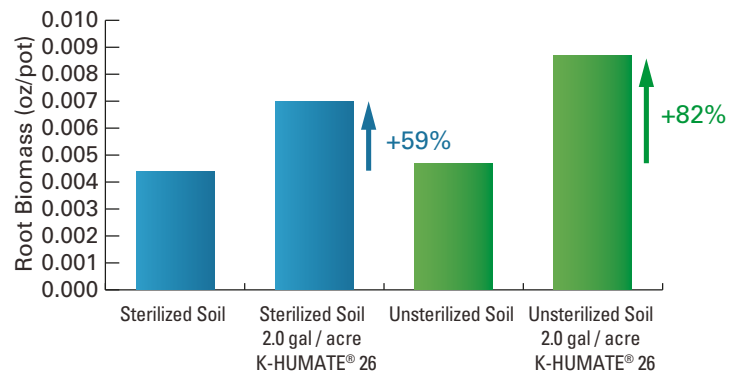
Calcium Concentration



6 inches soil depth

K-HUMATE® 26 soil conditioner increases the movement of calcium down the subsoil and plant root zone where it is most needed. Greater calcium concentration in the soil treated with K-HUMATE® 26 was evident down to a depth of 6 inches. This means quicker response from applied calcium in terms of nutrient availability and plant uptake. Calcium is important in promoting plant cell development which will lead to healthier plants, greater resistance to diseases and better crop quality.

DRY ROOT BIOMASS OF WHEAT IN STERILIZED AND UNSTERILIZED SOIL WITH AND WITHOUT K-HUMATE® 26



K-HUMATE® 26 works with the biology of the soil to increase root biomass, and consequent nutrient uptake. 2.0 gal / acre of K-HUMATE® 26 increased root biomass in wheat by 59% where the soil was sterilized, and 82% in unsterilized soil, showing the interaction with soil microbes. The increased root mass has been also recorded in a wide variety of crops including potatoes, citrus, tomatoes and corn.

FREQUENTLY ASKED QUESTIONS

Q. When is the best time to apply K-HUMATE® 26?

- A. For best results apply K-HUMATE® 26 with fertilizer application, or right before fertilizer is applied.

Q. How much K-HUMATE® 26 do I need and how do I apply in the field?

- A. Between 1 to 5 gallons per / acre during the growing season is effective. If possible, multiple applications of 0.5 to 1.0 gallons per / acre each spread over the growing season is more effective than a high single dose rate.. Before application, dilute K-HUMATE® 26 in water.

Q. Is there a particular soil type or crop that will benefit most from applications of K-HUMATE® 26?

- A. K-HUMATE® 26 is beneficial to all crops and soil types, sandy, loamy, and clayey. It improves nutrient and water retention, leading to more vigorous plant growth and, in the longer term, better soil structure.

Q. Can I reduce my fertilizer applications if I use K-HUMATE® 26?

- A. In order to secure the full potential of the crop, it is better to keep the recommended fertilizer rates. Reducing fertilizers will not help sustain the increased plant growth needed to secure a higher crop potential.

Q. How quickly can I expect to see benefits from the use of K-HUMATE® 26?

- A. Better nutrient uptake and plant vigor have been observed within a few weeks and will continue throughout the growing season with regular applications of K-HUMATE® 26 resulting in a higher yield and plant vitality. Effects on physical properties of soils will generally take longer with annual applications.

QUALITY IS CRITICAL!

Q. Why should I buy K-HUMATE® 26?

- A. Omnia stands by their product in terms of quality and humic acid concentration. K-HUMATE® 26 is manufactured in Australia using local resources and raw materials.

GUARANTEED ANALYSIS % (w/w)	
Humic Acid - 20%	Potassium (K ₂ O) - 6%

It is imperative to stick with a reputable company that can provide independent lab analysis of their product

QUALITY ASSURANCE

Omnia Specialities Australia manufactures one of the highest quality and concentrated humic acids in the world. K-HUMATE® 26 is produced in the Latrobe Valley in Gippsland, Victoria, Australia, using only Australian resources and raw materials. K-HUMATE® 26 is internationally recognized for its product quality and proven performance.

AVAILABILITY

K-HUMATE® 26 liquid is available in 5 gallon and 265-gallon totes, bulk tanks and mobile tankers.

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