

# **THE ACTIVATED CARBON TECHNOLOGY PLAYBOOK**



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

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# **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

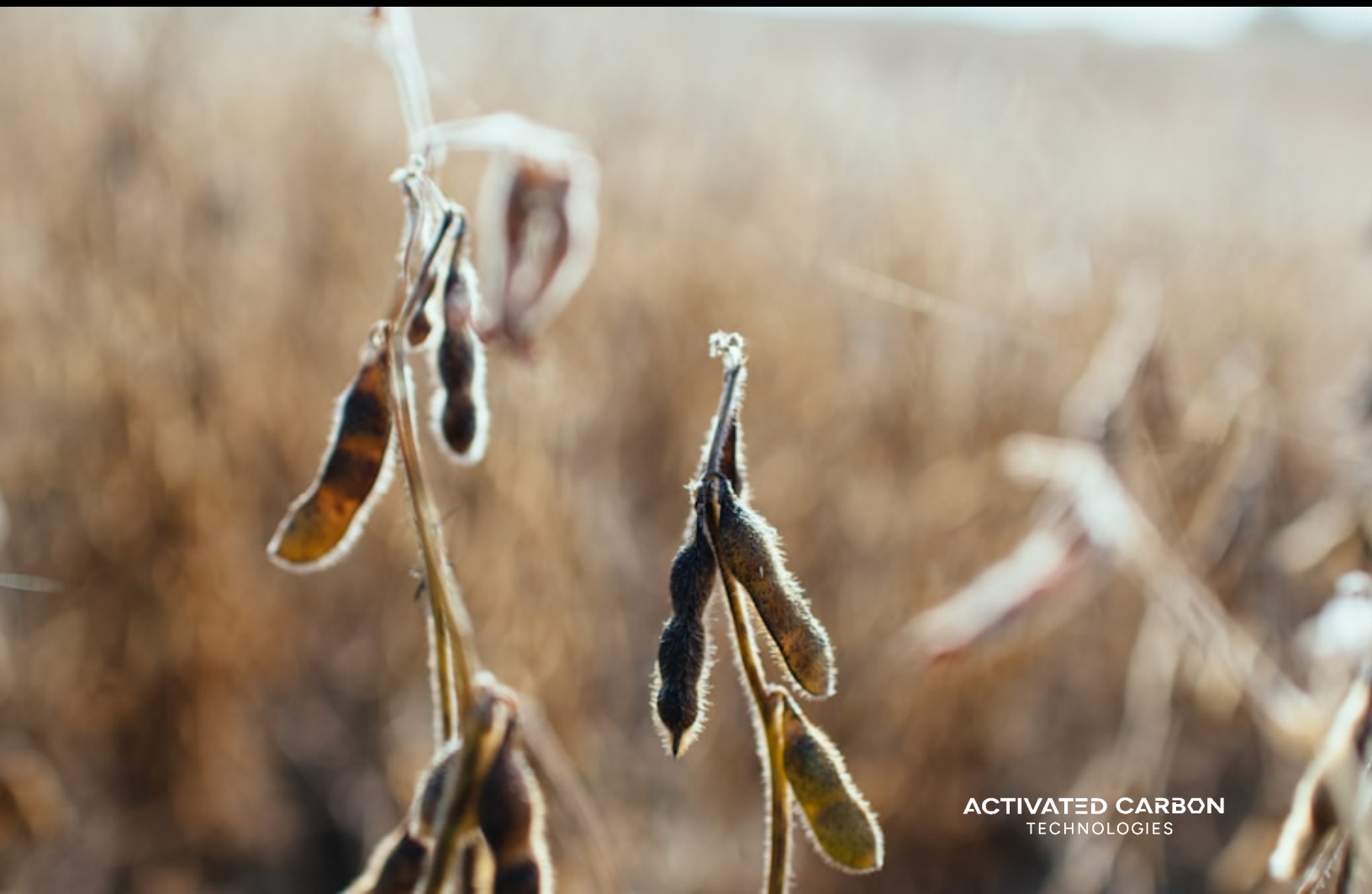
- 26% Activated Carbon Complex
- Carbohydrate/sugar source
- Biological population in solution Use for residue breakdown, improved soil health, and increased nutrient flow.



# 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.

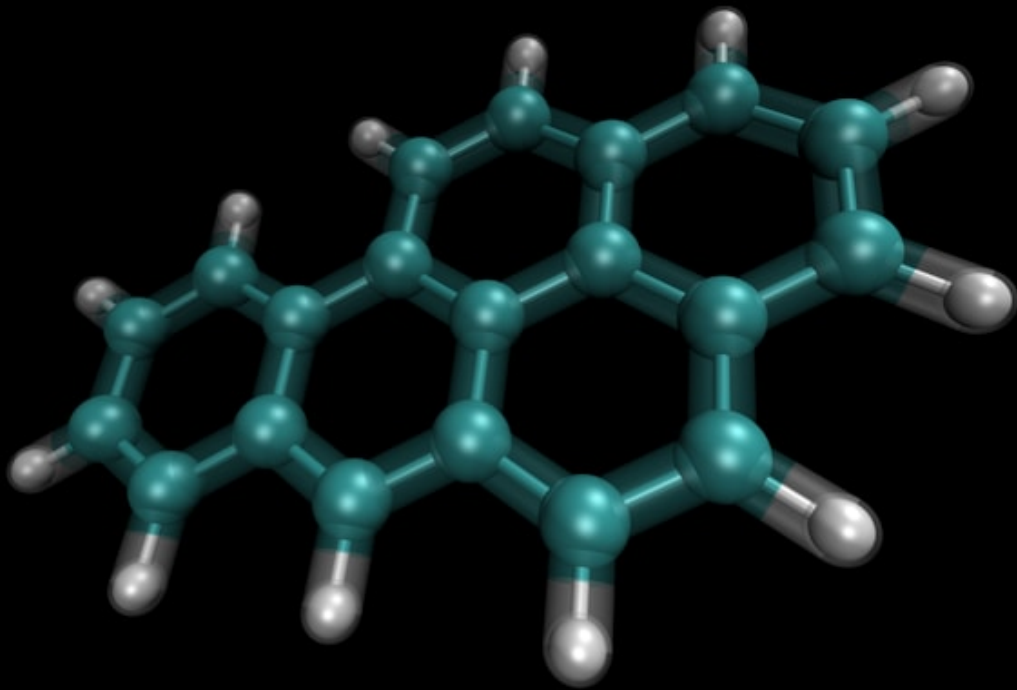




# ACTIVATED B

## 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

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Reduce tie-up

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Improve plant uptake

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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

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Reduces total fertilizer cost

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Provides more consistent performance

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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

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Boosts nutrient-use efficiency

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Strengthens long-term sustainability

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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

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Two years running

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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**

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**\$14/ac fertilizer savings**

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**\$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

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Lower total fertilizer dependence

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Stronger yield stability

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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

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Increases organic activity

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Builds structural carbon

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Strengthens microbial networks

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Balances pH naturally

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

The background of the page features a dark, textured surface with several 3D question marks. Most are dark grey or black, but one question mark in the lower right quadrant is a vibrant 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 orange and pink 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

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Each farm gets its own customized approach to:

Increase yield

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Reduce fertilizer dependence

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Improve soil health

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Increase profitability

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Strengthen long-term sustainability

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