Chengeta
Crop Care

K Humate

The most concentrated liquid humate available

(26% humic Acid W/V)

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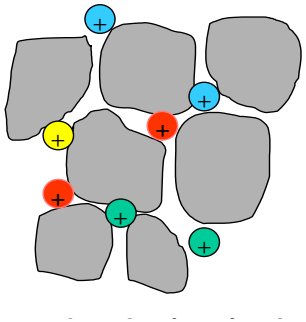
Complexing Ability of Humic Acids

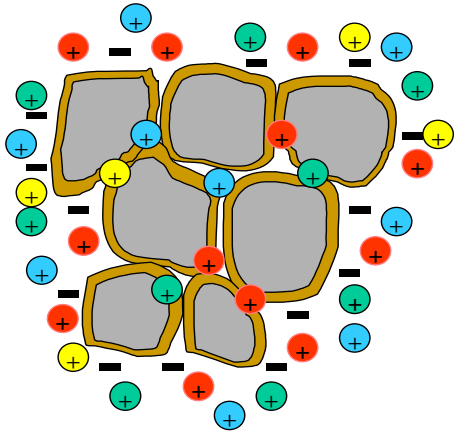
K Humate has 200 – 300 times the ability to hold nutrients than a sand does.

	CEC	unit
Humic acid (K Humate)	**400-600**	**cmol/kg**
Humus	**160-240**	**cmol/kg**
Montmorillonite	**80-120**	**cmol/kg**
Vermiculite	**120-150**	**cmol/kg**
Kaolinite	**1-10**	**cmol/kg**
Sand	**1-2**	**cmol/kg**
Gibbsite and goethite	**100**	**cmol/kg**

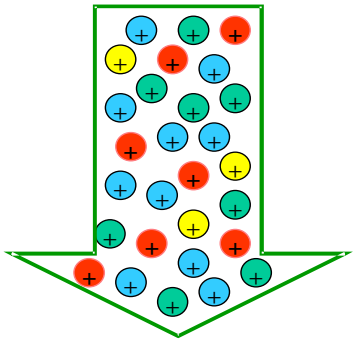
Benefits of a high CEC



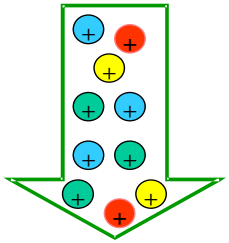
Uncoated fertilizer cannot hold nutrients



Coating with humate provides charged surface to hold nutrients



Large amount of nutrients not held in soil and lost through leaching



More nutrients held in soil – not lost through leaching

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

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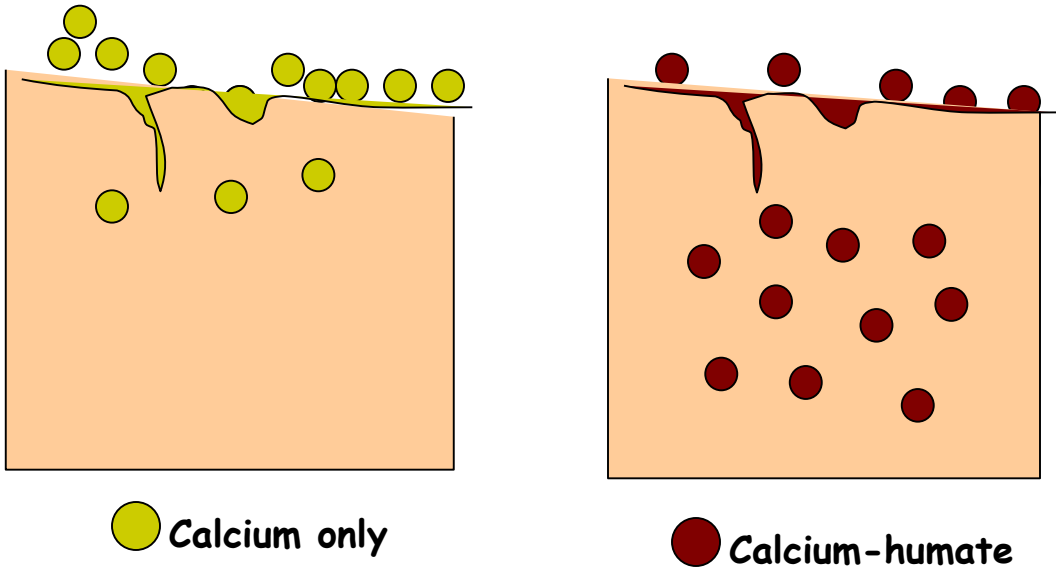
Improved Penetration of Calcium

Monash University
1998



K-humate soil conditioner increases the penetration and retention of calcium in the subsoil and plant root zone where it is most needed. Where K-humate is applied, the calcium concentration in the soil was always greater than the soils without K-humate. This greater calcium concentration in the soil treated with K-humate was evident down to a depth of 16cm.

With permanent crops such as citrus, olives, nuts and vines, the use of K-humate would improve the penetration of calcium down the soil into the root zone and be available for plant uptake. **This means a greater benefit will be gained from applications of lime in terms of quicker response to lime applications and more effective use.**

Calcium is important in promoting plant cell development which will result in healthier plants, greater resistance to diseases and better crop quality.

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Physical Benefits

Khumate™

- Promotes development of **good soil structure**
- Improves **moisture holding capacity** of the soil
- Increases **wettability** of soil
- Increases **soil aeration** and porosity
- Makes soil more friable and crumbly for easier working and plant root penetration

OVERALL

A HEALTHY, MORE FERTILE AND PRODUCTIVE SOIL

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Chemical Benefits

Khumate™

- High CEC **Holds Nutrients available in the root zone.**
- Improves **Calcium Movement** in the soil.
- Increases **Phosphate availability** of soil.
- Hold **Nutrients available** for longer

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Biological Benefits

Khumate™

- Stimulates beneficial **microbial activity** in the soil
- Enhances rate of seed germination and improves viability
- Promotes stronger, more **vigorous roots**
- Provides better **resistance to stress**
- Generally promotes healthier, stronger plants

OVERALL

Improve the microbial activity in the soil, root growth, strong plants

Test Quality

Humates aren't all the same

Each sample was diluted with 500 parts water to compare their concentration.

K-humate remained dark even after dilution with 500 parts of water due to its high humate concentration. K-humate contains in excess of 26% potassium humate.

K-humate

Competition Product

Competition product became clear after dilution with water confirming the product had a very low humate sconcentration compared to K-humate. The product also had a strong ammonia odour indicating that the product had been adulterated with ammonia solution