



MONTY'S FAMILY OF **HUMICS**

NIGERIA



Healthier Soil. Healthier Crops. Higher Yields.

SUCCESS STARTS WITH HEALTHY SOIL!

The health of your soil will have a significant impact on the quality and quantity of your yield.

Poor imbalanced soil can negatively impact your crops and rob you of yield.

WHAT IS IMBALANCED SOIL?

If you have imbalanced soil it means there is a biological, chemical, and geological imbalance in the soil. Our soils today are NOT as productive as they once were. Weather, insects, erosion, over-production, and high salt products have led to imbalanced soil robbing your yield potential.

Out of balance soil:

- Reduced biological life
- Erosion
- Crusting, cloddy, hard to work soil
- Little or no earthworm activity
- Water logging, poor drainage
- Compacted, poor root systems
- Insect and disease problems
- Poor organic matter decomposition
- High salt
- More fertilizer/chemicals needed
- High weed pressure



Compaction



Minimal Life



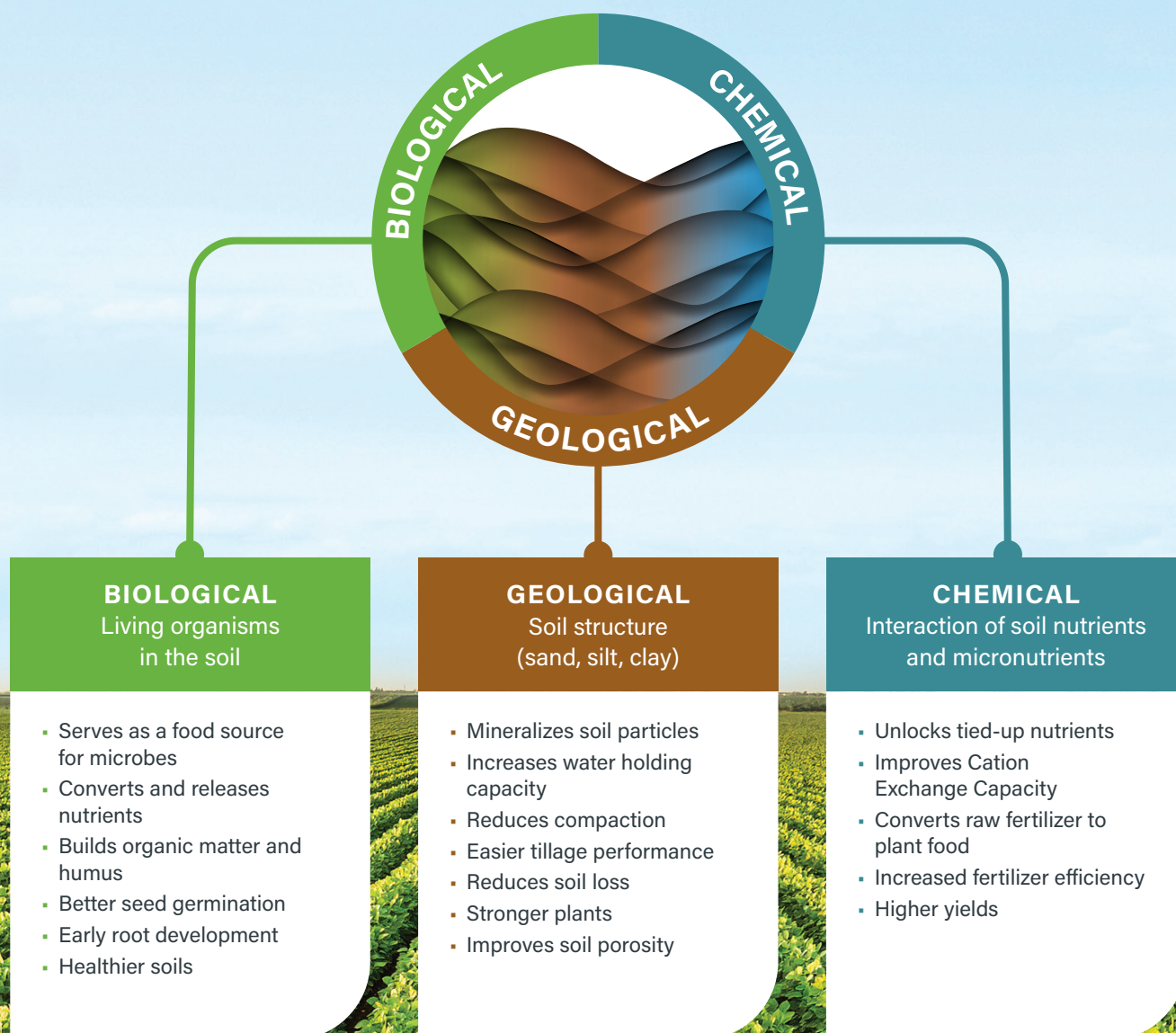
High Salt



Poor Drainage

THE KEY TO SUCCESSFUL ROI IS HEALTHY, BALANCED SOIL.

Three Soil Health Properties



The right humic substances can be the key to addressing this soil imbalance. ► ► ►

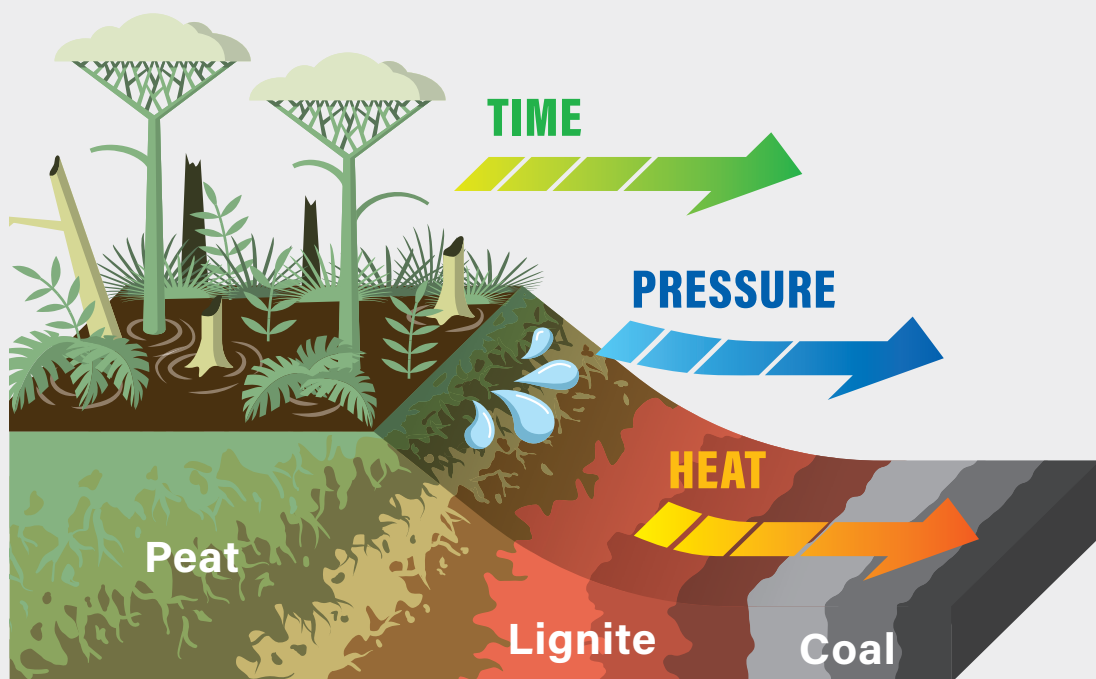
WHAT ARE HUMIC SUBSTANCES?

Humics are the major organic components of soil (humus), peat and coal.

Humic substances are formed by the microbial degradation and decomposition of organic (plant) matter.

The industry-wide standard is to use a variety of starting material like brown coal (Lignite, Leonardite) or peat to extract humic substances. Starting material is crushed, converted to granules, liquefied, and/or pelletized. In this state, it remains an **inactive** and **insoluble** humic product.

1 Decomposed matter (with time, pressure, and heat) forms brown coal



2 Brown coal (Lignite, Leonardite) is mined from the ground



- 3** It is then dried, crushed and screened to form granules
Humics on the market today are mined, dried, crushed (or liquefied), and remain in their natural state.



Composition of Mined Brown Coal (Lignite, Leonardite)

BROWN COAL:

75% of raw brown coal is organic matter

Minerals

ORGANIC MATTER:

Of that 75% organic matter,
80% is humic substances

Other
Compounds

HUMIC SUBSTANCES (HUMIC/FULVIC ACIDS AND HUMIN)

75% is INSOLUBLE
humic substances

Soluble
Humic
Substances

75% of the humic
substances are in their
natural state: **INSOLUBLE**
and biologically inactive.

What does **INSOLUBLE** mean?

Humic products remaining in their natural state are insoluble, meaning they do not dissolve in a water or soil solution, thereby having little impact on the health of the soil. See page 7.

This is where many competitors stop!



Many competitive products are insoluble, inactive, and bio-inhibiting substances. When applied to the field, they have little to no impact on the soil and its biology.

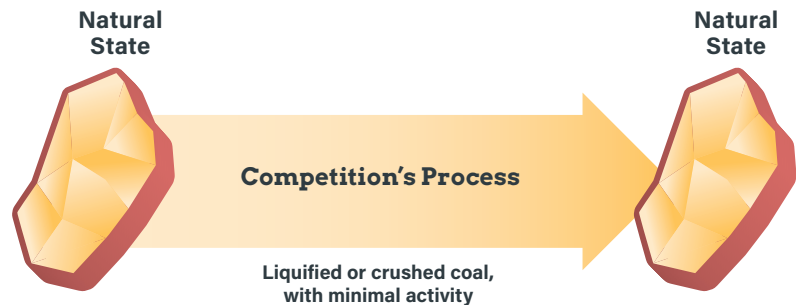


How are Monty's Humics Different? ► ► ►

HOW ARE MONTY'S HUMICS DIFFERENT?

Competition's Process

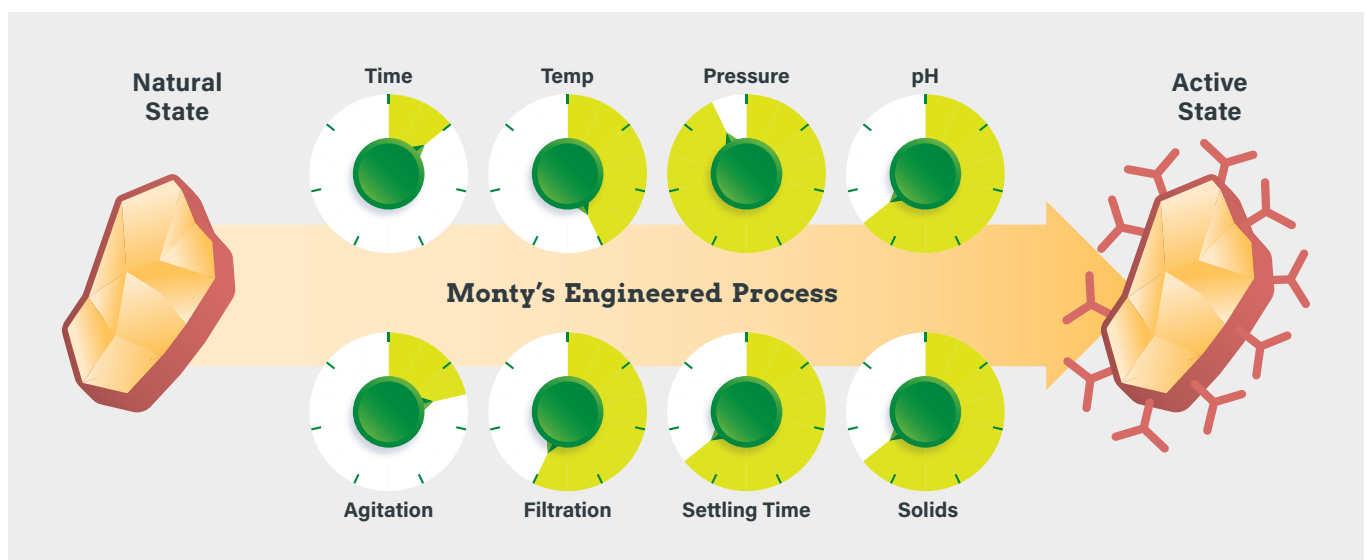
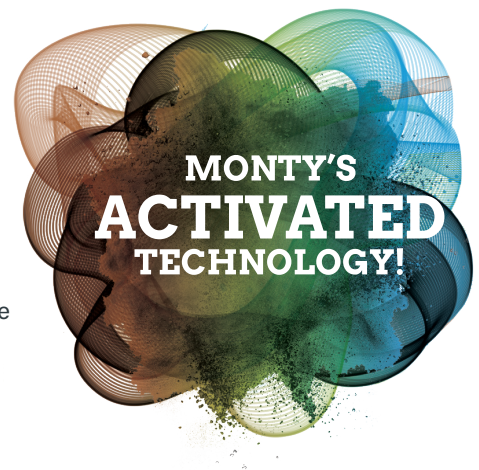
Some competitors process their material with an incorrect combination of chemicals, temperature, and/or other processes. These processes can cause their humics to be bio-inhibitive and significantly less beneficial to the plant and soil.



Monty's Engineered Process

Monty's takes the process even further with our proprietary humic technology. The unique, engineered process converts the inactive humic molecule to an open, activated soluble state.

This proprietary, patented process optimizes pH, temperature, pressure, time, solids, and agitation, creating a chemical reaction, converting humics substance to their active state. This results in a more soluble and biologically active humic product... maximizing efficiency and ultimately maximizing yields.



MONTY'S HUMICS PERFORM BETTER THAN THE REST!



Competition's humic molecule:

- ✗ Insoluble
- ✗ Inactive
- ✗ Less effective
- ✗ Prone to clog
- ✗ Bio-inhibitive



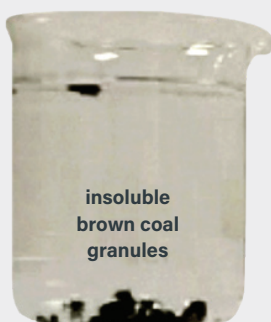
Monty's open, activated humic molecule is now a natural catalyst which is:

- ✓ Highly Soluble
- ✓ Highly Active
- ✓ Highly Effective
- ✓ Reduces Clogging
- ✓ Purest Humic Form
- ✓ Clean Humic Catalyst

Compare Monty's to the competition

The competition's insoluble humics will not dissolve, having little to no impact on the soil.

Monty's activated humics go to work in the soil immediately!



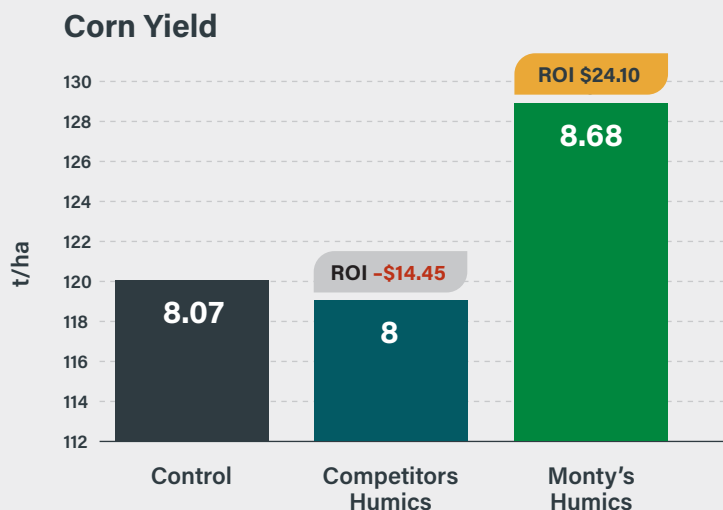
Competition's
Non-activated Humics



Monty's
Activated Humics

Farmers can see a difference in their yield!

Replicated field trials comparing Monty's Humics to the competitor's Humic product. Both applied at 4.68 l/ha in-furrow. Monty's Humics produced .68 t/ha more than the competitor's product, and had an ROI of \$24.10 over the control plot.



How do Monty's humics impact the plant and soil? ► ► ►

HOW DO MONTY'S ACTIVATED HUMICS IMPACT THE PLANT AND SOIL?

Our engineered humics allow for the selection of the optimum molecule size and humic to fulvic ratio for increased solubility and maximum performance.

Monty's engineered humics have the optimum concentration for peak biological, chemical, and geological activity (See page 3). This results in lower dosing rates, higher efficiency, and a wide variety of benefits to the soil and plant.

PHYSICALLY

- ✓ Decreases soil compaction
- ✓ Increases water holding capacity
- ✓ Increases aeration of soils

CHEMICALLY

- ✓ Improves Cation Exchange Capacity (CEC)
- ✓ Buffers soil pH
- ✓ Makes nutrients available to the plant

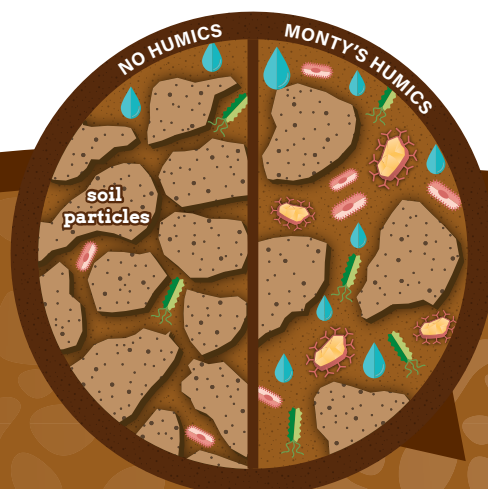
BIOLOGICALLY

- ✓ Acts as catalyst in numerous biological processes
- ✓ Stimulates plant growth
- ✓ Stimulate root growth for increased nutrient uptake
- ✓ Increases soil microbial communities

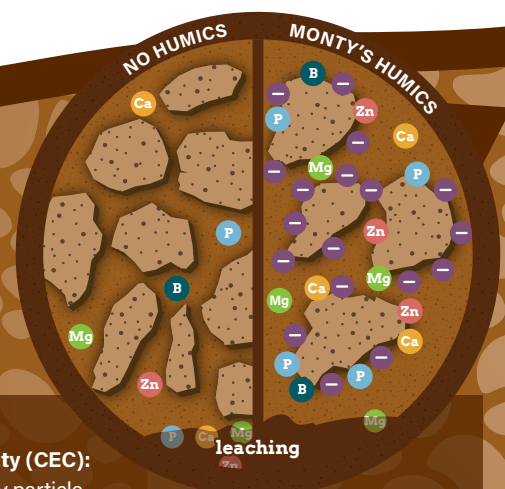
HUMIC SUBSTANCES

HUMIC ACID	FULVIC ACID
High	Low
Molecular Weight	
Low	High
Plant Nutrient Delivery	
High	Low
Soil Amendment Properties	

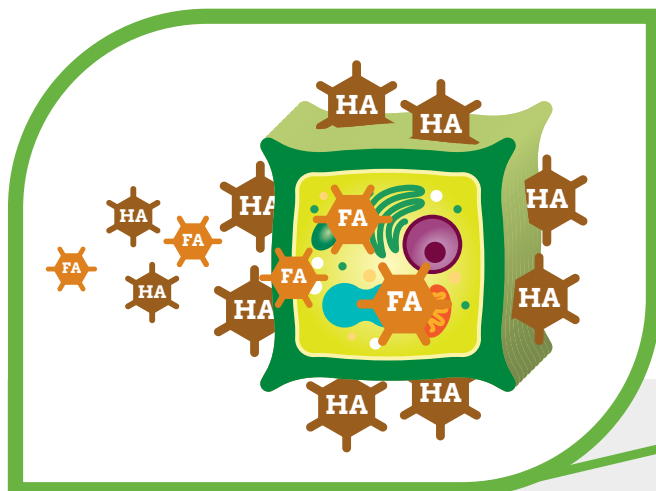
Monty's humics are unique in that we engineer each product with a specific humic acid to fulvic acid ratio dependent on desired functions. Fulvic acids have a lower molecular weight to help drive nutrients into the plant cells. Humic molecules have a higher molecular weight aiding soil microbe stimulation, increasing CEC, and chelating nutrients.



Decreases soil compaction and increases water holding capacity: Humics create space between soil particles allowing for increased water penetration and holding, aerate and increase oxygen content, and create a reservoir for nutrients. These benefits increase soil microbe populations and create an overall healthy soil structure.



Improves Cation Exchange Capacity (CEC): Humics create clay particle complexes which are negatively charged. These complexes bind positively charged (cations) nutrients including Ca, Mg, K, Zn, Cu, Mn, Fe, and B. These nutrients are then released into the soil and delivered to the plant, preventing nutrient leaching.



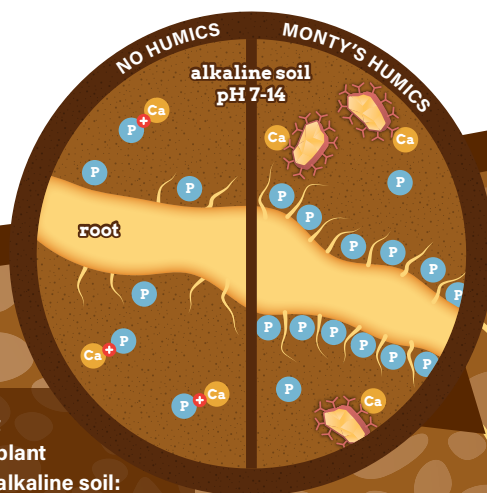
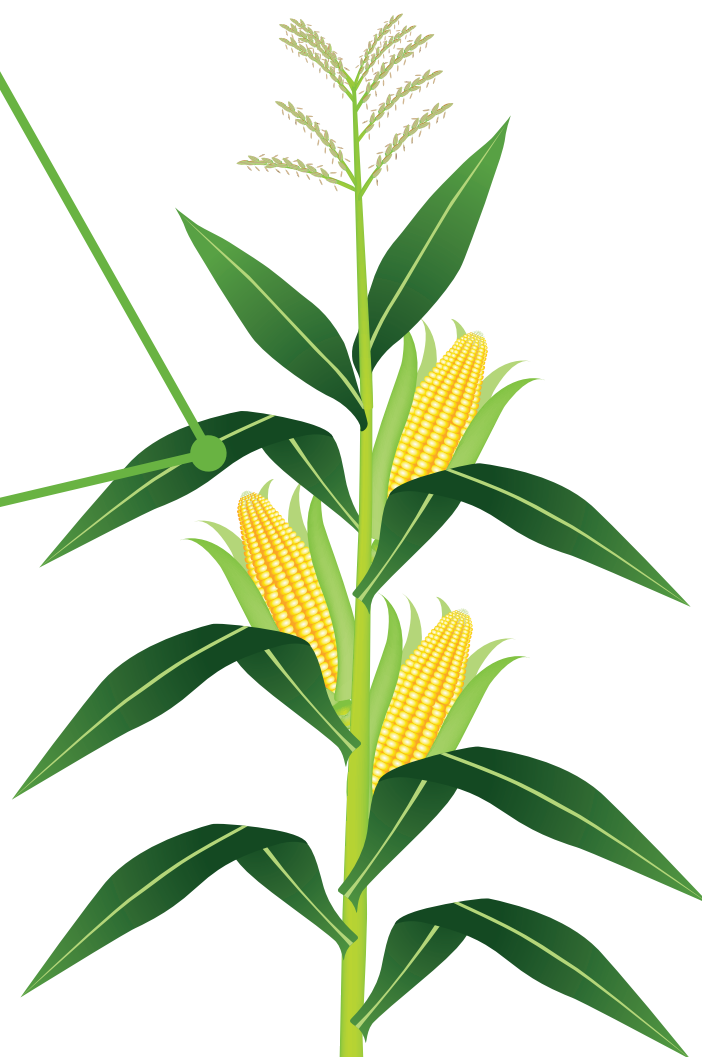
Humic acids are able to:

- ✓ Penetrate cell walls
- ✓ Attach to the outside of the cell membranes
- ✓ Protect the cell from toxins, pathogens and other stressors



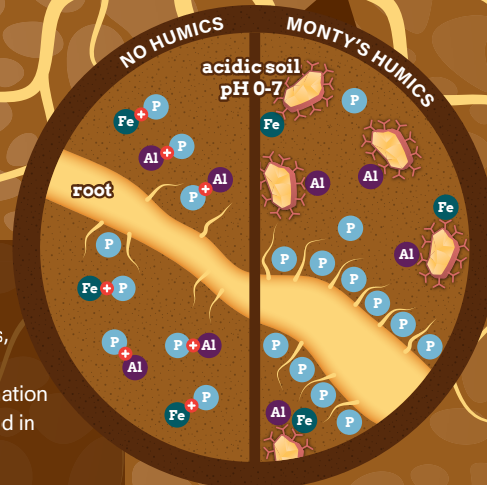
Fulvic acids are able to:

- ✓ Penetrate cell membranes due to their small molecular size
- ✓ Transport nutrients into the cell



Increases nutrient availability to the plant and buffers pH in alkaline soil:

In alkaline soils, calcium is bound with phosphate. Humics form complexes where phosphates are released into the soil along with other nutrients, making them readily available for root uptake. This process neutralizes soil pH.



Increases nutrient availability to the plant and buffers pH in acidic soil: Under acidic conditions, humics bind heavy metals making them immobile, promoting the formation of the clay-humic complexes that aid in neutralizing acidic soil.

Why is Monty's your trusted humics leader? ▶ ▶ ▶

MONTY'S: YOUR TRUSTED HUMICS LEADER

Monty's humics can improve your soil and maximize your yields year after year. Once applied to the soil, our humics technology provides a catalyst that makes everything you apply work better.

✓ PURITY

Highly soluble and clean = No clogging of sprayers, nozzles, or hoses.

✓ ACTIVITY

High efficacy, efficiency, and results = Lower dosing rates and higher yields.

✓ CONCENTRATION

Peak biological, chemical, and geological activity = humic molecules actively perform their function quickly and effectively for maximum performance.

✓ COMPATIBILITY

Tank mixable = Flexibility in mixing with nutrients, fungicides, herbicides, and pesticides.

BALANCED SOIL:

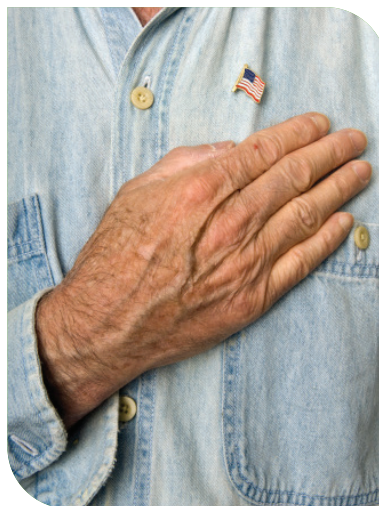
- Active biological life
- Reduced erosion
- Good tilth, loose soil
- Many earthworms
- Increased water intake & retention
- Reduced compaction
- Larger root systems
- Fewer pests & diseases
- Rapid organic matter conversion
- Reduced salt in the soil
- Fewer chemical inputs
- Fewer weeds

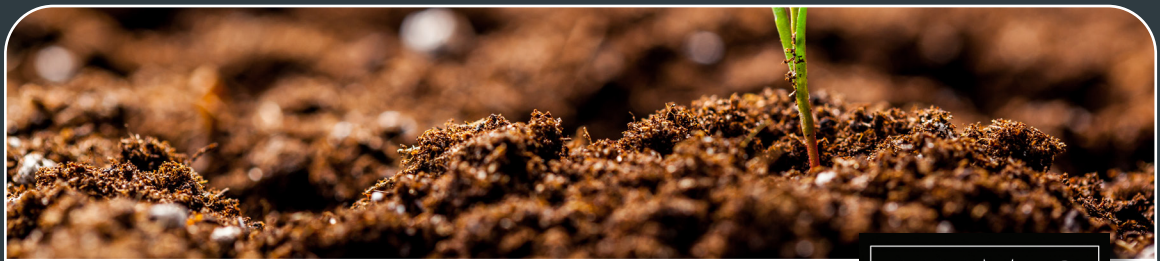
THE TRUTH ABOUT HUMICS

A little dose of truth is all your crops want. The truth...

- Monty's humic technology is proprietary. There is nothing else like it, or proven as effective on the market.
- Monty's highly concentrated formulas allow for lower application rates—providing better value to the producer.
- Monty's humics have been used successfully on soils ranging from heavy clay to light sand.
- Monty's products have a proven track record of improving grower's plants, soil, and increasing their yields since 1985.
- Monty's humics are uniquely designed to meet your farming challenges, focusing on soil health and sustainability.

And that's the truth. Don't be fooled by others who tell you differently. A little dose of truth is all your crops want. Talk to your dealer or Monty's representative, or go to TheTruthAboutHumics.com for more information.





Monty's is a proud member of the Humic Products Trade Association (HPTA). HPTA works to promote commercial trade of Humic Products through scientific cooperation while addressing regulatory issues and is responsible for a new standard for measuring humic substance content in products.



Monty's employs numerous patented processes in its unique humic technology. Monty's liquid humics, dry humics, and humic coating technologies are patented.



Monty's is proud to be involved with...

Agribusiness Industry Network
Agricultural Media Summit
Association of American Plant Food Control Officials (AAPFCO)
Corn Growers' Association
Fertilizers & Supplements Advisory Committee, Canada
FFA
Humic Products Trade Assn (HPTA)

Kentucky Ag Council
Kentucky Agricultural Science and Monitoring Committee (KASMC)
KY Proud
Noble Foundation
NRCS State Technical Committee
Soil Health Initiative
Soybean Growers' Association
Wheat Growers' Association

"We could tell a huge difference in the treated and untreated area of that field the first year. We repeated the test the second year and were blown away. The corn was almost twice as tall and the yield was over 50 bushels more where we applied Monty's Liquid Crabon for just two years."

BEN HUSHON
THE MILL

**"I trust Monty's
products on
every acre."**

BROOKS CARDINAL

National Corn Yield Contest Winner

*As seen on Corn Warriors, The Podfather,
and Live To Farm*



**"I put Monty's
Liquid Carbon with
every application."**

KEVIN KALB

National Corn Yield Contest Winner

*As seen on Corn Warriors and
The Podfather*

**"I work very closely
with Monty's team
to achieve my record
yields!"**

TERRY VISSING

*National Corn Yield
Contest Winner*



WHY IS MONTY'S THE HUMIC LEADER?



The benefits of Monty's activated humic technology:

What are humics?

Humic substances can be broken down into Humic Acids and fulvic acid. Humic Acids is a principal component of humic substances. Humic substances are the major organic constituents of soil (humus), peat, and coal. They are also found in upland streams, lakes, and ocean water. Humic substances are produced by the decomposition of organic matter.

How can humics help me to increase my yield?

Humics stimulate microbial activity in soil, help break up compacted soil, assist in transferring micronutrients from the soil to the plant, enhance water retention, increase seed germination, and improve the breakdown of plant residue.

How can Monty's lower % humic be better than the competition's higher % humic?

Whether its 50%, 25%, or 12.6%, humics in their natural state are insoluble. This means they cannot disperse effectively through the soil profile. Monty's proprietary processing technology makes our product the most active and soluble available. Our humics are more pure and have the ideal humic-to-fulvic ratio to provide for maximum yield and success. We understand the right concentration of humic substances to maximize biological stimulation. This is why our lower concentrations are more effective. This is our advantage.

What are the advantages of using Monty's products throughout the year?

Monty's humic products are continuously working when used throughout the year. Monty's recommended programs can improve your soils and maximize your yields year after year, providing the most cost-effective solution available.

How do you show/know it's active?

Activity is measured in the soil and plants. Soil testing will show the results: reduced soil compaction, improved overall soil health, enhanced micronutrient uptake, and enhanced breakdown of plant residue. Results may include increased root mass, healthier plants and ultimately a higher yield. As an example, a recent study* by North Carolina State University found a 12% average increase in yield over untreated soil.

*NC STATE UNIVERSITY, DEPARTMENT OF CROP SCIENCE, COLLEGE OF AGRICULTURE AND LIFE SCIENCES.

How can you apply two quarts to an acre and get results?

Our proprietary humics are purified and activated, have the correct humic-to-fulvic ratio, and are applied at the optimum humic concentration. Therefore we have a lower rate of application and can achieve greater results by stimulating the soil's natural biology in the most effective way.

Why are you telling me to add carbon, when I have plenty of carbon in my soil?

Carbon has many forms, but stable, organic carbon is our priority. Monty's Liquid Carbon is the product name for our active humic products. Monty's Liquid Carbon contains highly purified and activated humic substances with carbon in their molecular structure. This type of carbon is stable and organic.

Does Monty's activated humic technology work in all soil types?

Yes. Whether you have clay soils and compaction or sandy soils, Monty's Liquid Carbon and Monty's Dri-Carbon can provide benefits to the soil.

How does Monty's humic increase microbial activity?

Humic products increase microbial activity by providing optimum conditions for microbial life and protecting microbes from adverse external conditions.

Do humics increase Cation Exchange Capacity (CEC) in the soil?

Humic substances by themselves have a very high CEC. When added to soil, humic substances stimulate soil organic matter production, which is rich in humus. Humus has a high CEC, which raises CEC levels on the soil test.

How does your cost/acre compare to other humic products?

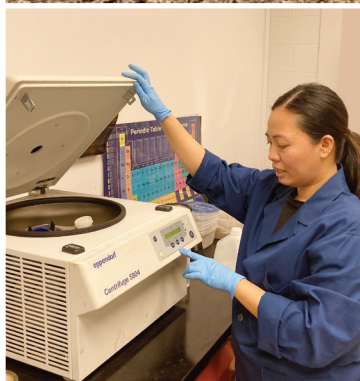
Our cost per acre is generally lower because our humics are purified and activated, have the correct humic-to-fulvic ratio, and are applied at the optimum humic concentration. Although our cost/gallon may be greater, our cost/acre is generally less because of our lower application rates.

Visit www.montysinternational.com for more questions and answers about the impact humics can have on soil and plant health.

TRUSTED ADVISORS. PROVEN SOLUTIONS.

One of Monty's primary goals has always been to help farmers be more successful. We achieve this goal by first testing and evaluating our products through research—both in the lab and on the farm. Next, we take our products to Certified Crop Advisors, agronomists, universities, and growers nationwide for further testing and evaluation. Finally, our progressive products are made available to farmers throughout the country!

Our Trusted Advisors are there for you at every step. No matter the issue, we'll always provide options that fit your needs and provide solutions to your farming challenges.





**TRUSTED ADVISORS.
PROVEN SOLUTIONS.**

www.montysinternational.com

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