



« Enhanced efficiency through innovation »



KynoHumate Black

B5217

Name:

Autus Black Humic Acid

Properties (What):

Humic Acid Concentration	15.0 % m/m
Potassium Concentration	3.0 % m/m
Nitrogen Concentration	0.5 % m/m
Appearance	Dark brown to black liquid
pH	10.0 – 12.0
Specific Gravity	1.10 g/cm ³

- Research has shown that humic acids affect plant metabolism with the result that plant growth is enhanced and stress tolerance is increased.
- Humic acids are only soluble in alkali solutions and should not be applied to acidic solutions.

Application (How):

Fertigation	Orchard Crops	Apply a total of 35 – 45 ℓ/ha per season, divided into applications of 5 – 10 ℓ/ha at a time.
	Open Field Vegetables	Apply a total of 25 – 30 ℓ/ha per season, divided into applications of 5 – 10 ℓ/ha at a time.
	Ornamental Plants & Turf	Apply a total of 35-45 ℓ/ha per season, divided into applications of 5 – 10 ℓ/ha at a time.

Benefits (Why):

- Humic acids play an important role in various soil and plant functions, controlling nutrient availability, affecting plant physiology and the composition of micro-organisms in the rhizosphere.
- The promotion of root growth is the most common initial effect humic acids have on growth. They have an auxin-like effect on plants that promotes lateral root development.
- Humic acids complex, mobilize and transport metal ions like Fe and other micronutrients. This includes aluminium in the soil solution and aluminium and iron oxides in the soil, and as a result phosphorus availability is increased.
- Humic acids help plants to tolerate saline conditions by decreasing the amount of sodium absorbed and by protecting cells through increased amino acid concentrations.
- Humic acids are an important component of soil biology. When humic acids are present on root surfaces, their complex structure assists beneficial bacteria to form colonies that provide the roots with nutrients.

Uses (Where):

- Humic acids benefits all crops particularly during the establishment phase and during periods when climatic stress is expected.