

## 1.Product Description

Fulvic acid is completely soluble in water alkaline and acid,with lighter molecular weight and much more active than humic acids and humate. It has black flake, black powder type.

## 2.Main Specification



Appearance	Black Flake	Black Powder
Product code	JFHA-FA-F	JFHA-FA-P
Water solubility	100%	100%
Potassium(K <sub>2</sub> O dry basis)	12.0% min	12.0% min
Fulvic Acid(dry basis)	55.0% min	55.0% min
Moisture	15.0% max	15.0% max
Particle size	1-2mm/2-4mm	/
Fineness	/	80-100mesh
pH	9-10	9-10

## 3.Main Function

### (1). Increase efficiency and increase production volume

Promote the growth of chlorophyll to help photosynthesis, thereby improve the accumulation of sugar, fat and amino acids in plants, promote the growth of plant roots, leaves, increase production volume and improve taste. The fulvic acid product can chelate heavy metals in the soil to avoid being absorbed by the crop. The pesticide Residues and heavy metals are greatly degraded, crop quality will also be greatly enhanced.

### (2). Promote soil nutrient uptake, increase soil fertility, inhibit harmful bacteria.

Increase soil organic matter, improve the soil structure, so that it could to great extent promote the soil buffer capacity. For barren sandy soil, this product maximizes the fixation of easily lost moisture and nutrients, in turn translate into a form that is readily absorbed by plants. In clay soil, this product helps to form a crumb structure to increase its water retention capacity and breathability.

Adjust soil acid and alkali and improve saline alkali soil, fixed nitrogen element, release phosphorus in the soil, promote potassium, calcium, magnesium and sulfur absorption, chelate trace elements thus increase soil fertility. Most plants are optimally grown in a soil environment with a pH range of 5.5 and 7.0, humic acid balances the pH of the soil to make it suitable for plant growth. Fulvic acid can stabilize nitrogen and

release slowly to a large extent. It can release phosphorus immobilized in soil by  $Al^{3+}$  and  $Fe^{3+}$ , meanwhile chelating trace elements to promote its absorption and utilization by plants, and greatly improve soil fertility.

Create a good living environment for beneficial microbial flora while inhibiting harmful germs. This product can directly improve the soil structure to create a good microbial living environment, while these microorganisms react on the soil structure improvement, meanwhile promoting the beneficial bacteria active reproduction and produce different kinds of biological enzymes, which in turn help to build the soft soil structure and improve the combination Capacity and water-holding capacity, known as the natural drought-resistant agent.

**(3). Improve crop resistance to resist bad weather conditions also the impact of pests and diseases, as well as improve their own immunity.**

Greatly increase crop resilience (the adverse effects of abnormal weather conditions on crops), reduce the impact of pest, disease disasters, droughts and floods on crops. Fulvic acid can regulate the opening degree of leaves to reduce the stomatal opening, reduce water transpiration, can mobilize the plant's absorption of potassium ions, promote metabolism, promote respiratory intensity, photosynthesis intensity, and promote plant enzyme activity, thereby improve crop drought resistance, meanwhile Water capacity can be greatly improved to improve plant drought, cold, pest and disease resistance.

**(4). The role of fulvic acid for insecticides, fungicides and herbicides.**

Spraying fulvic acid after spraying the pesticides, fungicides and herbicides, or mix them together, can improve efficacy and degrade the residue.

#### **4.Usage**

- Used as raw materials of the production of humic acid water-soluble fertilizer, it is recommended to add 5-10%.
- Foliar spray: As a foliar spray fertilizer, 15 grams of fulvic acid mixed with 15-30 kg water at concentration of 1: 1000 to 1: 2000 times solution per 665  $m^2$ . Generally totally fertilize 4-5 times in crop seedling, growth, flowering and fruiting time.
- Drip irrigation: Dissolve 1kg fulvic acid evenly into 20kgs water per 665  $m^2$ , pour into fertilizer tank or directly fertilize. Generally fertilize 4-5 times in crop seedling, growth, flowering and fruiting time.
- Soaking, dipping root: Mix fulvic acid with water at a concentration of 1: 2000 (1 part of fulvic acid, 2000 parts of water) solution, soak for 10-24 hours, could suitably shorten the soaking time if the temperature is high.

#### **5.Package**

- 1kg, 5kgs, 10kgs printing aluminium foil bag + 10kgs, 20kgs printing carton box.
- 20kgs/25kg woven/paper bags with inner liner.
- 20kgs/25kg color printing PP/PE bags with inner liner.
- 1MT,1.1MT jumbo bags with discharge hole.
- According to customer requirement.

#### **6. Advantage**

- Superior fulvic leonardite raw materials and further extraction technology. Humic and fulvic are concentrated carbon sources which stabilise and chelate nutrients for improved plant uptake.
- 100% water solubility, fast soluble. Improve water use efficiency. Buffer excess salt and toxicities in water or soil.
- Improve plants drought resistance, cold resistance, disease resistance.
- Anti-drought, anti-cold, anti-disease.
- High content of fulvic acid with small molecular weight and short molecular chain, easy to be absorbed by plants.
- Stimulate beneficial biology.
- Foliar or fertigate.