

THE ACTIVATED CARBON TECHNOLOGY PLAYBOOK



**GROW MORE WITH LESS.
BUILD A FARM THAT LASTS.**

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A green John Deere combine harvester is shown from a front-three-quarter view, operating in a field of tall, golden-brown grain. The sky is blue with scattered white clouds. The harvester's cab is visible, with a person inside. A black rectangular overlay covers the lower half of the image, containing white text.

1. INTRODUCTION: FARMING SMARTER, NOT HARDER

EVERY ACRE MATTERS. EVERY INPUT DOLLAR MATTERS EVEN MORE. FERTILIZER COSTS RISE, MARGINS TIGHTEN, AND THE NUTRIENTS YOU PAY FOR OFTEN NEVER REACH THE PLANT. AMERICAN FARMERS NEED TOOLS THAT STRETCH EVERY DOLLAR WHILE BUILDING SOIL THAT SUPPORTS LONG-TERM PRODUCTIVITY.

ACTIVATED CARBON TECHNOLOGIES WAS CREATED BY FARMERS AND AG PROFESSIONALS WHO SAW THAT FERTILIZER INEFFICIENCY WAS QUIETLY DRAINING PROFITABILITY. THEY BUILT A BETTER SYSTEM: ONE THAT FREES UP NUTRIENTS ALREADY IN YOUR SOIL, INCREASES UPTAKE, LOWERS FERTILIZER DEPENDENCE, AND STRENGTHENS SOIL HEALTH YEAR AFTER YEAR.



2. THE PROBLEM WITH MODERN FERTILITY SYSTEMS

NUTRIENT TIE-UP

Up to 60% of applied phosphorus and potassium can become chemically tied up in the soil before the plant ever sees it.

SOIL DEGRADATION

Year after year, heavy salt loads, compaction, low organic carbon, and pH imbalance slowly reduce productivity.

RISING COSTS

Commodity fertilizer prices squeeze margins and increase risk.

INEFFICIENT DELIVERY

Even when nutrients are available, plant uptake is often limited by poor structure, weak biological activity, or stressed root systems.

Farmers understandably feel trapped: "Use more fertilizer or lose yield."

Activated Carbon Technology breaks that cycle.



3. WHAT IS ACTIVATED CARBON TECHNOLOGY

Activated Carbon Technology uses a highly refined complex of humic substances extracted through advanced chemical and mechanical processes. The system contains:

HUMIC ACID

Breaks chemical bonds, frees tied-up nutrients, improves ion exchange.

FULVIC ACID

Small, mobile molecules that carry nutrients deep into roots and plant tissue.

HUMIN

A stable, structural carbon that improves water holding, CEC, soil tilth, and compaction resistance.

BIOLOGICAL SYSTEM

A combination of aerobic and anaerobic microbes that accelerate mineralization, residue breakdown, and nutrient cycling.

Rather than treating fertilizer as a one-and-done input, ACT builds a complete nutrient-delivery ecosystem.



4. HOW ACTIVATED CARBON WORKS IN SOIL AND PLANTS

**ACTIVATED CARBON
BLENDS DRIVE
IMPROVEMENTS
ACROSS ALL MAJOR
ASPECTS OF CROP
NUTRITION AND SOIL
HEALTH.**

IMPROVED NUTRIENT AVAILABILITY

Breaks bonds that trap phosphorus, potassium,
and micronutrients.

ENHANCED UPTAKE

Fulvic components carry nutrients through roots and into plant cells more efficiently.

MAXIMUM NUTRIENT PROTECTION

Buffers salts, stabilizes pH zones, and prevents nutrients from being tied up again.

HIGHER SOIL BIOLOGICAL ACTIVITY


Microbes break down residue, mineralize nutrients, and create exchangeable plant food.

BETTER WATER DYNAMICS

Improved infiltration, better holding capacity,
reduced compaction stress.

GREATER STRESS TOLERANCE

Stronger roots, healthier cells, and better nutrient flow help crops withstand heat, drought, and chemical stress.

A green John Deere tractor with two yellow tanks is shown in a field under a blue sky. The tractor is positioned on the left side of the frame, facing right. The background shows a line of trees and a clear sky.

5. THE THREE PILLARS: STRUCTURE, CHEMISTRY, BIOLOGY

Activated Carbon Technology improves all three at once:

STRUCTURE

- Increased root depth
- Reduced compaction
- Greater water infiltration
- Higher water-holding capacity
- Improved tilth and aeration

CHEMISTRY

- Buffers pH
- Neutralizes salt effects
- Frees tied-up nutrients
- Protects nutrients from re-binding
- Improves cation exchange activity

BIOLOGY

- Stimulates microbes
- Accelerates residue breakdown
- Enhances nutrient mineralization
- Increases soil organic activity
- Supports long-term soil health

**A PRODUCTIVE SOIL SYSTEM
REQUIRES ALL THREE. MOST
FERTILITY TOOLS TOUCH
ONLY ONE. ACTIVATED
CARBON TECHNOLOGY
STRENGTHENS ALL THREE
SIMULTANEOUSLY.**



6. PRODUCT LINE OVERVIEW

All ACT products are made in-house and custom-blended to fit the needs of the farm, soil type, and crop.

ACTIVATED CARBON

0-0-5

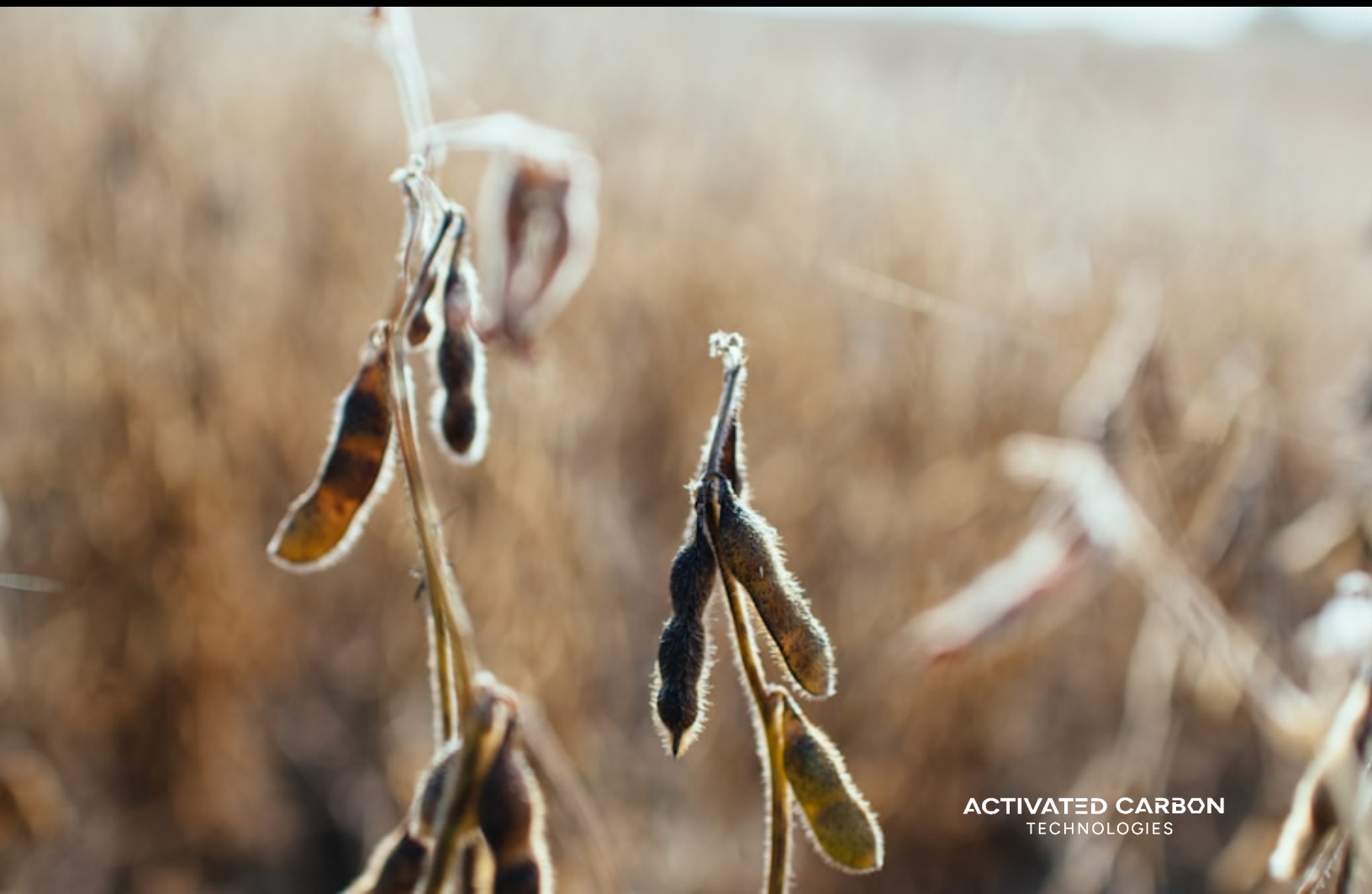
- 26% Activated Carbon Complex
- Carbohydrate/sugar source
- Biological population in solution Use for residue breakdown, improved soil health, and increased nutrient flow.



ACTIVATED P

7-21-2 + 8% AC

- Replaces 22–25 lbs of synthetic P Excellent for root development, early vigor, and reproductive strength.



ACTIVATED K

1-0-22-2 + 8% AC

- Replaces 18–24 lbs of synthetic K Improves stalk strength, water movement, stress tolerance, and grain fill.



ACTIVATED ZNS

3-0-2-4(S)-8(ZN) + 7% AC

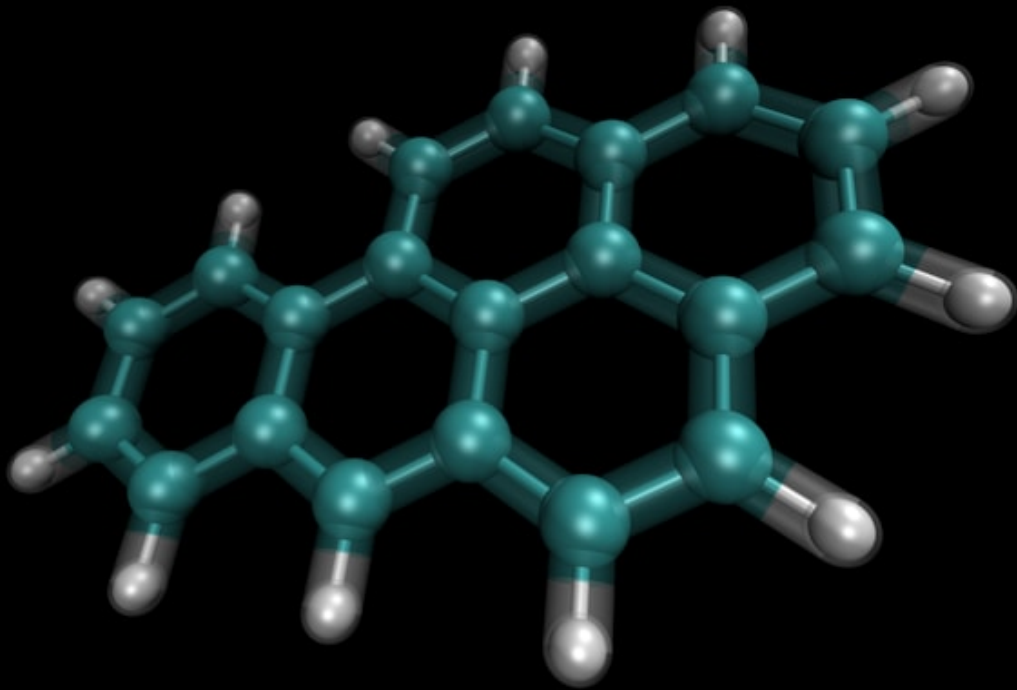
- Equivalent to 8 lbs of Zinc Supports enzyme formation, early root growth, and hormone balance.



ACTIVATED B

0-0-2-7(B) + 6% AC

- Equivalent to 4 lbs of Solubor Improves pollination, seed set, and reproductive success.





7. HOW TO IMPLEMENT ON YOUR FARM

Activated Carbon Technology adapts to any farm and any fertilizer program.

METHOD 1: ADDITIVE

Blend ACT into your existing liquid programs to:

Increase efficiency

Reduce tie-up

Improve plant uptake

Strengthen soil health

This is the easiest transition for most operations.

METHOD 2: PARTIAL REPLACEMENT

Replace a portion of your commodity fertilizers with ACT-powered blends. This typically:

Maintains or improves yield

Reduces total fertilizer cost

Provides more consistent performance

Improves soil conditions season after season

METHOD 3: FULL REPLACEMENT (CUSTOMIZED PROGRAM)

A complete ACT-based fertility plan designed specifically for your soils, crops, and goals. This approach:

Reduces fertilizer waste

Boosts nutrient-use efficiency

Strengthens long-term sustainability

Often lowers per-acre fertility costs



8. REAL-WORLD YIELD RESULTS

These aren't lab tests or 2-acre plots—they're real farmers, full fields, and multiple years.

RICE TRIALS (2-YEAR AVERAGE)

+17 bu/ac (4.73 barrels) using 1–2 gal/acre ACT
NK blend. Proven performance in high-yield
(245+ bu) rice.

MATT MILES – MCGEHEE, ARKANSAS

Custom Blend: 2-4-14-2(S)-.5(B)-.7(Zn) + 7% AC

More than **\$195 per acre** profit gain

Two years running

Adopting ACT across all rice acres in 2025

TODD KENNEDY – TALLULAH, LOUISIANA (CORN)

Full liquid ACT program across 1,800+ acres:

+46 bu/ac gain

\$14/ac fertilizer savings

\$197.08 per acre total profit advantage
Consistent across 18 fields.

A pile of US one hundred dollar bills is scattered on a dark, textured surface. The bills are fanned out, showing various serial numbers and the portrait of Benjamin Franklin. The lighting is warm, highlighting the texture of the paper and the ink. A dark, semi-transparent rectangular box is overlaid on the lower half of the image, containing white text.

9. ECONOMIC ADVANTAGE: EFFICIENCY THAT PAYS YOU BACK

ACTIVATED CARBON TECHNOLOGY IS UP TO 5X MORE EFFICIENT THAN TRADITIONAL FERTILIZERS.

That means:

Higher nutrient return per dollar

Lower total fertilizer dependence

Stronger yield stability

Improved soil for long-term productivity
The most profitable acre is the one that grows
more with fewer inputs. ACT turns that into a
predictable outcome.



10. WHY IT MATTER FOR THE NEXT GENERATION

The goal isn't just higher yields this year. It's building a soil system that produces *better* every year.

Activated Carbon Technology:

Reduces reliance on high-salt fertilizers

Increases organic activity

Builds structural carbon

Strengthens microbial networks

Balances pH naturally

Supports regenerative fertility practices
Farmers are stewards of land that must outlast them. ACT helps make that a reality.

The background features a dark, gradient surface with several 3D question marks. Most are dark grey or black, but one in the lower right is a bright orange. The lighting creates soft shadows, giving the question marks a three-dimensional appearance.

11. FREQUENTLY ASKED QUESTIONS

WILL ACTIVATED CARBON REPLACE ALL MY FERTILIZER?

It can—depending on your goals and program—but many farmers start with partial replacement.

IS IT SAFE TO BLEND WITH COMMODITY FERTILIZERS?

Yes. ACT is compatible with all liquid fertilizers.

DOES IT REALLY REDUCE FERTILIZER COSTS?

Yes. Improved efficiency and reduced tie-up cut total fertilizer dollars while improving yield potential.

IS THIS ORGANIC?

ACT is not certified organic but is extremely low-salt, carbon-based, and environmentally friendly.

HOW FAST WILL I SEE RESULTS?

Typically within the first season—both in crop performance and soil condition improvements.

A person in a dark hoodie stands in a field of tall grass, looking up at a sky with wispy clouds illuminated by a low sun, creating a warm, golden glow.

12. NEXT STEPS

TO BUILD A PROGRAM FOR YOUR FARM.

Brad Benson (Owner) 337-451-9340
Willis Frazer (Regional Manager) 662-645-3282
Brandon Laws (Bus. Development) 970-373-7719

Each farm gets its own customized approach to:

- Increase yield
- Reduce fertilizer dependence
- Improve soil health
- Increase profitability
- Strengthen long-term sustainability

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