



PRODUCT CATALOG

# IMPROVING PLANT & SOIL HEALTH - FOR OVER-50 YEARS SUNBURST MINING FOUNDED 1973

HUMA

LINE LAUNCHED

1984

BIO HUMA NETICS COMPANY REBRAND HUMA GRO TURF LINE LAUNCHED 1989 Micro Carbon Technology\* DEFINED 2012 **MESA VERDE** ACQUIRED 2017 fertilgold LINE LAUNCHED 2018 HUMA COMPANY REBRAND

2023

ACQUIRED

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Lyndon W. Smith CEO, HUMA, INC.

Huma<sup>®</sup> was founded in 1973 by my father, Dr. Jordan Smith, with a vision centered on trust, care, and long-term commitment to people and the land. Originally known as Sunburst Mining Company<sup>®</sup>, it evolved through Bio Huma Netics<sup>®</sup> and its brands, ultimately becoming Huma<sup>®</sup>, Inc. Today, despite many changes, the company's core values remain unchanged.

Huma, Inc. is a family-owned business that has been passed down through three generations with a focus on integrity and improving global agriculture through humic-based products and technologies. The legacy continues today with the involvement of multiple family members, including our children into the third generation.

Dr. Smith and Mr. Don Organ began applying a unique humate material from a mine in the Northwestern United States to farmlands across the United States. This material, rich in organic acids and minerals, had a direct impact on soil health, improving soil quality and enhancing nutrient uptake and yield in crops. It was an innovation that laid the groundwork for what we would go on to achieve.

By the early 1980s, Dr. Smith and Mr. Organ developed a proprietary process to extract beneficial organic acids, minerals, and other components, which became the foundation of Micro Carbon Technology<sup>®</sup>. This technology is now a core ingredient in the carbon-rich liquid products offered today.

For over 50 years now, we've focused on researching and responsibly harvesting Mother Nature's ancient organics and creating lasting value, not just for today, but for the future. From humble beginnings, the company has grown into a global leader in humic substances, now registered in over 40 countries, while remaining true to its roots.

We value tradition and believe in partnering with like-minded family-owned businesses, such as Mesa Verde Humates<sup>®</sup> and Gro-Power<sup>®</sup>, to support agriculture and the environment. These partnerships, based on shared values, have strengthened Huma's ability to help you succeed.

We take immense pride in our history, but we're even more excited about the future. As we move forward, we're committed to providing innovative, sustainable biostimulant-based solutions that not only help your business grow but also preserve the land and soil for generations to come. This legacy of trust, responsibility, and care isn't just something we've inherited—it's the foundation on which we lead every day. And we're ready to continue this journey with you, because we're simply better together!

HUMA



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# HUMA<sup>®</sup> IS DEDICATED TO IMPROVING YOUR SOIL HEALTH & CROP YIELDS.

Formed from prehistoric plant material, our humic-based carbon-rich products are millions of years in the making, providing you with greener solutions and a greener bottom line.

Owning humate mines in Idaho and New Mexico enables us to control every step of production, ensuring high quality. Our raw humate products are harvested, screened, and packaged in New Mexico, while our finished liquid products are extracted, blended, and packaged in Arizona.

Our liquid formulations are powered by our proprietary Micro Carbon Technology<sup>®</sup>, which ensures fast-acting delivery and exceptional uptake enhancement, while being an environmentally friendly biostimulant. We focus on innovating and improving the use of humic substances to support soil health and sustainable agriculture globally.





# **AGRICULTURE**

At Huma<sup>®</sup>, we provide a complete range of carbon-based humic solutions for both conventional and organic agriculture. Our product lines include highly efficient macronutrients and micronutrients, organic biopesticides, growth managers, carbon-rich organic acids, and regenerative soil fertility products. Huma products are designed to enhance nutrient uptake, improve soil and plant health, and offer zero-residue crop protection, resulting in higher yields, healthier crops, and more sustainable farming practices.

Our natural liquid and dry fertilizers and soil conditioners simplify turf and ornamental management by enhancing soil, turf, and plant health. Explore a range of science-backed solutions for commercial applications, home gardening, sports fields, golf courses, and nurseries to meet diverse turf, soil health, and landscaping needs.

# **TECH ADDITIVES**

Our high-quality raw humates and Micro Carbon Technology® are used to create customizable humic-based additives for a variety of applications. These versatile additives can be easily integrated into your products to enhance performance, boost efficiency, and improve results.

# WHY CHOOSE HUMA?

Leveraging our extensive research and knowledge, Huma® reflects both the strength and nurture of Mother Nature. We're industry innovators with over 50 years of experience providing transformative products and industry-leading research & development.

# **TURF & ORNAMENTAL**





# MICRO CARBON TECHNOLOGY

# HUMA'S LIQUID PRODUCTS CONTAIN A UNIQUE PROPRIETARY BLEND OF HUMIC AND MICRO CARBON TECHNOLOGIES<sup>®</sup>, NATURAL BIOSTIMULANTS, AND ESSENTIAL NUTRIENTS.

Each product has its own unique formulation, which is designed to meet the specific needs of its category, ensuring maximum effectiveness and results.

# WHAT IS MICRO CARBON TECHNOLOGY?

Micro Carbon Technology (MCT) is a proprietary blend of unique organic molecules rich in carbon, oxygen, and colloidal minerals. These molecules quickly and efficiently transport nutrients and other compounds into plants through the soil or leaves.

# WHERE DOES MCT COME FROM?

MCT originated in 1973 when our scientists discovered a unique organic material that enhanced both soil fertility and plant nutrient uptake. This material is a highly oxidized, unique humate that has not been compressed or heated into coal.



# **THESE PRODUCTS:**

- Boost Nutrient Availability & Uptake

# HOW DOES MCT PRODUCE RESULTS?



# WHAT MAKES HUMA® PRODUCTS UNIQUE?

Using MCT as the base, we have developed highly effective products for virtually every type of application.

- Enhance Activity & Diversity of Beneficial Microorganisms
- Improve Soil Physical Structure

- Improve Plant Tolerance to Environmental Stresses
- Provide Essential Nutrition for Optimal Growth, Fruiting & Vigor
- Produce Higher Quality, Increase Yields & Maximizes Profits

The size of the carbon molecules makes all the difference. The significantly smaller particle mass allows nutrients to be transported through both the leaf and root at a much higher rate.

- Quick Uptake: 1-hour absorption through the leaves,
  - 12-24 hours through the roots
- Greater Bioavailability: Most Efficient Way to Transport
- Nutrients into the Plant
- Foliar or Soil Applied
- Achieve Far More with Less Product
- (Lower Volume & Less Product to Handle)

- Fast-acting Source of Carbon
- Improved Plant Tolerance of Environmental Stresses
- Rapidly Activates Beneficial Microbes
- Improved Soil Structure
- Environmentally Friendly
- Natural Biostimulant

# Molecule size comparison of humic acids, fulvic acids, and Micro Carbon Technology (MCT).

# **KEY BENEFITS OF MICRO** CARBON TECHNOLOGY (MCT)

**NON-SELECTIVE:** works with both metallic (+) and non-metallic (-) ions.

VERSATILE DELIVERY: can be sprayed on the soil directly or applied through all irrigation systems and/or as a foliar.

LOW ENERGY: requires less plant effort to uptake nutrients, and protects nutrients from being tied up in the soil profile.





# CARBON-RICH ORGANIC ACIDS

Stop Working Your Soil & Start Working With It

Huma's carbon-rich organic acid products help crops optimize fertilizer use, improving germination, enhancing the effectiveness of foliar applications, and promoting stronger roots and vigorous plant growth.

Dry humates are natural carbon-based organic acids in a form that improve soil health, water holding capacity, enhance crop yields, and maximize return on investment. Huma® offers a full range of dry, concentrated humic and fulvic acid products, made from naturally occurring oxidized lignite, which contains additional trace minerals.

Our liquid carbon-based organic acid products are carbon-complexed with our Micro Carbon Technology<sup>®</sup> and offer the same benefits as dry humates in a more bioavailable form.

KEY BENEFITS OF ORGANIC CARBON-RICH ACIDS:

- Activates Soil Microbes
- Greater Nutrient Bioavailability & Better Uptake
- Improves Soil Health
- Cost Effective
- Easy Application
- Sustainable & Regenerative
- Improves Nutrient Absorption
- Maximizes Fertilizer Efficiency
- Soil pH Buffering
- Enhanced Seed Germination



# OM 6 mm (-)

OM 6 mm(-) is ground and screened to a particle size of 6 mm (1/4 inch) or smaller, making it ideal for mixing with other dry materials that are not hygroscopic. OM 6 mm (-) product is ideal for broadcast spreading on soil.

# **BROADCAST APPLICATION RATES:**

- SOIL BANDED OR SIDE DRESSED: Up to 75 lb/ac, 75 kg/ha
- SOIL BROADCAST: Up to 150 lb/ac, 150 kg/ha



# **BROADCAST APPLICATION RATES:**

- SOIL BANDED OR SIDE DRESSED: Up to 75 lb/ac, 75 kg/ha
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- Up to 150 lb/ac, 150 kg/ha



# **BROADCAST APPLICATION RATES:**

- SOIL BANDED OR SIDE DRESSED: Up to 75 lb/ac, 75 kg/ha
- SOIL BROADCAST INCORPORATED: Up to 150 lb/ac, 150 kg/ha



# OM 2-6 mm

OM 2–6 mm is a ground and screened product with less than 3% dust, making it perfect for mixing with other dry materials that are not hygroscopic. OM 2-6 mm can be broadcast or banded, either preplant, with seed, or after planting.







# OM 1-3 mm

OM 1–3 mm is a ground and screened product with less than 3% dust, making it ideal for mixing with other dry materials that are not hygroscopic. OM 1-3 mm can be broadcast or banded, either preplant, with seed, or after planting.

# **BROADCAST APPLICATION RATES:**

- SOIL BANDED OR SIDE DRESSED: Up to 75 lb/ac, 75 kg/ha
- SOIL BROADCAST : Up to 150 lb/ac, 150 kg/ha



- Up to 25 lb/ac, 25 kg/ha
- SOIL BROADCAST: Up to 50 lb/ac, 50 kg/ha





# **OM GREENS**

OM GREENS is a finely ground product screened to a particle size of 1–2 mm with less than 3% dust, making it perfect for mixing with other dry materials that are not hydroscopic. OM GREENS is an excellent broadcast turf humate supplement that can also be applied to all soil types and crops.



# K HUME<sup>®</sup> OM

K HUME OM works quicker compared to other humates as it is a ground and screened product with less than 3% dust, making it perfect for mixing with other dry materials that are not hygroscopic. K HUME OM is combined with potassium hydroxide to make an excellent soil conditioner; its improved solubility (76% soluble) speeds activity in the soil for enhanced microbial uptake and growth.

# **BROADCAST APPLICATION RATES:**

- SOIL BANDED OR SIDE DRESSED: Up to 38 lb/ac, 38 kg/ha
- SOIL BROADCAST INCORPORATED: Up to 75 lb/ac, 75 kg/ha



# **BROADCAST APPLICATION RATES:**

SOIL BANDED OR SIDE DRESSED:

# **OM PRILLED**

OM PRILLED is a dry humate made using a patented dispersing granule process that results in a spherical granule that contains thousands of micro-sized humate particles and dissolves into the soil when wet.

# **BENEFITS AT-A-GLANCE:**

- Highly dissolvable after irrigation
- Manufactured to be blended specifically with hygroscopic materials such as urea





# MICROHUMIC<sup>®</sup> OM

MICROHUMIC OM is an ultra-fine powder with humic and fulvic acids. It's not suitable for dry broadcast applications or air planters. With an average particle size of 15 microns, this product can be used as both a humate soil amendment and a seed treatment.



# **APPLICATION RATES:**

- MIX WITH SEEDS AT PLANTING: Large Seeds (Up to 8 oz/ac, 0.5 kg/ha), Small Seeds (Up to 16 oz/ac, 1.0 kg/ha)
- SOIL-MIX WITH GRANULE FERTILIZERS: Up to 2 lb/ac, 2 kg/ha
- SOIL-MIX WITH COMPOST & APPLY BROADCAST OR IN A BAND: Up to 4 lb/ac, 4 kg/ha



# **APPLICATION RATES:**

Up to 5 lb/ac, 5 kg/ha

# **APPLICATION RATES:**

• FIELD CROPS, SOD, AND SPECIALTY CROPS: Up to 2 lb/ac, 2 kg/ha, diluted with water

# MICROMATE

MICROMATE is an ultra-fine powder with humic and fulvic acids. MICROMATE is designed for suspension in liquid to deliver the maximum possible concentration of humic and fulvic acids (24% humic/fulvic acid with a pH of 3.7), plus a clay/mineral suspension agent. It's not suitable for dry broadcast applications or air planters.



**APPLICATION RATES:** 

Up to 5 lb/ac, 5 kg/ha

• FIELD CROPS, SOD, AND SPECIALTY CROPS :



# HUMA STABLESOL POWDER

# STABLESOL® POWDER

STABLESOL POWDER is a highly water-soluble, high-humic/fulvic acid product that blends easily with other applications. When added to water or other nutrient solutions, it has a low solution viscosity, is stable under both high and low pH (0.5-14.0), and can be blended and pumped easily without plugging nozzles or gelling.

### **APPLICATION RATES:**

- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 4 gal/ac, 40 L/ha



• FIELD CROPS, SOD, AND SPECIALTY CROPS:

# **OM SOLUBLE POWDER**

OM SOLUBLE POWDER is a fully water-soluble, high-humic/fulvic acid product modified potassium humate derived from humic ore. OM SOLUBLE POWDER is designed to be mixed in solutions and applied to soil. It is soluble at a pH of 5.5. and above.



# 0-0-2 HUMA PRO<sup>®</sup> 16

HUMA PRO 16, carbon-complexed with Micro Carbon Technology<sup>®</sup>, is an activated liquid humic acid source derived from a highly oxidized, naturally occurring carbon and mineral deposit.

# **BENEFITS AT-A-GLANCE:**

- Fast acting liquid humic/fulvic acid with high content
- Clean liquid solution

- Stable in mixes above a pH of 7.5
- Complexed with Micro Carbon Technology



# **APPLICATION RATES:**

- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 gal/ac, 10 L/ha
- SPRINKLERS SOLID, SET, DRAG LINES, LINEAR. OR PIVOT (100% SPEED): Up to 2 gal/ac, 20 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 4 gal/ac, 40 L/ha
- MIXED IN LIQUID FERTILIZER SOLUTION: Up to 1 gt/40 gal of liquid: Up to 1 L/160 L of liquid

- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/ MICRO SPRINKLERS: Up to 1 gal/ac, 10 L/ha
- SPRINKLERS SOLID, SET, DRAG LINES, LINEAR, OR PIVOT (100% SPEED): Up to 2 gal/ac, 20 L/ha
- MIXED IN LIQUID FERTILIZER SOLUTION: Up to 2 gal/40 gal of liquid, Up to 20 L/160 L of liquid

# HUMA PRO MIX is an activated liquid humic acid source derived from a highly oxidized, naturally occurring humate deposit.

# **BENEFITS AT-A-GLANCE:**

HUMA PRO<sup>®</sup> MIX

- Excellent stability in tank mixes in high & low pH ranges (2.0-12.0)
- Clean liquid solution
- Short-term soil organic matter building
- Short-term soil microbial activation
- Complexed with Micro Carbon Technology









# 6-2-0 X-TEND®

X-TEND contains a high concentration of Micro Carbon Technology® (MCT). It is formulated with organic acids and nutrients to significantly improve the efficiency, release, and uptake of other fertilizer products.

**BENEFITS AT-A-GLANCE:** 

- Complexes nutrients for easier plant uptake
- Strong carbon-rich biostimulant
- Releases tied-up nutrients in the soil
- Stimulates root arowth
- Buffers salts in high alkaline or sodium soils



# **APPLICATION RATES:**

- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 gt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gal/ac, 10 L/ha
- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 at/ac, 2.5 L/ha
- MIXING IN LIQUID FERTILIZER SOLUTION: Up to 1 qt/40 gal of liquid, Up to 1 L/160 L of liquid

# **APPLICATION RATES:**

- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gal/ac, 10 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: Up to 2 at/ac, 5 L/ha
- MIXING IN LIQUID FERTILIZER SOLUTION: Up to 2 gal/40 gal of liquid: Up to 20 L/160 L of liquid

# **APPLICATION RATES:**

 IMPREGNATING DRY, NONCOATED GRANULAR FERTILIZERS: Up to 2 qt/2 L per ton of granular

**X-TEND® B** 

Like X-TEND, X-TEND B contains a high concentration of MCT. X-TEND B is designed with organic acids and nutrients to enhance the effectiveness, release, and absorption of other dry fertilizer products. The distinct blue dye makes it easy to identify that the product has been applied correctly.

# **BENEFITS AT-A-GLANCE:**

- Buffers salts in high alkaline or Complexes nutrients for easier plant uptake sodium soils
- Encourages root growth





CASE STUDY

FULL STUDY

HERE



# **STOP WAITING FOR ORGANIC CROP** SOLUTIONS THAT JUST DON'T WORK

and where they need it.





**UNCOATED & COATED UREA TREATMENTS** 



 SOLID BANDED OR INJECTED THROUGH DRIP TAPE MICRO SPRINKLERS: Up to 2 gt/ac, 5 L/ha

# **FULVI PRO®**

FULVI PRO is an activated liquid fulvic acid source derived from highly oxidized humic substances.

**BENEFITS AT-A-GLANCE:** 

- Complexing of fertilizers & pesticides enabling quicker uptake by plants
- Carbon food source for the beneficial microbes
- Biostimulant
- Fulvic acid complexed with Micro Carbon Technology



# 0-0-6 STABLESOL® LIQUID

STABLESOL LIQUID is an activated humic acid derived from natural carbon and mineral deposits. It helps correct soil imbalances caused by a lack of humic acid, fostering healthier soil and supporting sustainable plant growth.

ÓRGANIC

# **BENEFITS AT-A-GLANCE:**

- High Humic/fulvic acid product
- >95% water soluble
- Excellent stability in tank mixes in high & low pH ranges (2.0-12.0)
- Short-term soil organic matter building
- Short-term soil microbial activation

# **APPLICATION RATES:**

 SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 qt/ac, 5 L/ha

HUMA FULVI PRO

- SPRINKLERS- SOLID, SET, DRAG LINES, LINEAR, OR PIVOT (100% SPEED): Up to 1 gal/ac, 10 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 2 gal/ac, 20 L/ha
- MIXED IN LIQUID FERTILIZER SOLUTION: Up to 1 qt/40 gal of liquid: Up to 1 L/160 L of liquid

Powered by MCT, Huma has a comprehensive range of products designed to provide your crops with the right nutrition exactly when

Your crops require different nutrients at each stage of their growth. That's why we've created a range of organic crop nutrition and protection products designed to deliver optimal results at every step.

PRO TIP Organic Products feature 'OM' in the product name, which stands for 'Organic Material'.

HUMA X-TEND OM







# SUSTAINABLE SOIL ACTIVATORS Renew, Rebuild, and Maintain Your Soil

Our carbon-based soil health products enhance soil quality by boosting beneficial bacteria and fungi. This increases microbial activity, improving soil structure, fertility, and breaking down organic matter into nutrient-rich humus. The products also stabilize pH, electrical conductivity (EC), and salt levels, keeping nutrients available even in tough conditions. These benefits are achieved quickly, within weeks, rather than over months or years.

CARBON-COMPLEXED WITH MICRO CARBON TECHNOLOGY<sup>®</sup> (MCT), OUR SOIL ACTIVATORS HAVE THE FOLLOWING KEY BENEFITS:

- Carbon Based
- High Protein, Carbohydrate, and Nutrient Content for Microbial Growth
- Rapidly Increase Beneficial Microbial
  Populations





# 5-0-0 FERTIL SOIL®

FERTIL SOIL balances the carbon-oxygen ratio, creating a carbon-rich environment that allows the rhizosphere to be more active. Apply in low organic matter soils.

# **BENEFITS AT-A-GLANCE:**

- Activates beneficial bacteria
- Improves nutrient availability
- Root stimulant
- Increases water use efficiency

# **APPLICATION RATES:**

- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 gt/ac, 2.5 L/ha
- SPRINKLERS SOLID, SET, DRAG LINES, LINEAR, OR PIVOT (100% SPEED): Up to 2 qt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 3 gt/ac, 7.5 L/ha

## **APPLICATION RATES:**

- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 0.5 gal/ac, 5 L/ha
- SPRINKLERS SOLID, SET, DRAG LINES, LINEAR, OR PIVOT (100% SPEED): Up to 1 gal/ac, 10 L/ha

# **APPLICATION RATES:**

- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 gt/ac, 2.5 L/ha
- SPRINKLERS SOLID, SET, DRAG LINES, LINEAR, OR PIVOT (100% SPEED): Up to 2 qt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 3 qt/ac, 7.5 L/ha

# FERTIL HUMUS®

FERTIL HUMUS balances the carbon-nitrogen ratio, creating a carbon-rich environment that allows the rhizosphere to be more active. Ideal for high organic matter soils and creates a thriving, humus-rich soil.

Rapidly improves soil structure

Buffers salt

• Diminish stress from pH extremes

# BENEFITS AT-A-GLANCE:

- Activates beneficial funai
- Increases soil water retention
- Stimulates root growth

- Recycles tied up nutrients
- Helps to buffer harsh chemicals & degrade toxic compounds in soil





# HUMA SURF-MAX -

# **SURF-MAX®**

SURF-MAX is a blend of non-ionic, fully biodegradable, non-hazardous, non-phytotoxic, and highly compatible surfactants.

# **BENEFITS AT-A-GLANCE:**

- Drastically improve water penetration & lateral movement
- Improve water use efficiency & moisture retention
- Complexed with Micro Carbon Technology for added benefits & stronger activity
- Aids in delivering water-carried nutrients

# **APPLICATION RATES:**

- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 gt/ac, 2.5 L/ha
- SPRINKLERS SOLID, SET, DRAG LINES, LINEAR, OR PIVOT (100% SPEED): Up to 1 qt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 2 qt/ac, 7.5 L/ha

Your crops require different nutrients at each stage of their growth. That's why we've created a range of organic crop nutrition and protection products designed to deliver optimal results at every step.

# ZAP®

ZAP is a formulation of nutrients that improves root growth and, as a result, reduces susceptibility to secondary root infections. ZAP feeds a strong, vigorous soil biology, which indirectly results in the natural improvement of soil health.

# **BENEFITS AT-A-GLANCE:**

- · Fastest way to add new life into soil
- Stimulates root arowth
- Builds resistance to soil pathogens & plant parasitic nematodes
- Builds a vigorous microbial community & balance
- Ideal for dearaded, diseased, leveled soils, & after fumigation or pesticide applications

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# 5-0-0 ENCAPSALT®

ENCAPSALT uses Micro Carbon Technology<sup>®</sup> to reduce salt stress in roots, improve water penetration, break up hard soils, and help flush salts deeper into the soil.

# **BENEFITS AT-A-GLANCE:**

- Buffers salts in highly alkaline or sodium-rich soils
- Improves soil conditions for aerobic microbial activity
- Aerates soil & flocculates clay particles
- Enhances water penetration
- Increases nutrient availability for easier plant uptake

# **APPLICATION RATES:**

CASE

- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 qt/ac, 2.5 L/ha
- SPRINKLERS SOLID, SET, DRAG LINES, LINEAR, OR PIVOT (100% SPEED): Up to 2 gt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 3 gt/ac, 7.5 L/ha

# STOP WAITING FOR ORGANIC CROP SOLUTIONS THAT JUST DON'T WORK



Powered by MCT, Huma has a comprehensive range of products designed to provide your crops with the right nutrition exactly when and where they need it.





# **PRO TIP**

Oraanic Products feature 'OM' in the product name, which stands for 'Organic Material'.





# ULTRA-EFFICIENT **MACRONUTRIENTS** Maximize Nutrient Availability & Efficiency

Macronutrient fertilizers improve the efficiency and uptake of N-P-K applications, enhancing nutrient availability for better plant quality. Huma's concentrated formulations allow for superior results with less fertilizer, reducing both costs and environmental impact by minimizing N, P, and K residue.

CARBON-COMPLEXED WITH MICRO CARBON TECHNOLOGY® (MCT), OUR MACRONUTRIENTS (NPK FORMULATIONS) HAVE THESE KEY BENEFITS:

- Improved Nutrient Use Efficiency & Uptake
- Concentrated Formulations for Decreased
  Use Rates
- Lower Transportation & Storage Costs
- None or Low Phytotoxicity
- Carbon-Based vs Salt-Based
- Low Residue
- Aids in Lowering Carbon Intensity Scores
- Mobile in the Plant Where it Needs Them
- One-Hour Absorption Rate
- Both Soil & Foliar Applied
- Resists Tie up & Losses to the Environment





# 30-0-0 SUPER NITRO®

SUPER NITRO is a high-nitrogen fertilizer. SUPER NITRO enhances cellular respiration and helps build essential compounds like proteins, chlorophyll, and nucleic acids.

# **BENEFITS AT-A-GLANCE:**

- Due to increased efficiency from MCT, 1 gallon is equivalent to 10lbs N
- Neutral pH for better tank compatibility

- Prevents nitrogen loss, keeping it soluble & available to plant roots
- Offers fast crop response & can be applied right before crop need

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 gal/ac, 10 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 2 gal/ac, 20 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 4 gal/ac, 40 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 8 gal/ac, 80 L/ha

HUMA SUPER PHOS

## **APPLICATION RATES:**

- Up to 1 qt/ac, 2.5 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 2 qt/ac, 5 L/ha

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 2 qt/ac, 5 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 1 gal/ac, 10 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 gal/ac, 20 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 3 gal/ac, 30 L/ha

# SUPER PHOS<sup>®</sup>

SUPER PHOS is a high phosphorous fertilizer and is 15 times more efficient than conventional 10-34-0. SUPER PHOS enhances the production of amino acids, proteins, and carbohydrates necessary for cellular division.

# **BENEFITS AT-A-GLANCE:**

- Due to increased efficiency from MCT, 1 gallon is equivalent to 50lbs  $P_2O_5$
- Excellent starter fertilizer
- Aids in keeping irrigation systems and sprav nozzles clean as it breaks down
- precipitates in solution



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# HUMA SUPER POTASSIUM

# 0-0-40 SUPER POTASSIUM®

SUPER POTASSIUM is a high-potassium fertilizer. SUPER POTASSIUM promotes internal cellular strength for fruit development and maturity, and it helps to regulate the movement of water and nutrients within the plant.

# **BENEFITS AT-A-GLANCE:**

- Due to increased efficiency from MCT, 1 gallon is equivalent to 40lbs K<sub>2</sub>O
- Provides guick crop response and can be applied just prior to actual crop need
- Aids in potassium uptake in heavy clay, compacted, or high-salinity soils
- Can be mixed with nitrogen solutions for easy application

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 2 at/ac, 5 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 1 gal/ac, 10 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 gal/ac, 20 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 3 gal/ac, 30 L/ha

# STOP WAITING FOR ORGANIC CROP SOLUTIONS THAT JUST DON'T WORK

Powered by MCT, Huma has a comprehensive range of products designed to provide your crops with the right nutrition exactly when and where they need it.

Your crops require different nutrients at each stage of their growth. That's why we've created a range of organic crop nutrition and protection products designed to deliver optimal results at every step.

FOLIAR BAND APPLICATION AT 50% COVERAGE:

- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 gal/ac, 10 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 2 gal/ac, 20 L/ha

# LUCKY 7<sup>®</sup>

LUCKY 7 is a complete nutrient package containing most macro- and micronutrients. LUCKY 7 provides excellent foliar and soil nutrition for all types of crops, trees, vines, turf, and ornamentals in a wide range of conditions.

# **BENEFITS AT-A-GLANCE:**

- Blended for all soil types & regions
- Improves tolerance to environmental stresses
- Excellent product for fertigation
- Stimulates root growth in seedlings & transplants
- Improves overall plant nutrient value & vigor by increasing essential nutrient levels



# 4-14-12 38 SPECIAL®

38 SPECIAL is designed for a wide range of uses and can be applied to promote germination, fruiting, and crop vigor. It stimulates root development in seedlings and transplants, boosts plant health, and raises phosphorus levels to encourage flowering and fruit production.

# **BENEFITS AT-A-GLANCE:**

- Excellent application for legumes and starter fertilizers
- Neutral pH for better tank compatibility

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 2 qt/ac, 5 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 1 gal/ac, 10 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 gal/ac, 20 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 3 gal/ac, 30 L/ha





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# SECONDARY MACRO & MICRONUTRIENTS

Everything Your Crops Need to Grow & Thrive

Secondary macronutrients (Magnesium, Calcium, and Sulfur) and micronutrients (Boron, Copper, Iron, Manganese, Molybdenum, Nickel, and Zinc) are essential for healthy plant growth and better crop yields. They help plants use other nutrients more effectively and support strong roots, fruit development, and seed health. These nutrients boost overall plant strength, nutritive value, and yield quality.

CARBON-COMPLEXED WITH MICRO CARBON TECHNOLOGY<sup>®</sup> (MCT), OUR SECONDARY MACRO & MICRONUTRIENTS HAVE THESE KEY BENEFITS:

- Improved Nutrient Use Efficiency & Uptake
- Concentrated Formulations for Decreased
  Use Rates
- Lower Transportation & Storage Costs
- Zero or Low Phytotoxicity
- Carbon Based vs Salt Based
- Low Residue
- Aids in Lowering Carbon Intensity Scores
- Mobile in the Plant Where it Needs Them
- One Hour Absorption Rate
- Both Soil & Foliar Applied
- Resists Tie Up & Losses to the Environment



# MAX PAK<sup>®</sup>

MAX PAK is a liquid micronutrient formulation containing a carboncomplexed, highly stable source of many important micronutrients.

# **BENEFITS AT-A-GLANCE:**

- Excellent starter fertilizer
- Fantastic foliar application at all stages & all crops
- Broad spectrum approach to boost many micronutrients at once

# MICRO/SECONDARY NUTRIENTS AT-A-GLANCE:

- SULFUR (S) 3.0% • COPPER (Cu) 1.0% • BORON (B) 0.6% • IRON (Fe) 2.0%
- COBALT (Co) .05%
- MANGANESE (Mn) 1.0%
  - MOLYBDENUM (Mo) .05%
- ZINC (Zn) 3.5%

- **APPLICATION RATES:**
- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 pt/ac, 1.25 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set. linear, pivot (100% speed): Up to 1 qt/ac, 2.5 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 qt/ac, 2.5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 2 gt/ac, 5 L/ha

### **APPLICATION RATES:**

- Up to 1 qt/ac, 2.5 L/ha

# **APPLICATION RATES:**

HUMA

HUMA

 FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 qt/ac, 2.5 L/ha

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- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 2 qt/ac, 5 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 qt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gal/ac, 10 L/ha

# 44 MAG<sup>®</sup>

44 MAG maximizes magnesium absorption, a key component of chlorophyll that gives plants their green color. Magnesium is crucial for starch movement, sugar production, phosphorus transport, and regulating other nutrients. It also boosts oil and fat formation in plants.

# **MICRO/SECONDARY NUTRIENTS AT-A-GLANCE:**

- MAGNESIUM (M) 5.0%
- SULFUR (S) 5.5%
- ORGANIC MATTER (derived from humic substances) 0.5%

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# **Z-MAX®**

Z-MAX ensures efficient absorption of zinc, sulfur, manganese, and copper to enhance micronutrient nutrition and help plants manage stress. This concentrated solution boosts plant health and vigor and works well with growth regulators, pesticides, and other liquid fertilizers.

# MICRO/SECONDARY NUTRIENTS AT-A-GLANCE:

- SULFUR (S) 5.0% • MANGANESE (Mn) 2.0%
- ORGANIC MATTER (derived from humic substances) 0.2% • COPPER (Cu) 0.5%

# • ZINC (Zn) 8.0%

- **APPLICATION RATES:**
- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 qt/ac, 2.5 L/ha
- · FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 2 gt/ac, 5 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 qt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gal/ac, 10 L/ha

# **APPLICATION RATES:**

- Up to 1 qt/ac, 2.5 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 2 gt/ac, 5 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 qt/ac, 5 L/ha

FOLIAR BAND APPLICATION AT 50% COVERAGE:

 FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 2 gt/ac, 5 L/ha

 SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 qt/ac, 5 L/ha

 SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gal/ac, 10 L/ha

# CALCIUM

Huma's CALCIUM ensures maximum uptake and translocation within the plant with our Micro Carbon Technology (MCT). CALCIUM is a required nutrient for cellular strength and growth, plant health, and fruit development. It enhances stress tolerance, nodulation in legumes, early root growth, and vitality in seed crops.

# MICRO/SECONDARY NUTRIENTS AT-A-GLANCE:

- NITROGEN (N) 8.0%
- CALCIUM (Ca) 10.0%
- ORGANIC MATTER (derived from humic substances) 0.3%



# YIELD, PERCENT NET PROFIT & ROI RATIO. CONTROL VS HUMA® PROGRAM

LD (ton/ac)	% NET PROFIT	ROI RATIO
0.82	—	—
1.57	85%	2:1
1.96	139%	4:1
1.44	<b>79</b> %	3:1
1.81	131%	6:1
1.91	149%	8:1
2.34	185%	4:1

### TOTAL PEANUTS YIELD PER ACRE. CONTROL VS HUMA PROGRAM



# CASE STUDY **HUMA PROGRAM INCREASES PEANUT YIELD UNDER SEVERE CONDITIONS**



- FOLIAR BAND APPLICATION AT 50% COVERAGE:
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gal/ac, 10 L/ha

# **IRO-MAX<sup>®</sup>**

IRO-MAX provides effective and quick iron uptake into the plant. Iron is a key micronutrient involved in photosynthesis that also enables other biochemical processes such as respiration, symbiotic nitrogen fixation, and transfer of ATP within the plant.

# MICRO/SECONDARY NUTRIENTS AT-A-GLANCE:

- NITROGEN (N) 12.0% IRON (Fe) 8.0%
- SULFUR (S) 3.0%
- ORGANIC MATTER (derived from humic substances) 10.5%





# **BORO-PRO®**

BORO-PRO helps with cell division, plant metabolism, cell structure, sugar transport, pollination, and seed development. It enhances pollen viability and pollination in flowering crops and supplies boron nutrition necessary for proper growth and maturation. Formulated with MCT®, ensures efficient and effective uptake.

# MICRO/SECONDARY NUTRIENTS AT-A-GLANCE:

- BORON (B) 10.0%
- ORGANIC MATTER (derived from humic substances) 0.5%

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1cup/ac, 700 mL/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 1 pt/ac, 1.25 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 pt/ac, 1.25 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 qt/ac, 2.5 L/ha

## **APPLICATION RATES:**

- Up to 1 cup/ac, 0.65 L/ha

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 cup/ac, 700 mL/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 1 pt/ac, 1.25 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 pt/ac, 1.25 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gt/ac, 2.5 L/ha

# COPPER

COPPER is a micronutrient involved in many plant metabolic processes including photosynthesis, enzyme activity, protein metabolism, nitrogen regulation, and plant vigor. COPPER deficiency affects grain, seed, and fruit formation. Formulated with MCT<sup>®</sup>, ensures efficient and effective uptake.

# MICRO/SECONDARY NUTRIENTS AT-A-GLANCE:

- MAGNESIUM (M) 5.0%
- SULFUR (S) 5.5%
- ORGANIC MATTER (derived from humic substances) 0.5%





# HUMA

# 8-0-0 SULFUR

SULFUR enables sulfur nutrient absorption by the plant. SULFUR is a major nutrient involved in respiration, photosynthesis, amino acid metabolism, plant growth, and vigor.

# **MICRO/SECONDARY NUTRIENTS AT-A-GLANCE:**

- NITROGEN (N) 8.0%
- SULFUR (S) 10.0%
- ORGANIC MATTER (derived from humic substances) 0.1%

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 qt/ac, 2.5 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 2 qt/ac, 5 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 gal/ac, 20 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gal/ac, 10 L/ha

# STOP WAITING FOR ORGANIC CROP SOLUTIONS THAT JUST DON'T WORK

Powered by MCT, Huma has a comprehensive range of products designed to provide your crops with the right nutrition exactly when and where they need it.

Your crops require different nutrients at each stage of their growth. That's why we've created a range of organic crop nutrition and protection products designed to deliver optimal results at every step.

FOLIAR BAND APPLICATION AT 50% COVERAGE:

 FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 1 qt/ac, 1.25 L/ha

 SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 qt/ac, 1.25 L/ha

 SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 qt/ac, 2.5 L/ha

# COBALT

COBALT is carbon-complexed with Micro Carbon Technology<sup>®</sup> which ensures efficient and effective uptake. COBALT is a micronutrient essential for nodulation of legumes, microbial function, and recovery from plant stress. It is the central element of the B-12 vitamin.

## MICRO/SECONDARY NUTRIENTS AT-A-GLANCE:

- COBALT (Co) 5.0% ORGANIC MATTER (derived from humic substances) 0.1%
- SULFUR (S) 2.5%



# MANGANESE

MANGANESE is a micronutrient involved in many plant metabolic activities, including photosynthesis, enzyme activity, and nutrient regulation. Formulated with MCT<sup>®</sup>, it ensures efficient and effective uptake.

# MICRO/SECONDARY NUTRIENTS AT-A-GLANCE:

- NITROGEN (N) 8.0%
- SULFUR (S) 10.0%
- ORGANIC MATTER (derived from humic substances) 0.1%

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 cup/ac, 700 mL/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set. linear, pivot (100% speed): Up to 1 pt/ac, 1.25 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 pt/ac, 1.25 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gt/ac, 2.5 L/ha



**PRO TIP Organic Products** feature 'OM' in the product name, which stands for 'Organic Material'.

# HUMA



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# OPTIMAL **GROWTH MANAGERS** Give Your Plants What They Need, When

# Give Your Plants What They Need, When They Need It

Huma<sup>®</sup> provides top-quality, user-friendly plant growth nutrients that help plants naturally produce their own beneficial hormones.

CARBON-COMPLEXED WITH MICRO CARBON TECHNOLOGY<sup>®</sup> (MCT), OUR GROWTH MANAGERS HAVE THE FOLLOWING KEY BENEFITS:

- User Friendly, Highly Compatible in Tank Mixes
- Doesn't Provide Hormones, but Rather Stimulates the Plant to Produce its own Naturally
- Due to Natural Processes, Works in all Crops and Climates
- Contain Nutrient Levels which Aid in
  Processes
- Fast Acting, Results in Days
- No Adverse Side Effects
- Helps Reduce Environmental Stresses





# 8-16-4 VITOL®

VITOL supports the plant's natural growth processes, promoting vegetative development and fruit sizing. It boosts nutrient uptake and ensures a smooth transition through different growth stages.

# **BENEFITS AT-A-GLANCE:**

- Plant energy and photosynthesis booster
- Accelerates plant vigor
- Improves plant recovery from environmental stresses
- Stimulates cellular elongation
- Relieves plant from both abiotic and biotic stress
- Tap root stimulant

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 qt/ac, 2.5 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set. linear, pivot (100% speed): Up to 2 gt/ac, 5 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 gt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gal/ac, 10 L/ha

## **APPLICATION RATES:**

- Up to 1 qt/ac, 2.5 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 qt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gal/ac, 10 L/ha

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- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 qt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 1 gal/ac, 10 L/ha

# **CROP-GARD®**

CROP-GARD provides nutrients and refined plant oils for natural plant vigor. It also achieves balanced plant nutrition for better plant color, growth, development, and production. It prevents yellowing of leaves and can be used in combination with any Huma<sup>®</sup> nutrients.

# **BENEFITS AT-A-GLANCE:**

- Enhances plant's natural ability to tolerate stresses, especially diseases
- Can be used in rotations of foliar fungicides
- Enhanced with VITOL for improved plant health & vigor







Boll counts at this time were: 44 (untreated) vs. 65 bolls (treated)



# 0-1-20 JACKPOT®

JACKPOT is a concentrated blend of potassium and boron that supports the metabolic processes for improving fruit quality by moving nutrients, proteins, carbohydrates, and sugars from leaves and stems into the fruit. To maximize results, JACKPOT should be applied with Huma's CALCIUM.

# **BENEFITS AT-A-GLANCE:**

- Uniform fruit maturity
- Improves shelf life

- Enhances marketable yield
- Improves size, color, & BRIX

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 qt/ac, 2.5 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 2 qt/ac, 5 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 2 gt/ac, 5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 3 qt/ac, 7.5 L/ha



# CASE STUDY **BREAKOUT® INCREASES COTTON YIELDS 20%**

HUMA BREAKOUT



FOLIAR BAND APPLICATION AT 50% COVERAGE:

 FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 2 qt/ac, 5 L/ha

# **BREAKOUT®**

BREAKOUT supports the plant's natural growth processes, promoting reproductive and germination development.

# **BENEFITS AT-A-GLANCE:**

- Stimulates cellular division
- Helps stack nodes & improve branching
- · Provides energy for uniform bud break & accelerate fruiting buds

3500

2900

2300

1700

1100

500

- Not only improves uniform flowering, but also quantity & quality of flowers
- Gives more energy for decreased abortion, improving fruit set & yield

SEED COTTON YIELD PER ACRE, CONTROL vs BREAKOUT®

X 3 APPLICATIONS

3099.03

BREAKOUT® x 3







Boll counts at this time were: 26 (untreated) vs. 50 bolls (treated)



# 5-23-4 GOLDEN PRO®

GOLDEN PRO helps in providing essential plant nutrients that boost fruit size, guality, and yield. It combines nitrogen, phosphorus, potassium, and calcium in a stable, effective formula, ensuring each nutrient's benefits are maximized for optimal plant growth and fruit production

# **BENEFITS AT-A-GLANCE:**

- Increases fruit quality & shelf life
- Improves uniformity of fruit size
- Improves color & sugar levels (BRIX)

2584.35

CONTROL

# **APPLICATION RATES:**

- FOLIAR BAND APPLICATION AT 50% COVERAGE: Up to 1 qt/ac, 2.5 L/ha
- FOLIAR BROADCAST OR SPRINKLERS: solid, set, linear, pivot (100% speed): Up to 2 gt/ac, 5 L/ha
- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 gt/ac, 2.5 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 2 qt/ac, 5 L/ha



# ZERO-RESIDUE **CROP PROTECTION** Organic Biopesticides with Proven Results

Huma's Zero-Residue Crop Protection products efficiently treat disease and insect-infested plants and soils on your farm. Our pest control products are designed to work on a broad range of diseases as well as soft-bodied insects and then decompose without posing an environmental risk to beneficial insects or humans. These products are not harmful to the environment, and they get the job done.

CARBON-COMPLEXED WITH MICRO CARBON TECHNOLOGY<sup>®</sup> (MCT), OUR CROP PROTECTION PRODUCTS HAVE THE FOLLOWING KEY BENEFITS:

- Organic Biopesticides (OMRI listed, EPA-exempt)
- Contains Natural Substances (such as botanical oils, proteins, minerals, etc.) to Control Nematodes, Fungi, Bacteria, Insects, and other Plant Diseases
- Apply at any Stage for any Crop, Even the Day of Harvest
- Fast Acting upon Contact (Zero Re-entry), then Biodegradeable
- Safe for Beneficial Insects & the Environment
- Cost-Effective Performance
- Broad Spectrum, Locally Systemic





# **PROMAX®**

PROMAX is an organic-listed, EPA-exempt crop protection soil-applied product that controls plant parasitic nematodes and soil-borne diseases. It offers high performance with minimal residual effects and is compatible with most agrochemicals. It is recommended to apply ZAP® after the final PROMAX application.

2,651

Grower's Standard (GS)

# **BENEFITS AT-A-GLANCE:**

 Powerful control provides cost-effective & eco-friendly alternative to fumigants

3500

3000

2500

2000

1500

1000

10lb

- Superior nematode control
- Provides excellent control of soil-borne pathogens
- Cost-effective performance
- Fast-acting upon contact

# **APPLICATION RATES:**

- SOLID BANDED OR INJECTED THROUGH DRIP TAPE/MICRO SPRINKLERS: Up to 1 gal/ac, 10 L/ha
- SOIL BROADCAST SPRAY INCORPORATED, FLOOD OR FURROW IRRIGATED: Up to 2 gal/ac, 20 L/ha

# Restricted Entry Interval (REI): 0 days

• Pre-Harvest Interval (PHI): 0 days







# MIXING GUIDE FOR HUMA® LIQUIDS

# CASE STUDY HUMA® PROGRAM INCREASES **STRAWBERRY YIELDS BY 14%**

HUMA PROMAX

(4 Treatment Programs Replicated 6 Times on 40' x 3.33' Plots)



# 500

# **GENERAL FOLIAR APPLICATION RATES:** 0.5–1 qt: 15–25 gal/ac 1–2 qt: 25–50 gal/ac 2-4 qt: 50-100 gal/ac 4-8 qt: 100-200 gal/ac



# PROUD 3<sup>®</sup>

PROUD 3 is an organic-listed, foliar-applied crop protection product that acts as a miticide, fungicide, and insecticide. It supports Integrated Pest Management, offers high performance with minimal residual effects, and is compatible with most other agricultural products, making it suitable for tank mixes and rotation programs.

2,815

GS + Promax®

# **BENEFITS AT-A-GLANCE:**

bacterial diseases in crops

Fast-acting upon contact

- Directly affects soft-bodied insects & mites
- Cost-effective performance Provides excellent control against fungal/
  - · Safe for crops, humans, and the environment

GS + Promax<sup>®</sup> + Zap<sup>®</sup> +

Huma® Foliar Nutrient

- Restricted Entry Interval (REI): 0 days
- Pre-Harvest Interval (PHI): 0 days
- · Activates natural defense mechanisms in plants

TOTAL STRAWBERRY TRAYS YIELD PER ACRE

1. Please perform a jar test before mixing in large quantities.

2. The mixing container should be fiberglass, plastic, stainless steel, or rubber-lined and capable of withstanding heat exchanges.

3. Use a large enough container to adequately handle the initial mixture, plus room in the container for at least twice the water.

4. Use a stir rod such as a 3-to-6-foot PVC pipe or use a mix tank agitation system.

5. Start making the mix by adding into the container half the water you plan to use.

6. Use a 3-gallon measuring bucket with a handle for measuring the products to add, and/or use a 1-quart/1-liter measuring pitcher with ounces and/or mL increments for small measurements.

7. Add or mix the Huma products into the water in the order from most acidic to most basic or alkaline. From pH ( $\leq$  1.0) to pH ( $\geq$  14.0).

8. Fill the container capacity with the rest of the water you will use.

9. As a rule of thumb, leave the products with the most basic pHs (> 7.0), such as SUPER POTASSIUM<sup>®</sup>, until the very last and add very slowly. If there is a reaction, it will be immediate, but with a little patience and stirring, it should mix in well.

10. If adding a pesticide or fungicide to the fertilizer solution, add after all the Huma products are thoroughly mixed. Do a jar test first for compatibility.

11. Never apply total Huma products plus other ag chemicals at more than 10% concentration of the finished application mix.

Visit Huma.us or Contact your Huma Sales Manager or Distributor for More Information

# **PRODUCT pH (Acid to Basic)**

CALCIUM	≤ 1.0
GOLDEN PRO®	≤ 1.0
SUPER PHOS®	≤ 1.0
SULFUR	0.5–1.5
CROP-GARD®	1.0-2.0
MAX PAK®	1.0-2.0
44-MAG®	1.5–2.5
BREAKOUT®	1.5–2.5
IRO-MAX®	1.5–2.5
MANGANESE	1.5-2.0
VITOL®	1.5–2.5
Z-MAX <sup>®</sup>	1.5–2.5
COBALT	2.0-3.0
COPPER	2.0-3.0
LUCKY 7®	3.5-4.5
SURF-MAX®	4.0-5.0
ZAP®	4.0-5.0
PROUD 3®	4.5-6.0
FERTIL HUMUS®	5.0-6.0
PROMAX®	5.0-6.0
38 SPECIAL®	6.5–7.5
BORO-PRO®	6.6–7.6
SUPER NITRO®	7.0-8.5
FERTIL SOIL®	7.5-8.5
MOLYBDENUM	8.0-9.0
X-TEND <sup>®</sup>	8.0-9.0
X-TEND <sup>®</sup> B	8.0-9.0
HUMA PRO® 16	11.0–12.0
JACKPOT®	≥ 14.0
SUPER POTASSIUM®	≥ 14.0













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	CROP PROGRAM		And and a state of the local division of the local division of the local division of the local division of the	
N. CARLON	SOIL HEALTH:	VEGETATIVE PROGRAM:	REPRODUCTIVE PROGRAM:	SIZING:
	Fertigate and/	VITOL®	BREAKOUT®	GOLDEN PRO®
	or inject ZAP® PROMAX®	SUPER PHOS® CALCIUM	MAX PAK® NICKEL	SUPER POTASSIUM®







the second s	— CROP PROGRAM ——			-	
Sections. It is the	PLANTING:	EARLY VEGETATION:	PEGGING:	PODDING:	SIZING:
ANUTS	ZAP®	VITOL® SUPER PHOS® MAX PAK®	BREAKOUT® MAX PAK®	BREAKOUT® MAX PAK®	JACKPOT® MAX PAK® CALCIUM

3



# LIQUID PRODUCT COMPARISON GUIDE

CARBON-RICH ORGANIC ACIDS		PH	WEIGHT	CARBON-RICH ORGANIC ACIDS	N %	P <sub>2</sub> O <sub>5</sub> %	K <sub>2</sub> O %	CA% MG%	S %	FE %	B% MO%	ZN % CL	5% MN %	CO % SIO <sub>2</sub> % NI % FA		
FULVI PRO®	Fulvic acid product that provides a carbon food source for the beneficial microbial population in the soil.	1.5–2.5	9.18 lb/gal, 1.05 kg/L	FULVI PRO ®										10		6.0
HUMA PRO® 16	Liquid humic acid product used for carbon-depleted soil conditions.	11.0-12.0	9.01 lb/gal, 1.10 kg/L	HUMA PRO® 16			2.0									10.0
HUMA PRO® MIX	Mix improves unbalanced soil by adding humic acid, which promotes healthier soil for sustainable plant growth.	7.0-8.0	8.84 lb/gal, 1.06 kg/L	HUMA PRO® MIX		2.0	3.0								8.0	
STABLESOL® LIQUID	Treats unbalanced soil conditions caused by a lack of humic acid, promoting a stronger, healthier soil for plant growth.	9.0-10.0	9.59 lb/gal, 1.15 kg/L	STABLESOL® LIQUID			6.0		2.0						20	
X-TEND® (B) 6-2-0	Increases efficiency, release, and uptake of fertilizers. (B with blue dye added.)	8.0-9.0	8.68 lb/gal, 1.05 kg/L	X-TEND <sup>®</sup> B 6-2-0	6.0	2.0										9.0
SOIL ACTIVATORS	DESCRIPTION	PH	WEIGHT	SOIL ACTIVATORS		P <sub>2</sub> O <sub>5</sub> %	K₂O %	CA % MG %			B % MO %			CO % SIO <sub>2</sub> % NI % FA		
FERTIL HUMUS <sup>®</sup> 24-0-0	Feeds beneficial fungal activity, digests crop residue, and builds a humus-rich soil.	5.0-6.0	10.43 lb/gal, 1.20 kg/L	FERTIL HUMUS <sup>®</sup> 24-0-0	24.0					0.1		0.05	0.05			11.5
FERTIL SOIL® 5-0-0	Improves soil structure and feeds the beneficial bacteria activity in the soil.	7.5–8.5	8.76 lb/gal, 1.05 kg/L	FERTIL SOIL <sup>®</sup> 5-0-0	5.0					0.1		0.05	0.05			11.0
SURF-MAX®	A surfactant that improves water penetration and lateral movement within the root zone.	4.0-5.0	9.07 lb/gal, 1.00 kg/L	SURF-MAX®												
ZAP® 8-0-0	Creates a balanced soil environment by feeding a strong, vigorous soil biology.	4.0-5.0	9.18 lb/gal, 1.00 kg/L	ZAP <sup>®</sup> 8-0-0	8.0				1.0			0.05	0.05			8.5
MACRONUTRIENTS	DESCRIPTION	РН	WEIGHT	MACRONUTRIENTS	N %	P <sub>2</sub> O <sub>5</sub> %	К <sub>2</sub> О %	CA% MG%	<b>S %</b>	FE %	B % MO %	ZN % CL	J % MN %	CO % SIO <sub>2</sub> % NI % FA	% HA %	DM%
38 SPECIAL® 4-14-12-8S	A multi-purpose blend of primary nutrients. Can be used as a starter mix.	6.5–7.5	11.68 lb/gal, 1.35 kg/L	38 SPECIAL® 4-14-12	4.0	14.0	12.0		8.0							0.2
LUCKY 7 <sup>®</sup> 7-7-7	Is a complete nutrient package containing most macro and micronutrients.	3.5-4.5	10.80 lb/gal, 1.20 kg/L	LUCKY 7 <sup>®</sup> 7-7-7	7.0	7.0	7.0	0.5	1.0	0.10	0.02 0.006	0.05	0.05	0.01		7.00
SUPER NITRO® 30-0-0	A nitrogen source that can be foliar applied without causing damage, or to the soil, providing a steady release of nitrogen in root zone.	7.0-8.5	10.60 lb/gal, 1.20 kg/L	SUPER NITRO® 30-0-0	30.0											11.0
SUPER PHOS <sup>®</sup> 0-50-0	A concentrated phosphorus formulation for maximizing availability and uptake by plants.	≤ 1.0	12.44 lb/gal, 1.40 kg/L	SUPER PHOS® 0-50-0		50.0										0.01
SUPER POTASSIUM® 0-0-40	A concentrated potassium product, complexed to maximize uptake by plant.	≥ 14.0	12.18 lb/gal, 1.35 kg/L	SUPER POTASSIUM® 0-0-40			40.0									0.5
SECONDARY MACRO & MICROS	DESCRIPTION	РН	WEIGHT	SECONDARY MACRO & MICROS	N %	P <sub>2</sub> O <sub>5</sub> %	K <sub>2</sub> O %	CA % MG %	<b>S %</b>	FE %	B % MO %	ZN % CL	1% MN %	CO % SIO <sub>2</sub> % NI % FA	% HA %	0M %
44 MAG®	Provides maximum assimilation of magnesium.	1.5–2.5	10.68 lb/gal, 1.20 kg/L	44 MAG®				5.0	5.5							0.5
BORO-PRO®	Provides effective uptake of boron.	6.6-7.6	10.85 lb/gal, 1.30 kg/L	BORO-PRO®							10.0					10.0
CALCIUM 8-0-0	Provides maximum calcium uptake and translocation within the plant.	≤ 1.0	11.60 lb/gal, 1.39 kg/L	CALCIUM 8-0-0	8.0			10.0								0.3
COBALT	Provides effective uptake of cobalt in plants.	2.0-3.0	9.60 lb/gal, 1.15 kg/L	COBALT					2.0					5.0		0.5
COPPER	Provides effective uptake of copper in plants.	2.0-3.0	9.77 lb/gal, 1.10 kg/L	COPPER					3.0			5.	.0			0.2
IRO-MAX <sup>®</sup> 12-0-0	Provides effective and rapid uptake of iron in plants.	1.5–2.5	10.90 lb/gal, 1.20 kg/L	IRO-MAX <sup>®</sup> 12-0-0	12.0				3.0	8.0						10.5
MANGANESE	Provides effective uptake of manganese in plants.	1.5–2.0	9.18 lb/gal, 1.10 kg/L	MANGANESE					2.5				5.0			4.5
MAX PAK <sup>®</sup>	Is a highly stable source of many important micronutrients.	1.0-2.0	10.70 lb/gal, 1.30 kg/L	MAX PAK®					3.0	2.0	0.60 0.05	3.5 1.	0 1.0	0.05		6.0
MOLYBDENUM	Provides effective uptake of molybdenum in plants.	8.0-9.0	9.16 lb/gal, 1.10 kg/L	MOLYBDENUM							5.0					0.02
SULFUR 8-0-0	Provides effective uptake of sulfur in plants.	0.5-1.5	10.35 lb/gal, 1.20 kg/L	SULFUR 8-0-0	8.0				10.0							0.1
Z-MAX <sup>®</sup>	Provides effective uptake of zinc, sulfur, manganese, and copper in plants.	1.5–2.5	11.51 lb/gal, 1.30 kg/L	Z-MAX <sup>®</sup>					5.0			8.0 0				0.02
GROWTH MANAGERS	DESCRIPTION	РН	WEIGHT	GROWTH MANAGERS	N %	P <sub>2</sub> O <sub>5</sub> %	K <sub>2</sub> O %	CA% MG%	S %	FE %	B % MO %	ZN % CL	1% MN %	CO % SIO <sub>2</sub> % NI % FA	% HA %	DM%
BREAKOUT <sup>®</sup> 4-14-3	Feeds the natural metabolic process within the plant for enhanced bud initiation, flowering, and fruit set.	1.5–2.5	10.77 lb/gal, 1.20 kg/L	BREAKOUT® 4-14-3	4.0	14.0	3.0									10.5
CROP-GARD <sup>®</sup> 1-7-1	Achieves balanced plant nutrition for better plant color, growth, development, and production.	1.0-2.0	10.44 lb/gal, 1.20 kg/L	CROP-GARD® 1-7-1	1.0	7.0	1.0		2.0			2.0 0	.2 0.5			3.0
GOLDEN PRO® 5-23-4	Provides nutrients to feed the metabolic processes necessary for improved fruit sizing, quality, and yield.	≤ 1.0	12.43 lb/gal, 1.40 kg/L	GOLDEN PRO® 5-23-4	5.0	23.0	4.0	4.0								0.1
JACKPOT <sup>®</sup> 0-1-20	Feeds the metabolic processes necessary for uniform fruit maturity and improved shelf life.	≥ 14	10.87 lb/gal, 1.25 kg/L	JACKPOT® 0-1-20		1.0	20.0				0.5					5.5
VITOL® 8-16-4	Increases vertical foliar growth, fruit size, and uniformity. Improves plant recovery from environmental stresses.	1.5–2.5	10.10 lb/gal, 1.25 kg/L	VITOL <sup>®</sup> 8-16-4	8.0	16.0	4.0		1.0	0.1		0.05	0.05			6.0
CROP PROTECTION	DESCRIPTION	РН	WEIGHT	CROP PROTECTION	N %	P <sub>2</sub> O <sub>5</sub> %	K <sub>2</sub> 0 %	CA % MG %	S %	FE %	B % MO %	ZN % CL	1 % MN %	CO % SIO <sub>2</sub> % NI % FA	% HA %	ом %
PROMAX®	Broad-spectrum soil fungicide and nematicide.	5.0-6.0	9.12 lb/gal, 1.09 kg/L	PROMAX®												
PROUD 3®	Foliar insecticide, miticide, bactericide, and fungicide.	4.5-6.0	8.34 lb/gal, 1.00 kg/L	PROUD 3®												



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