



Powered By black earth

## Your Liquid Source of Humic Acid

### WHY USE ACTIV12?

#### Ease of Use.

Great application flexibility with liquid humics – irrigation, foliar spray, preplant in-furrow or sidedress applications.

#### When and Where.

Apply your humic acid to your crop when you need it and where you want it.

#### Canadian Source.

From the highest quality, most consistent source of humic, ACTIV12 is high in humic acid but low in ash and heavy metals.



### BENEFITS OF HUMIC ACID / FULVIC ACID



#### BIOLOGY

Provides a food source for soil microbes, increasing their activity in mineralization and crop residue breakdown processes.



#### STRUCTURE

Improves soil tilth and aggregation through improving aeration and water movement in the soil.



#### CHEMISTRY

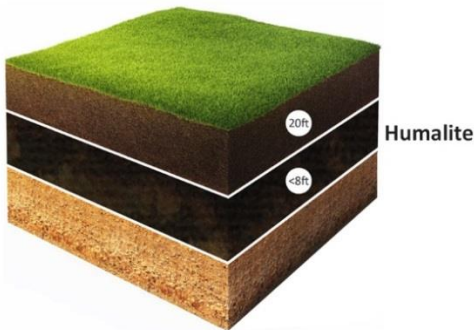
Increases the soil's Cation Exchange Capacity thus improving nutrient availability. Because it is amphoteric (neutralizes), it also impacts pH challenged acidic or alkaline soils, creating a more seed friendly environment, thus improving seed germination and viability.



#### NUTRITION

Creates nutrient bridges and displaces nutrients off of clay through electrostatic charges, making nutrients more plant available.

### WHAT DIFFERENTIATES BLACK EARTH'S HUMICS FROM OTHER HUMIC PRODUCTS?

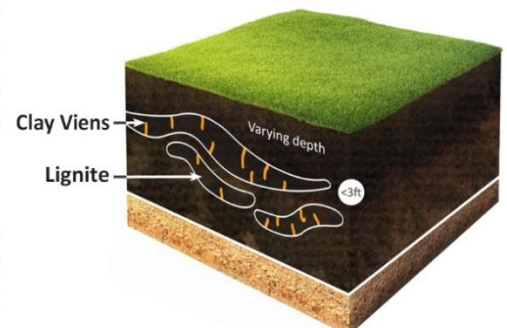


Black Earth Humic is unique because of its source. Mined in Alberta, Canada, our source was developed from flora with a very high nutritional value with freshwater in pre-glacial times. When the glaciers re-ceded, this layer was also exposed to oxygen, transforming it from sub-bituminous coal to weathered sub-bituminous coal, which when now used makes the humic substances much more available.

This layer is also a consistent layer, making it easy to mine and of consistent quality. Because it originated predominantly of plants, it also has low ash and heavy metal content. Because of these unique features, this area's source is technically called, "humalite".

Conversely, most other sources of humic acids come from "leonardite" or "lignite" sources. Because they were developed through salt water deposits and often a mix of flora and fauna sources, they usually naturally have higher ash and heavy metal content than humalite. Their humic and fulvic acid contents are also generally not as high nor as consistent.

Because of how the deposits were formed, they are not in an even strata and can wave into multiple layers, making mining more difficult. Quality and consistency of mined product can therefore vary greatly from geographical location and depth within a mine.



## CROPS & APPLICATION RATES

May be utilized with any crop in any type of soil.

**Irrigation Water:** inject in at rate of 9.35 Litres / Hectare (1 Gal / ac)

**Foliar Spray:** utilize at 9.35 Litres / Hectare (1 Gal / ac)

**Preplant In-Furrow and Sidedress Applications:** apply 5 - 12.5 L per ha (0.5-1.3 US gal per acre) by band or broadcast in tank mixture with or after fertilizer applications

## MIXING & BEST PRACTICES INSTRUCTIONS

- When blending liquid humic products with acidic (low pH) fertilizers, there is potential for precipitation of solids.
- Always conduct a jar test with a liquid fertilizer prior to blending in order to visually evaluate compatibility.
- As a secondary check, filter the blended liquid through a screen of the same mesh size mesh to be used in application conditions.
- It is not uncommon for small amounts of solids to settle out over time. This occurs naturally in true humic products and does not impact the concentration of the liquid.
  - For best results, do not mix solids back into the liquid as this can create issues with screens or orifices. Elevate the spigot valve so in order to leave behind any solids.
  - If desired, sediment can be recovered by adding hot water, agitating vigorously and discharging through large orifice nozzles.

## PRODUCT INFORMATION

### PACKAGING:

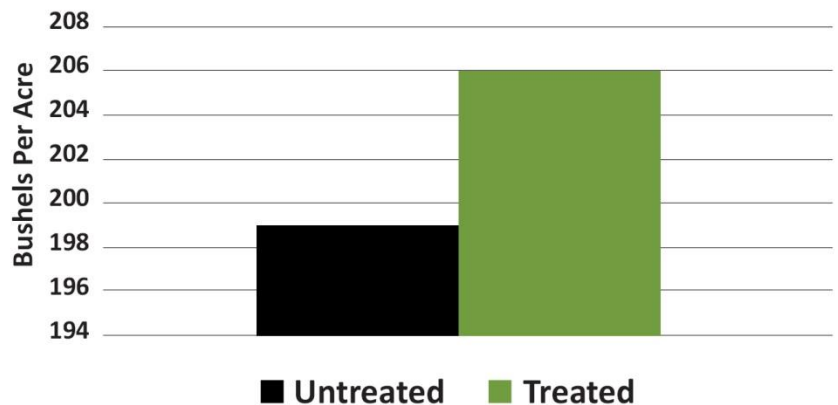
**International:**  
1000L Totes (265 US gal )

**North America:**  
20 L (5 US gal) jugs; 1000 L (265 US gal) totes

### STORAGE:

- Store jugs and totes indoors between 10 and 35 C (50 to 95 F).
- Do not let liquid materials freeze. Humic liquids can undergo some physical separation in cold temperatures (below 4° C or 39° F). If this happens, increase temperature and agitate the product.
- Do not store in direct sunlight.

### Results of 2017 Corn Yield Trials with Black Earth Humics



## TECHNICAL DETAILS

### Content Analysis

PARAMETER	LEVEL
Humic Acid	12%, (Colormetric method)
pH	10
Colour	Black
Type	Liquid
Specific Gravity	1.05

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