



# HIGH YIELD PROGRAM

A Guide to Growing  
High Yield Crops



# What Makes a Successful High Yield Program?

High-yield farming is the fastest-growing trend in agriculture – literally. Growers who utilize high-yield programs consistently see more than 300 bushels of corn per acre – with some producing over 400 bushels – and soybean growers are harvesting more than 100 bushels per acre!

The “building blocks” to high-yield programs are not new – attention to plant and soil health, growing conditions, nutrient needs, and that ever-important element, timing. But high-yield growing applies these principles in new, science-based programs that are producing record yields and ROI; and producing them sustainably across the entire U.S.

You too can join the ranks of high-yield farmers. Finding the right partner is the key to maximizing your success. Our team of experienced, trusted advisors can help you meet your high-yield goals by utilizing Monty’s High Yield programs which offer ideal combinations of sustainable products and science-based application programs.

High-yield farming is still evolving. It may require a change in thinking, along with some changes in planting equipment and more attention during the growing season. Let Monty’s trusted advisors and proven solutions help guide you through these changes on your way to becoming a successful high yield grower... and higher ROI. And as a growing number of farmers across the country will testify, it’s more than worth the investment.

## What Does High Yield Success Look Like?

**Kevin Kalb**  
**400+ bu/ac**  
**Corn Yield**

**28 NCGA**  
**Members**  
**with 300+**  
**bu/ac**

**NCGA**  
**WINNERS!**  
**5 national**  
**32 Overall**

**29 bu/ac**  
**Corn Yield**  
**Increase**

Top: 2021 NCGA Contest results. Bottom left: 2021 NCGA Contest results. Bottom right: See page 5.

**“I use Monty’s on my corn in row on the seed. I get better germination, more even seed emergence, and better root growth and penetration. I have no mixing problems with anything.”**

*Perry Galloway, NCGA High Yield Grower*



# Liquid fertilizers: The winning solution for high-yield growing.

Giving plants what they need, when they need it is the foundation of high-yield farming. Because nutrient availability and fast uptake is key, most successful high-yield growers now use liquid fertilizers exclusively.

## UNIFORM DELIVERY

In dry fertilizers, individual granules of N, P, K and any other desired minerals, nutrients, or micronutrients are mixed for specific crops and conditions.

But in the field, getting the same combination of dry granules to every plant isn't guaranteed. What's more, nutrients like phosphorus aren't very "mobile" – they don't spread far from the granule they came in.

Because every drop of liquid fertilizer has the same nutrient content, it ensures a "fair share" while helping phosphorus and nutrients like it reach plants' roots.

## FASTER UPTAKE

Dry fertilizer granules need soil microbes and rain to break down into a form plants' roots can absorb.

But liquid fertilizer minerals and nutrients hit the ground in a form roots can latch onto immediately and use right away.

Depending on application method, liquid delivers pinpoint accuracy – exactly the right combination of nutrients, directly to the seed/plants. So there's less waste, and greater efficiency, too.

## LOWER SALTS

All fertilizers contain salt. Some have higher concentrations than others; dry fertilizers usually have the highest. Over time, high-salt granular fertilizer creates buildup that makes soil far less hospitable to plants. If you're using more dry fertilizer every year, check your soil-salt index. Quality liquid fertilizers contain less salt, thus mitigating buildup.

## SOIL RESTORATION

A liquid mix with soil-health enhancers is an easy, affordable way to restore the health of your soil as you fertilize. The activated humics and sugars in Monty's low-salt liquid fertilizers stimulate soil microbes, helping soil biology recover from high-salt dry fertilizers.

## COST ADVANTAGES

As dry fertilizer costs reach new highs, manufacturing efficiencies have brought liquid fertilizer prices down. Factor in less waste, faster uptake and more efficient application, and you'll likely find liquids far more cost-effective than dry fertilizers.

## Recommended Liquid Application Methods



✓ **Foliar:** Applying liquid fertilizer directly to the leaves as opposed to in the soil. The absorption takes place through their stomata and their epidermis.



✓ **In-Furrow:** Applying fertilizer and micronutrients inside the seed furrow helps protect the seed at a critical stage in the growth cycle. In-furrow applications commonly apply fungicides, insecticides, micronutrients, plant growth regulators and biologicals.



✓ **2x2x2 (Pop-Up, Starter, or Side by Side):** 2x2x2 is where the fertilizer is placed 2" to each side and 2" below the seed. It provides fertility in less-than-ideal environments, and in salt sensitive crops. 2x2x2 generally result in faster early crop development.



✓ **Y-Drop:** Y-Drop is a sprayer system that delivers N solution directly to the soil surface. Y-drop is a versatile nutrient placement system that can offer flexibility in timing of N application and is ideal for improving nitrogen efficiency.

# High Yield Corn

## Monty's Step-By-Step Process for Maximizing Your Corn Yield

**STEP 1**

### Pre-Plant (Broadcast)

Apply 1 gallon/ac of **Monty's Liquid Carbon** and **Agri-Sweet FG**. Can be applied with all herbicide

*This application is designed to: Improve soil health • Decrease nutrient loss • Reduce fertilizer salt toxicity • Not harm soil microbes • Increase moisture retention • Quickly and efficiently provide nutrient management benefits without inhibiting the activity of the soil's natural bacteria*

For additional benefit, apply **Humihance** (fertilizer coating) at 1/2 gallon/ton on the fertilizer.

**STEP 2**

### Planting (In-Furrow or 2x2x2)

Apply 1 gallon/ac of **Monty's Liquid Carbon** and **Agri-Sweet FG** to increase germination, microbial activity and root development.

*This application is designed to: Improve soil health • Reduce fertilizer salt toxicity • Enhance release of soil nutrients through microbial activity • Increase moisture retention • Promote early root development, plant stamina, and overall plant health*

For additional benefit, apply **9-24-3** at 1 gallon/ac (in-furrow), **Zinc** at 2 quarts/ac, and **Multiplicity** at 1 pint/ac.

**STEP 3**

### Vegetative, V4-V6 (First Y-Drop and/or Foliar)

Apply 1 gallon/ac of **Monty's Liquid Carbon**, **Agri-Sweet FG**, and **Boron**. Can be applied with herbicides and fungicides.

*This application is designed to: Work synergistically to improve efficiency • Buffer the salt from the Nitrogen, preventing burn • Increase efficiency of UAN by stabilizing it in the soil • Increase uptake of Nitrogen*

For additional benefit, apply **Zinc** at 2 quarts/ac.

**STEP 4**

### Reproductive, V8-V10 (Second Y-Drop and/or Foliar)

Apply 1 gallon/ac of **Monty's Liquid Carbon**, **Agri-Sweet FG**, and **Boron** when Y-dropping and/or foliar. Can be applied with fungicides and insecticides.

*This application is designed to: Work synergistically to improve efficiency • Buffer the salt from the Nitrogen, preventing burn • Increase efficiency of UAN by stabilizing it in the soil • Increase uptake of Nitrogen*

For additional benefit apply **Zinc** at 2 quarts/ac.

**STEP 5**

### Tasseling (Foliar)

Apply 2 quarts/ac of **Surge XD** and **Agri-Sweet FG**. Can be applied with fungicides and insecticides.

*This application is designed to: Drive nutrients into the plant for increased performance • Provide energy to the plant entering reproductive stage • Work synergistically to improve efficiency*

For additional benefit, apply **Micronutrients** as needed based on tissue testing results.

**STEP 6**

### Post Harvest (After-Season Management)

Apply 1 gallon/ac of **Humi-Till**. Or apply 1 gallon/ac each of **Monty's Liquid Carbon** and **Agri-Sweet FG**.

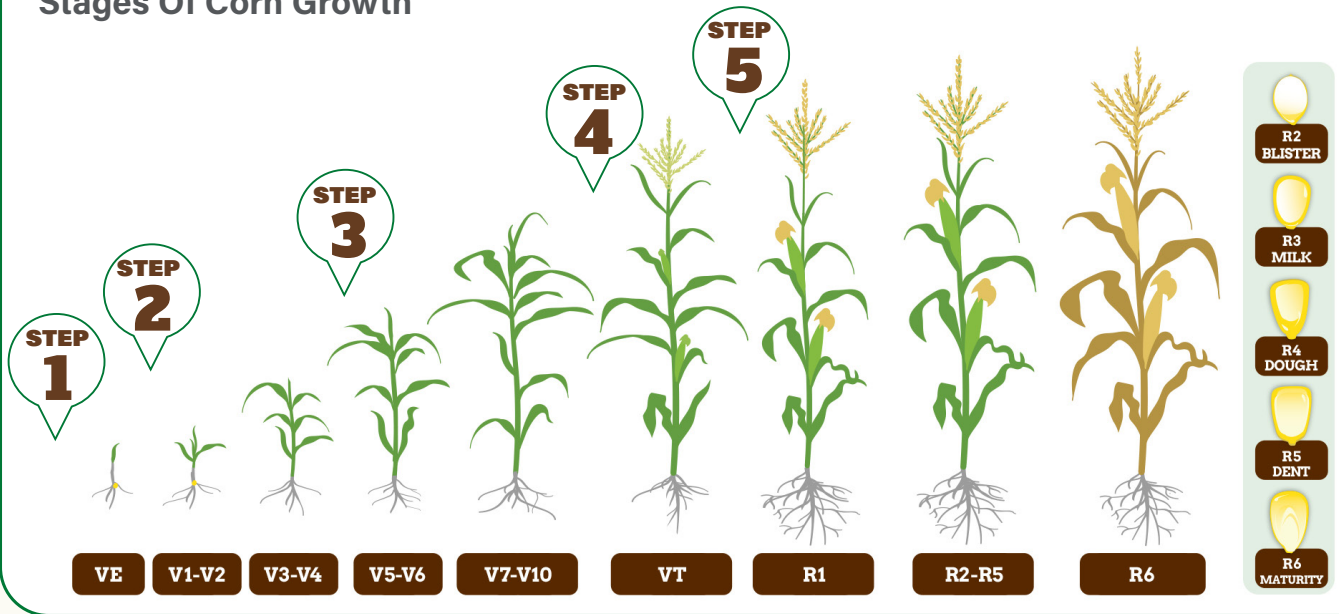
*This application is designed to: Leverage the synergistic interaction between humic and bacterial sources, fortifying the beneficial impact on soil and plant health, crop productivity, and after-season crop residue management*

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

TERRY VISSING, NCGA High Yield Grower

*Monty's High Yield Programs' product and application rate recommendations are intended to serve as a base to achieving your high yield goals. We recommend that soil tests be done prior to planting new crops. In subsequent years, you should take soil tests, along with petiole samples, to determine nutrient levels. Additional products, product substitutions, and/or adjustments to application rates may be necessary based on soil test results, weather conditions, and insect/disease pressure for nutrient and stress management. Consult your Monty's representative for guidance.*

## Stages Of Corn Growth



### Corn: High Yield

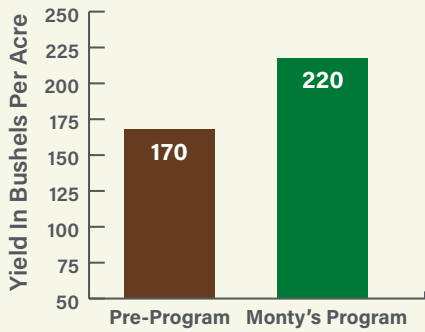


Figure 1

### Corn: Soil Organic Matter

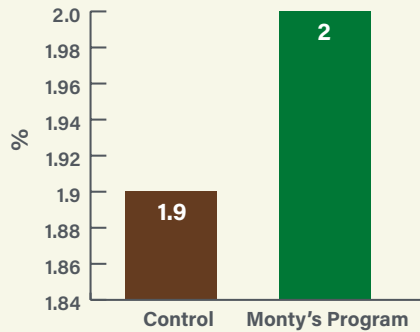


Figure 2

### Corn: Plant Biomass

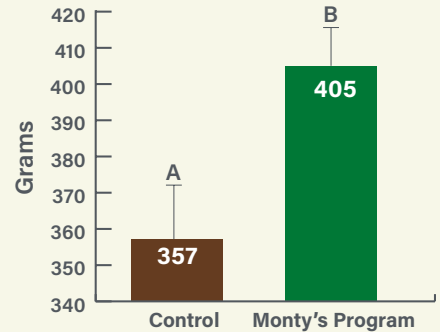
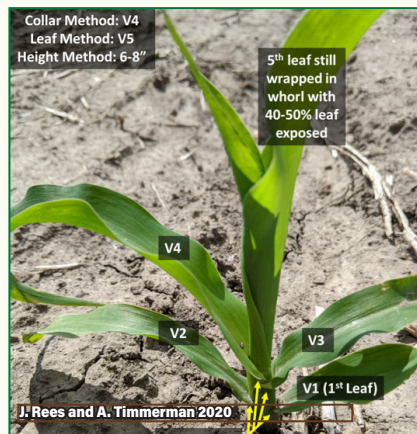


Figure 3

Figure 1: Trial data reflects a **50 bu/ac increase** with Monty's program - **an increase of 29.4%**. Figure 2: At harvest, the Monty's program significantly increased soil OM. Figure 3: Plant biomass in grams at V10 stage - **an increase of 14%**. Letters above bars that are different represent statistical significance at a p-value of 0.10.



Left: Monty's root mass (left) vs Control (right). Middle: Identifying the correct growth stage is crucial for best fertilization applications timings. Right: Root mass with Monty's program.

# High Yield Soybeans

## Monty's Step-By-Step Process for Maximizing Your Soybean Yield

**STEP  
1**

### **Pre-Plant** (Broadcast)

Apply 1 gallon/ac of **Monty's Liquid Carbon** and **Agri-Sweet FG**. Can be applied with all herbicide

*This application is designed to: Improve soil health • Decrease nutrient loss • Reduce fertilizer salt toxicity • Not harm soil microbes • Increase moisture retention • Quickly and efficiently provide nutrient management benefits without inhibiting the activity of the soil's natural bacteria*

For additional benefit, apply **Humihance** (fertilizer coating) at 1/2 gallon/ton on the fertilizer.

**STEP  
2**

### **Planting** (In-Furrow and/or 2x2x2)

Apply 1 gallon/ac of **Monty's Liquid Carbon** and **Agri-Sweet FG** to increase germination, microbial activity and root development.

*This application is designed to: Improve soil health • Reduce fertilizer salt toxicity • Enhance release of soil nutrients through microbial activity • Increase moisture retention • Promote early root development, plant stamina, and overall plant health*

For additional benefit, apply **9-24-3** at 1 gallon/ac (in-furrow), **Zinc** at 2 quarts/ac, and **Multiplicity** at 1 pint/ac.

**STEP  
3**

### **Vegetative, V4-V6, Tri-Foliate** (First Y-Drop and/or Foliar)

Apply 1 gallon/ac of **Monty's Liquid Carbon**, **Agri-Sweet FG**, and **Boron**. Can be applied with herbicides and fungicides.

*This application is designed to: Work synergistically to improve efficiency • Buffer the salt from the Nitrogen, preventing burn • Increase efficiency of UAN by stabilizing it in the soil • Increase uptake of Nitrogen*

For additional benefit, apply **Zinc** at 2 quarts/ac.

**STEP  
4**

### **Reproductive, R1-R3** (Second Y-Drop and/or Foliar)

Apply 1 gallon/ac of **Monty's Liquid Carbon**, **Agri-Sweet FG**, and **Boron** when Y-dropping and/or foliar. Can be applied with fungicides and insecticides.

*This application is designed to: Work synergistically to improve efficiency • Buffer the salt from the Nitrogen, preventing burn • Increase efficiency of UAN by stabilizing it in the soil • Increase uptake of Nitrogen*

For additional benefit apply **Zinc** at 2 quarts/ac.

**STEP  
5**

### **Reproductive, R4-R6** (Foliar)

Apply 2 quarts/ac of **Surge XD** and **Agri-Sweet FG**. Can be applied with fungicides and insecticides.

*This application is designed to: Drive nutrients into the plant for increased performance • Provide energy to the plant entering reproductive stage • Work synergistically to improve efficiency*

For additional benefit, apply **Micronutrients** as needed based on tissue testing results.

**STEP  
6**

### **Post Harvest** (After-Season Management)

Apply 1 gallon/ac of **Humi-Till**. Or apply 1 gallon/ac each of **Monty's Liquid Carbon** and **Agri-Sweet FG**.

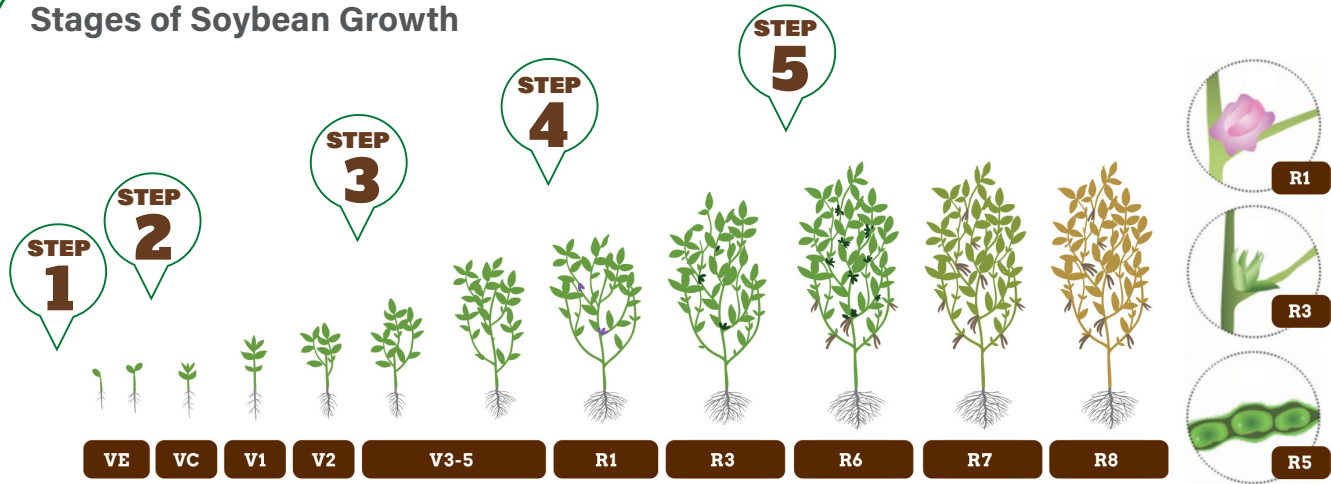
*This application is designed to: Leverage the synergistic interaction between humic and bacterial sources, fortifying the beneficial impact on soil and plant health, crop productivity, and after-season crop residue management*

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

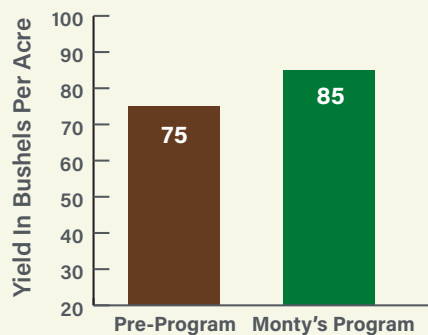
*Brooks Cardinal, National Corn Yield Contest Winner  
as seen on Corn Warriors and Live To Farm*

*Monty's High Yield Programs' product and application rate recommendations are intended to serve as a base to achieving your high yield goals. We recommend that soil tests be done prior to planting new crops. In subsequent years, you should take soil tests, along with petiole samples, to determine nutrient levels. Additional products, product substitutions, and/or adjustments to application rates may be necessary based on soil test results, weather conditions, and insect/disease pressure for nutrient and stress management. Consult your Monty's representative for guidance.*

## Stages of Soybean Growth



### Soybean: High Yield



Trial: Data above reflects a 10 bu/ac increase with Monty's program - **an increase of 13.3%.**

#### Things To Know

- ✓ For optimum soybean growth, soil pH should be between 6 and 6.5.
- ✓ High yielding beans remove substantial nutrients from the soil, more so compared to wheat, corn and sorghum.

#### Practices To Enhance Nodes/Plant

- ✓ **PLANT EARLY** - Grow vegetatively for a longer period of time.
- ✓ **SELECT THE RIGHT MATURITY** - Flower as close to solstice as possible.
- ✓ **SEEDING/ROW SPACING** - Higher seeding rate and narrower rows.
- ✓ **QUICK EMERGENCE** - Focus on starters, seed treatments. Use of humic acid + micronutrients can improve germination. Potential yield increase with starter fertilizer when moderated by Monty's Liquid Carbon.
- ✓ **AVOID HERBICIDE/ENVIRONMENTAL DAMAGE** - remediate problems quickly, particularly for earlier maturing varieties.
  - Early planting invites cool/wet stress
  - Earlier maturing varieties slow/stop growth under stress
  - Double-crop often planted in dry conditions

Ron Heiniger, Vernon G. James Research Center, North Carolina State University 2023



Figure 1



Figure 2



Figure 3

Figure 1: A soybean field in north Georgia outside of Cleveland. 2 qts MLC were used at planting. 1 qt K28 and 1 qt Microhance applied at 1' tall stage. Beans are approximately 30" tall. Very thick stand. Figures 2 & 3: Kevin Kalb, 14-Time NCGA Winner and current star of Live To Farm, reviewing the status of his soybeans as part of his Monty's-based program.

# High Yield Wheat

## Monty's Step-By-Step Process for Maximizing Your Wheat Yield

**STEP  
1**

### **Pre-Plant** (Broadcast)

Apply 1 gallon/ac of **Monty's Liquid Carbon** and **Agri-Sweet FG**. Can be applied with all herbicides.

*This application is designed to: Improve soil health • Decrease nutrient loss • Reduce fertilizer salt toxicity • Not harm soil microbes • Increase tiller development • Increase moisture retention*

For additional benefit, apply **Humihance** (fertilizer coating) at 1/2 gallon/ton on the fertilizer.

**STEP  
2**

### **Planting** (In-Furrow, 2x2x2, or Drilling)

Apply 1 gallon/ac of **Monty's Liquid Carbon** and **Agri-Sweet FG** to increase germination, microbial activity, and tillering. Broadcast if not using planter.

*This application is designed to: Improve soil health • Reduce fertilizer salt toxicity • Enhance release of soil nutrients through microbial activity • Increase tiller development • Increase moisture retention*

For additional benefit, apply **9-24-3** at 1-3 gallons/ac, **Zinc** at 2 quarts/ac, and **Multiplicity** at 1 pint/ac.

**STEP  
3**

### **Feekes, V4-V6** (First Y-Drop)

Apply 1 gallon/ac of **Monty's Liquid Carbon**, **Agri-Sweet FG**, and **Boron** for split application of Nitrogen when coming out of winter vernalization period, for increased plant development and yield potential.

*This application is designed to: Work synergistically to improve their efficiency • Buffer the salt from the Nitrogen, preventing burn • Increase efficiency of UAN by stabilizing it in the soil • Increase uptake of Nitrogen*

For additional benefit, apply **Zinc** at 2 quarts/ac and **9-24-3** at 1 gallon/ac.

**STEP  
4**

### **Feekes, V8-V10** (Second Y-Drop)

Apply 1 gallon/ac of **Monty's Liquid Carbon**, **Agri-Sweet FG**, and **Microhance** for second application of Nitrogen, between flag leaf and jointing for increased plant development and maximum yield potential.

*This application is designed to: Work synergistically to improve their efficiency • Buffer the salt from the Nitrogen, preventing burn • Increase efficiency of UAN by stabilizing it in the soil • Increase uptake of Nitrogen*

For additional benefit, apply **Zinc** and **K28** at 2 quarts/ac.

**STEP  
5**

### **Feekes 10.1 – 10.5** (Foliar)

Apply 2 quarts/ac of **Surge XD**, **Agri-Sweet FG**, and **K28** at head emergence for maximum yield potential. Can be applied with fungicides and insecticides. Drives nutrients into the plant for increased performance

*This application is designed to: Provide energy to the plant entering reproductive stage • Work synergistically to improve efficiency • Provide much needed potash for seed development (K28)*

For additional benefit, apply **Micronutrients** based on tissue testing results.

**STEP  
6**

### **Post Harvest/Double-Crop Beans** (After-Season Management)

Apply 1 gallon/ac of **Humi-Till**. Or apply 1 gallon/ac each of **Monty's Liquid Carbon** and **Agri-Sweet FG**.

*This application is designed to: Leverage the synergistic interaction between humic and bacterial sources, fortifying the beneficial impact on soil and plant health, crop productivity, and after-season crop residue management*

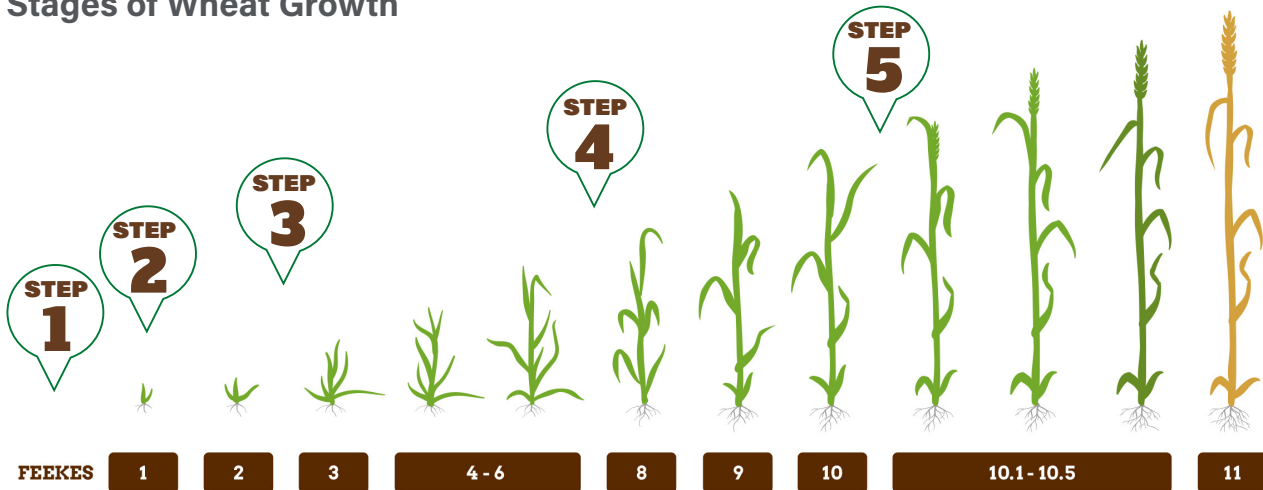
**"I would not have the success I've had without Monty's Liquid Carbon."**

KEVIN KALB, 14-Time National Corn Yield Winner, Corn Warrior, & MACC Group Founder

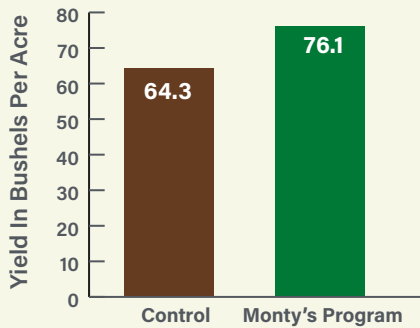
Monty's High Yield Programs' product and application rate recommendations are intended to serve as a base to achieving your high yield goals. We recommend that soil tests be done prior to planting new crops. In subsequent years, you should take soil tests, along with petiole samples, to determine nutrient levels. Additional products, product substitutions, and/or adjustments to application rates may be necessary based on soil test results, weather conditions, and insect/disease pressure for nutrient and stress management. Consult your Monty's representative for guidance.



## Stages of Wheat Growth



### Wheat: High Yield



*Trial: Data above reflects a 10 bu/ac increase with Monty's program - an increase of 13.3%.*

Monty's research and trials throughout the United States have shown a consistent increase in tiller count. This includes trials by NC State University which showed an **increase in tiller counts of more than 18%**.

By adding Monty's program with UAN, Research and trials throughout the United States have shown an increase in UAN efficiency, a buffering of the burn, and an overall **increase in yield by as much as 18 bushel**.

Research has shown that using Monty's program throughout the growing season - including with fungicide or 2nd application of UAN - can **increase wheat yield by nearly 16 bushel**.

### Healthy Soil. Healthy Roots.



Healthy soil leads to healthy plants, less disease and advanced growth development, higher yield.

### Distinguishing Between Flowering Stages In Wheat (Feekes 10.5):



Feekes 10.5 Figure 1      Feekes 10.5.1 Figure 2      Feekes 10.5.2 Figure 3      Feekes 10.5.3 Figure 4

Figure 1. Feekes 10.5 - Heading growth stage. Figure 2. Feekes 10.5.1 - Beginning flowering growth stage. Figure 3. Feekes 10.5.2 - Flowering growth stage. Figure 4. Feekes 10.5.3 - Full flower growth stage.

KVOTT 2016

# High Yield Success

## Ideal Products for Maximum Success

Monty's offers natural soil enhancement and plant fertility products using innovative proprietary technologies for growers around the world - in the agriculture, horticulture, lawn and garden, and turf industries. Monty's products work on all soil types and planting conditions. Monty's products are tank-mix flexible and are ideal for all crops including corn, wheat, soybeans, specialty crops, and forages.

### MONTY'S® LIQUID CARBON™

Activated Humic Technology



Monty's Liquid Carbon is a soil conditioner designed to reduce soil compaction and improve overall soil health. It can be easily applied all year round, especially during pre-chemical application or burn down. Liquid Carbon enhances micronutrient uptake and breakdown of plant residue. Improve the health and vitality of your soil, and maximize your yields with Monty's Liquid Carbon (MLC). Also available in dry format.

Five main applications for Monty's Liquid Carbon

- Pre-plant or burn down: ½ to 1 gallon/ac
- Residue management: ½ to 1 gallon/ac
- At planting in a 2x2 starter program: ½ gallon/ac
- Added to any liquid nitrogen application: 1-2 qts/ac
- Added to any other foliar applied nutrient product: 1 qt/ac



#### Active Ingredients

Humic Acids . . . . . 2%

### HUMIHANCE®

Patented, Innovative Fertilizer Coating



A humic-based fertilizer coating that will quickly and efficiently provide nutrient management benefits without inhibiting the activity of the soil's natural bacteria. Humihance also provides all the natural benefits of Monty's proprietary, activated humic technology to the plant and soil. It is ideal for use when blending all granular fertilizers, and is compatible with a variety of micronutrients and pre-treated fertilizers.



#### Active Ingredients

Nitrogen (N) . . . . . 1%  
Humic Acids . . . . . 6%

### AGRI-SWEET™ FG

Natural, Soluble Liquid Source of Sugar

Used for any application where you are currently using molasses or sugar - without the nozzle problems caused by other sugars!

#### Active Ingredients

Fructose . . . . . 24%  
Glucose . . . . . 31%

### AGRI-N™

Enhancement for Green-Up & Energy

Used for any application where you are currently using molasses or sugar. Monty's Agri-N is a natural product that provides 14% nitrogen for green-up... and energy - without the nozzle problems caused by other sugars!

#### Active Ingredients

Total Nitrogen (N) . . . . . 14%  
Glucose . . . . . 26%

Monty's Activated Humic Technology. 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.



Products bearing the OMRI Listed® seal have been reviewed and determined to be allowed for organic use in accordance with one or more specific organic standards: the USDA National Organic Program regulations, the Canada Organic Regime standards, or the Mexico Organic Products Law organic guidelines.



Monty's is a proud member of the Humic Products Trade Association (HPTA) and guarantees our humic and fulvic acid levels in accordance with the HPTA method (ISO 19822). HPTA works to promote commercial trade of humic products through scientific cooperation while addressing regulatory issues.



## SURGE<sup>®</sup> XD

Extreme Delivery of Nutrients



Surge XD is designed for use with any liquid fertilizers to facilitate nutrient uptake through the plant tissues.



### Active Ingredients

Fulvic Acid . . . . .	0.45%
Humic Acids . . . . .	1.0%

## MIDNIGHT<sup>®</sup>

Unique Blend Ideal for Plant Growth

Monty's Midnight increases plant growth with our unique blend of NPK and micronutrients. Its balanced blend helps boost the plant's ability to maximize nutrient uptake and root development.

### Active Ingredients

Nitrogen (N) . . . . .	10%
Available Phosphate (P <sub>2</sub> O <sub>5</sub> ) . . . . .	8%
Soluble Potash (K <sub>2</sub> O) . . . . .	4%
Sulfur (S) . . . . .	3%
Iron (Fe) . . . . .	0.45%
Zinc (Zn) . . . . .	0.4%

## 9-24-3

Activated Humic Technology in Ortho/Poly Blend

9-24-3 is an ortho/poly blend that can be applied with liquid Nitrogen. It is used in the row on the seed delivering the highest levels of available phosphate to the seed and plant, early in its growth when it needs it the most. 9-24-3 is a low salt product, making it much safer for in-furrow placement.

### Active Ingredients

Total Nitrogen (N) . . . . .	9%
Available Phosphate (P <sub>2</sub> O <sub>5</sub> ) . . . . .	24%
Soluble Potash (K <sub>2</sub> O) . . . . .	3%
Iron (Fe) . . . . .	0.1%

## K28<sup>™</sup>

Liquid Potash Nutrient Supplement

Monty's K28 Liquid Potash is a supplement for potassium deficient plants. Monty's nearly pH balanced formula can be applied 2x2x2 at planting and safely added to nitrogen solutions – as well as most herbicides and fungicides for foliar application.

### Active Ingredients

Soluble Potash (K <sub>2</sub> O) . . . . .	28%
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## BORON

Protein Synthesis, Cell Division, & Root Development

Boron moves plant sugars up and down the plant daily. It is essential for germination of pollen grains and growth of pollen tubes, and for seed and cell wall formation. Boron forms sugar-borate complexes associated with sugar translocation and is important in protein formation.

### Active Ingredients

Boron (B) . . . . .	10%
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## ZINC

Increases Availability of Calcium & Phosphorous

Zinc improves assimilation of CO<sub>2</sub> in photosynthesis. It improves the plant's metabolism and uptake of nitrogen. Zinc is chelated for rapid absorption and utilization. It aids synthesis of plant growth substances and enzyme systems. Zinc is essential for promoting certain metabolic reactions.

### Active Ingredients

Zinc (Zn) . . . . .	9%
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## MULTIPLICITY<sup>™</sup>

Microbial Strains to Help Crops Reach Potential

Multiplicity is a dry package of microbial strains designed to promote early root development, plant stamina, and the overall health of the crop throughout the growing season.

### Active Ingredients

A formulation of billions of microbes\*

## HUMI-TILL

Crop Residue Management



Humi-Till is a unique blend of specific microbes and activated humics designed to decompose cellulose, lignin, and keratin in crop residue. Humi-Till breaks down crop residue — significantly reducing your planting problems and making the nutrients in crop residue available.



### Active Ingredients

A formulation of billions of microbes\*

Humic Acids . . . . .	1%
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Also available in dry form for use in organic production: Humi-Till Activator.

*\*See label for specific ingredients*

**“I recommend Monty’s because it does a lot of things the plant needs. It stimulates early root development and early growth.”**

DR. RON HEINIGER, NC State University

# Success Always Starts with Healthy Soil

Farmers around the country are beginning to discover the value of humics. Humics are basically organic substances that work as soil catalysts. Not all humics are created equal, nor do they perform the same.

Monty's understands the right ratio of humic substances that maximize plant growth. Our engineered humic product stimulates all three soil health properties - biological, chemical, and physical - causing dramatic differences in soil, roots, and crops. Monty's understands the importance of that relationship and how it impacts the success of the plant's growth. THIS is the Monty's edge!



**BIOLOGICAL.** Living organisms in the soil means... Increased biological activity

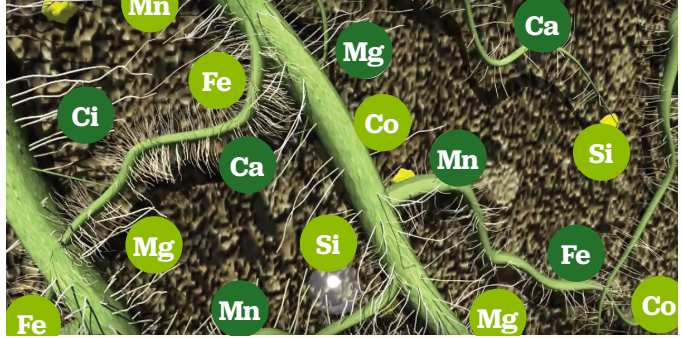
- ✓ Serves as a food source for microbes
- ✓ Converts and releases nutrients
- ✓ Builds organic matter and humus
- ✓ Better seed germination
- ✓ Early root development
- ✓ Healthier soils

**GEOLOGICAL.** Soil Structure means... increased geological activity

- ✓ Mineralizes soil particles
- ✓ Increases water holding capacity
- ✓ Reduces compaction
- ✓ Easier tillage performance
- ✓ Reduces soil loss
- ✓ Stronger plants
- ✓ Improves soil porosity

**CHEMICAL.** Interaction of soil nutrients and nutrient means... increased chemical activity

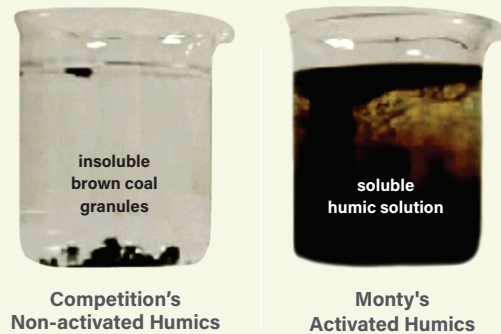
- ✓ Unlocks tied-up nutrients
- ✓ Improves cation exchange capacity
- ✓ Converts raw fertilizer to plant food
- ✓ Increased fertilizer efficiency
- ✓ Higher yields



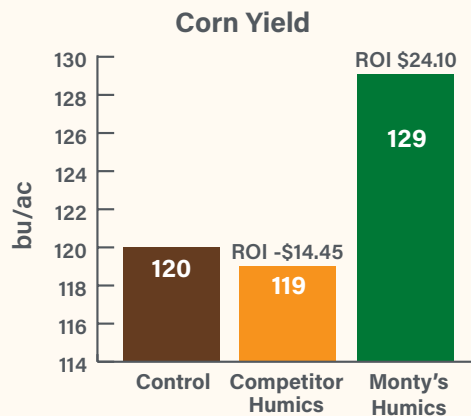
Monty's activated humic technology provides more oxygen and a variety of essential nutrients for healthy root system growth by stimulating the soil biology. Monty's activated humic is engineered to unlock tied up nutrients making them available to the plant as it continues to develop. We understand the right concentration of humic substances to maximize biological, geological, and chemical impact - which contributes to healthier soils leading to higher yields. This is one of our advantages.

## 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!



## Farmers can see a difference in their yield and ROI!



Replicated field trials comparing Monty's Humics to the competitor's Humic product. Both applied at 0.5 gal/ac in-furrow. Monty's Humics produced 10 bu/ac more than the competitor's product, and had an ROI of \$24.10 over the control plot.

## Soil & Tissue Sampling

Soil and tissue testing throughout the growing season is vital to the success of a high yield program. These are Monty's general recommendations. To maximize your testing program, please contact your Monty's representative.

### SOIL SAMPLING RECOMMENDATIONS

Soil samples can be taken by grid or soil zones. Your sample should consist of a composite of 15 subsamples taken randomly at a depth of 4-6 inches from across the sample area. The sample needs to be mixed well to be representative of the soil conditions.

**Soils that can be tested less often:** If the soil has high CEC, it will hold cation nutrients better and the pH will remain constant over longer periods of time. We suggest testing throughout the growing season and at the end of the harvest for planning.

**Soil that should be frequently tested:** Soil with low CEC (less than 7), some cations such as potassium (K+), magnesium (Mg++), and ammonium (NH4+) have the ability leach through the root zone, so testing more often to find nutrient deficiencies is essential. When fertility levels are low, soil samples should be taken more frequently to insure best utilization of added nutrients.

**The key is consistency and getting the information back in time to use it.** We encourage sampling at harvest so you may plan properly for the next growing season. While factors such as weather and crop rotation can affect soil test results, these differences are generally small and reliable information can still be obtained regardless when sampling is done.

**For general practices:** Additional fall or spring sampling can be done for fertilizer planning and application purposes. Pre-season and post-harvest sampling each season provides beneficial data to maximize yield potential.



### TISSUE SAMPLING RECOMMENDATIONS

**Timing:** To achieve the highest yields possible, we encourage tissue sampling weekly throughout the season. Many high yielding growers depend on weekly tissue testing to help address their deficiencies more quickly.

**Plant tissue to sample:** Taking the third or fourth leaf below the most recent growth should provide information for you to make the best decisions. For more crop specific sampling, contact your tissue sampling lab.

**Storing and shipping:** Store the sample properly and remove soil or other debris that would interfere with tissue analysis and results. Problem areas or areas of interest should be sampled separately. All samples should be stored in a paper bag in a cool place and properly labeled. All samples should be sent to the lab immediately to prevent any decay or damage to your sample that could cause your tissue results to be inaccurate.

**Give yourself adequate time to review the test results and plan the program before making fertilizer applications. Talk to your Monty's representative about the best soil and issue testing program for you.**

**"I tissue test several times throughout the growing season. It's the only way to know what are my deficiencies and how I can address them right away, before they become a problem and affect my yield."**

*KEVIN KALB, 14-Time National Corn Yield Winner, Corn Warrior, & MACC Group Founder*

# High Yield Questions & Answers

## 1. What are the fundamental principles of high-yield farming?

### a. The right nutrients.

Liquid nutrients are proving to be “the secret sauce” for high-yield growing. Even in non-high-yield programs, liquids offer a number of advantages, especially as dry fertilizer costs increase.

- **Uptake:** Quality liquid nutrients are provided in a form which is readily available to plants. This is especially important when used as a starter. A germinating seed cannot wait for nutrient conversion. Liquids perform in wet or dry conditions, and unlike dry fertilizer, don't require rain to activate.
- **Cost-efficiency:** Instead of fertilizing an entire field, liquid nutrients may be applied in-furrow, 2x2x2, or foliar. Nutrients are precisely placed where they are available for uptake by the plant, reducing waste. Liquid nutrients can also cost measurably less.
- **Flexible formulations:** Liquid nutrients can be custom formulated to provide the perfect dose of nutrients and boost soil biology. Whether your plants need macronutrients, secondary nutrients or micronutrients, liquids can be formulated to address whatever nutritional challenges arise during the season. Beneficial substances such as sugars, biologicals or humic substances can also be incorporated into your formulations to give your plants or soil a boost at different stages of growth and in times of stress.
- **Lower salts, easier on the soil:** Liquid nutrients typically do not contain the high levels of salt that many dry fertilizers do. Less salt is easier on your plants, your soil biology, and your soil.
- And since the liquid goes directly to the plants and is quickly absorbed, and runoff is minimal.

### b. The right nutrients, at the right time.

- **At planting:** The most important principle is ensuring you have provided everything the plant needs right from the start. Having the appropriate nutrients and micronutrients, in plant available form, available to the plants from the moment of germination is fundamental to stronger, more-efficient starts, better growth



and higher yields. Monty's High-Yield farmers use a 2-pronged approach: (a) Direct, in-furrow application of liquid nutrients while planting and (b) 2x2x2 application of liquid 2 inches on either side of a row. Besides protecting the seed during germination, this method ensures that nutrients go directly to the plant – fueling the earliest stages of growth, and setting plants up for success, regardless of planting conditions.

- **In season:** Remember whatever the plant lacks is going to cost you yield. Tissue sampling identifies those deficiencies, sometimes before they're visible in the plants themselves. Successful high-yield program farmers typically tissue test weekly. More data, more information, more knowledge. Tissue sampling allows you to respond quickly to any deficiency and foliar apply the right nutrients in the right amount at the right time. This process eliminates guesswork and waste.

### c. Soil health.

Much like tissue sampling, it is important to test your soil at least annually. The results will indicate deficiencies in the soil – not just nutrients and pH, but also organic matter, CEC, and many other measurements which impact soil health and consequently yield. Monty's trusted advisors can then help you with solutions to address those deficiencies. Soil health has a direct impact on the health of the plant... and your overall yield!

**Healthier Soil. Healthier Plants. Higher Yields.**

## 2. Do I need new equipment?

No, minor changes to existing equipment are all you need. In-furrow and 2x2x2 application requires some modification of planters; specifically, attachments that are usually readily available from your equipment supplier. But the cost is very low compared to ROI.

## 3. How important is maintaining and improving the soil biology?

High-yield growers know soil biology is critical for high-yield farming. The growers using Monty's programs who are harvesting more than 300 bu/ac appreciate that they are also seeing healthier soils than when they used only granular fertilizers and had lower yields.

Unlike dry fertilizers that are heavy in salts and thus detrimental to soil microbes – especially as salt builds up over time, Monty's proprietary humics and unique sugars act as catalysts to increase microbial activity which improves soil productivity and yields.

## 4. What about responsiveness?

Succeeding at high-yield farming is more work than spreading granular fertilizer in the fall, planting in the spring, then hoping for the best. It's about data: assembling a clear picture of your current conditions, using that information to give plants a good start, and taking regular surveys of plant health throughout the growing season. If sampling turns up a deficiency, you are in a position to provide a quick response, typically through foliar application of nutrients or supplements. As with any successful enterprise, great management leads to great results.

Successful high-yield farmers don't just guess. They make it their business to know. And they, along with their Monty's team, custom-tailor their nutrient programs to their specific crops, conditions, and goals.



## 5. How long before I see results in yield – and ROI?

In-field performance is impossible to predict. However, improved plant nutrition (absent drought or other calamity) will generally show a positive ROI in the season in which it is implemented. But to see the full impact of high-yield practices, soils must be given time to return to a healthy state. Consequently, it may take several seasons to attain true high-yield harvests – harvests which only a few years ago were thought unattainable.

## 6. How do I get started?

Talk to the experts! Monty's agronomy team is on hand to offer advice, resources, and connections with other high-yield growers to help you down the path to your own high-yield success. Whether it's a strip, a test plot, a field, or going "all-in," Monty's trusted advisors are ready to help you achieve your high-yield goals. Visit [montysplantfood.com](http://montysplantfood.com) or call us at 800-978-6342 for more information.





**TRUSTED ADVISORS.  
PROVEN SOLUTIONS.**

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