



EMERALD
HARVEST®

**SIMPLE,
EASY
SUCCESS**



WELCOME TO EMERALD HARVEST





A MESSAGE FROM OUR FOUNDERS

Thank you for your interest in Emerald Harvest!

You want simple, easy success—and you deserve it. While working with hundreds of growers and store owners over many years, we listened to your concerns. The message was clear: The industry wants and needs a compact line of nutrients that combines the very best of science and nature in a simple, easy-to-use program that gives professional results. That's Emerald Harvest.

Growing isn't just your passion. It's your business. We get it.

We're confident you will love the results in your gardens, both in terms of the quantity and the quality of your yields. You will also appreciate the ease of use of our products. That's why all our products are 100 percent satisfaction guaranteed.

Read through this product guide, learn all you can learn about our unrivalled product line and then reach out to us. Our team of hydroponics professionals are always ready to help.

To set up an appointment with one of our representatives, please call 1.866.325.8235 or email us at info@emeraldharvest.co

On behalf of the entire Emerald Harvest team, we wish you plentiful, profitable harvests!

Robert Higgins
CEO

David Pratt
President

Sharon Higgins
COO

WHY EMERALD HARVEST?

WHAT WE SET OUT TO ACHIEVE AT EMERALD HARVEST:

- Create the finest brand of plant fertilizers possible.
- Combine the best that science and nature have to offer.

We knew we needed to take a scientific approach to create the high-quality base nutrients and supplements we offer today. So we hired a top-notch organic chemist with years of field experience, vast knowledge and profound understanding of how plants reach their maximum genetic potential. We then did extensive testing and spent the time and energy required to fully understand what other products are being offered and why there is so much product confusion on the market.

Until now, the leading hydroponic fertilizer companies have been pushing quantity to growers over quality or efficiency. All of the big-name brands push extensive product lines, fed to crops through overly complex feeding programs. Our solution was to simplify without sacrificing quality by putting as many nutrients and additives as we could into every formulation. The result is our easy-to-use, yet very powerful, line of premium nutrients and supplements.

To achieve this, we needed to cut through a common misconception in our industry: the idea that more products mean better results. As it stands now, many additives, such as rhizobacteria and fungi, carbohydrates, amino acids, vitamins, enzymes, chelated micronutrients and rare earth elements, are sold as standalone products. Growers like you are also offered an array of organic additives, such as kelp meal, bat guano, alfalfa meal, worm castings, bone meal, fish meal, leonardite and humic acid; the list goes on and on. Rather than helping you grow better,

too many choices leave you feeling misled and confused. While many of the products available have well-known benefits, we agree with you that using so many single-bottle supplements is costly and frankly wasteful.

OUR GOAL

We have set a clear mandate to build, develop and manufacture a superlative product line. Because certain compounds cannot be combined in the same formulations and retain their benefit to plants, our team of scientists has worked out the best way to streamline our products so they work well for you and your plants. After careful testing, we've brought many of these standalone additives together in our unique, compact product line.

SCIENTIFIC BREAKTHROUGHS

For example, we use superconcentrates in many of our products. This fantastic scientific breakthrough makes it possible to combine and deliver the full power of multiple compounds in a simple, one-step formulation.

Take our **Emerald Goddess**® premium plant tonic. The most extensive and concentrated supplement of its kind, it can be used as a standalone nutrient, but it works best when combined with one of our professional base nutrient series.

Another innovative, unique contribution to the industry is our introduction of hemp seed protein in **King Kola**®, our powerful bloom booster. Other companies use a bovine-based protein. Although animal-based proteins and the amino acid profile they provide do offer certain benefits, our research indicates that plant-based hemp seed protein matches the amino profile of your crops exactly, thereby providing the superlative building blocks necessary for your plants to reach their maximum genetic potential.

Why Emerald Harvest? Because we offer the streamlined, scientifically backed premium nutrients and supplements that growers want for simple, easy success.

YOUR SUCCESS

YOU SPEAK. WE LISTEN.

The idea of Emerald Harvest was the fruit of thousands of conversations with growers like you. You told us how devoted you are to your plants.

We witnessed firsthand your knowledge and expertise. We learned you have needs that nutrient companies are not addressing.

What you want is an easy-to-use, high-quality nutrient brand offered at a reasonable price.

That's exactly what you get with Emerald Harvest.

WE PROVIDE YOU WITH PREMIUM NUTRIENTS IN A STREAMLINED PRODUCT LINE.

Our base nutrients pack maximum punch per liter. Our simple, yet powerful range of one-and-done supplements meets the nutritional needs of the most demanding crop strains.

Our easy-pour smart bottles minimize spillage, safeguarding you from product loss.

Spend less time mixing nutrients and spilling away profits and more time enjoying your garden and expanding your business. Help your plants reach their maximum genetic potential without undue complexity or expense. Buy Emerald Harvest for simple, easy success.

WE BELIEVE.

THIS IS WHAT WE STAND FOR.

- **We have a fresh approach to our customers**, both to our immediate customers—distributors and hydroponic retail stores—and to our ultimate customers: growers. We consider you our partners in profit, not our cash cows. We know that your success is our success. We don't patronize you. Instead, we show our gratitude for your business in everything we do—and without pressure, intimidation or hype.

- **We have a fresh attitude toward our entire industry**, including our competitors. We see them not only as business rivals, but also as peers, with whom we have many common interests. We want to join them in lobbying to assure the industry and its community are secure and can keep growing. We hope to work with them to guarantee growers top-notch nutrients free of harmful additives or byproducts. For this reason, we seek to set a good example by partnering with fertilizer regulators, rather than combating them. We want our industry to produce only what is best for growers and for the public at large.

What's new that we bring to the table? Well, where should we begin?

- **We have a bold new look.** Take a look at our labels. They are a source of pride.

- **We have an industry first: an easy-pour smart bottle that reduces spillage and looks sharp to boot.** It has a flow-back spout that provides better security, less wastage and less spoilage. It's much easier to handle and the cap on the 2-qt and 1-gal bottles acts as

a built-in measuring device. This is a revolution in the grow room.

- **We have new formulations.** Our product line is straightforward, and yet it goes beyond merely covering all the bases. As a complete line, our products include a wealth of chelated micronutrients, as well as humic acid, vitamin B₁, kelp extract, carbohydrates, silica, hemp seed flour and much more. Everything is offered in as few products as possible, so you have less clutter in your grow room and more money in your wallet—and that's even before we start talking yields!

So that's us: we bring to you the streamlined, scientifically backed premium nutrients and supplements that you want for simple, easy success. Emerald Harvest is here because of you, because you deserve the best.

Get premium yields and sustainable value.

Available sizes:

- 1 qt
- 2 qt
- 1 gal
- 2.5 gal
- 6 gal
- 55 gal
- 270 gal



! Keep all products above 48°F (8.8°C) and under 80°F (26.6°C).

AGRONOMIC SERVICES

Emerald Harvest Commercial Agronomic Services leverages our network of experts and their accumulated knowledge so that you—growers, farmers and commercial customers—enjoy business success.

At Emerald Harvest Commercial Agronomic Services, we believe in delivering better harvests for a growing world through exceptional crop solutions. To achieve this, we take a balanced approach to agriculture by producing a broad range of high-yield bulk fertilizers, developing innovative custom products, offering crop-consulting services and recommending horticultural technologies that increase productivity in a sustainable way.

Our mission is to be an industry innovator that sets high standards through strong performance and growth. Our solutions deliver premium yields to farmers, growers and commercial customers and sustainable value to our distributors and our wholesale and retail partners.

You can leverage our global presence and economies of scale. Call one of our knowledgeable representatives to learn more about Emerald Harvest Commercial Agronomic Services and how you can become a partner.

RESULTS 100% GUARANTEED—YOU HAVE OUR WORD ON IT, IN WRITING



At Emerald Harvest, we guarantee our product performance and customer satisfaction. That's why we back our products with a 100% guarantee. If you are not completely satisfied with the results of using any of our products, simply return the product and proof of purchase to the retailer where you purchased it, and they will gladly offer you

a refund, replacement or credit toward your next purchase.

We also welcome customer feedback about Emerald Harvest on how we can better serve you. If you have questions or comments, email us at info@emeraldharvest.co or call us toll-free at 1.866.325.8235.

BASE NUTRIENTS

Our two professional nutrient series cater to two types of growers: a 2-part for those who like to keep it simple and a 3-part for those who want the freedom to fine-tune. Both of our bases are fully developed fertilizers: every element that is typically used by plants to grow is in the bottles. What sets our base nutrients apart is the high degree of chelation and precise nutrient ratios and concentrations that minimize the risk of deficiencies and ensure your plants get a diet that mirrors their nutritional needs throughout their life cycles.

BENEFITS:

- **You give your crops all the nourishment they need—and even save money by minimizing unabsorbed nutrients.** None of the elements your plants need have been left out of our base formulations, and the chelated micronutrients increase nutrient uptake while providing insurance against nutrient lockout:
 - **Emerald Harvest base nutrients contain optimal levels of essential elements.** According to Liebig's Law of the Minimum, your plants need at least a certain amount of every essential element to thrive. Each of our professional nutrient series constitutes a full feeding program.
 - **Emerald Harvest base nutrients offer high levels of chelated micronutrients.** Few competing base nutrients contain a comparable amount of chelation—if they include chelates at all:
 - Chelation is important for two reasons:
 - o Chelates form complexes that are readily absorbed by the roots, which means more of the nutrients you feed your crops actually get used as plant food, rather than binding to the growing medium or running to waste.
 - o Chelates also extend the pH range of each micronutrient, reducing the risk of nutrient lockout and deficiencies.

- Our base nutrients contain four chelated micronutrients—the maximum number possible:
 - o Copper activates certain plant enzymes and assists chlorophyll production and lignin formation.
 - o Iron assists in chlorophyll production and activates metabolic processes important to respiration and photosynthesis.
 - o Manganese partners with iron in chlorophyll production.
 - o Zinc helps regulate plant growth.

- **You supply your crops with the right ratio of nutrients suited to every week of every phase of their life cycle.** Although your plants always need the minimum of each essential element, their specific diet of nutrients (more of this, less of that) changes as they grow and mature throughout their life cycle:

Our scientists have meticulously mapped out your crop's specific dietary needs for you.

– **Emerald Harvest base nutrients vary the ratios of nutrients.** During the vegetative phase, crops need a higher percentage of nitrogen than phosphorus or potassium; during the flowering phase, the reverse is true.

However, crop dietary needs are even more specific than that. Secondary macronutrient and micronutrient ratios also need to be adjusted during each of the crop life cycle phases—indeed, each week!

- **Emerald Harvest base nutrients vary the concentrations of nutrients.** The concentrations of specific nutrients increase or decrease in tandem with the ratios. Our scientists have meticulously mapped out your crop's specific dietary needs for you. Just follow the feeding chart most suited to your strain's appetite. The result is consistently well-nourished crops, harvest after harvest.



CALI PRO® GROW & BLOOM

PROFESSIONAL 2-PART NUTRIENT SERIES

Take the math out of growing.

With Cali Pro, you spend less time measuring and tweaking your feeding program and more time tending to your high-value crops. Our 2-part base nutrients are popular with growers who prefer to keep things simple. With Cali Pro, feeding your crops couldn't be easier: just mix equal portions of parts A and B according to the application rates on the bottle or the feeding chart best suited to your strain. Cali Pro takes the math out of growing!

TIPS & TRICKS:

- Maintain the water temperature in the reservoir at 62–70°F (16.6–21°C) and its pH at 5.6–6.3.
- Add and dilute Part A to the reservoir first because it has more reactive ingredients in it. Mix it well and then add Part B, followed by any or all of the supplements.

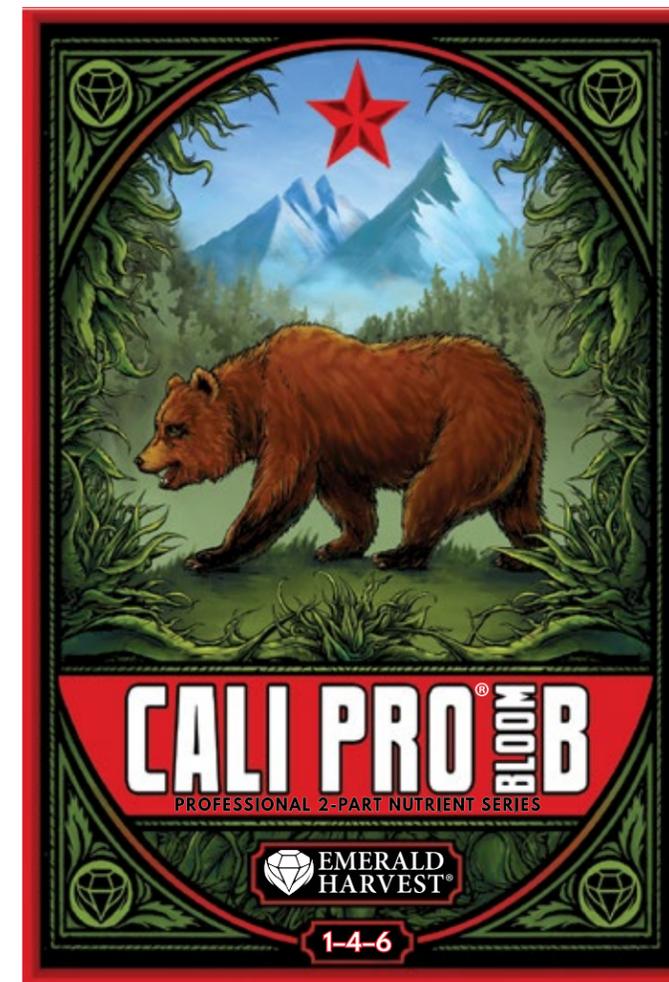
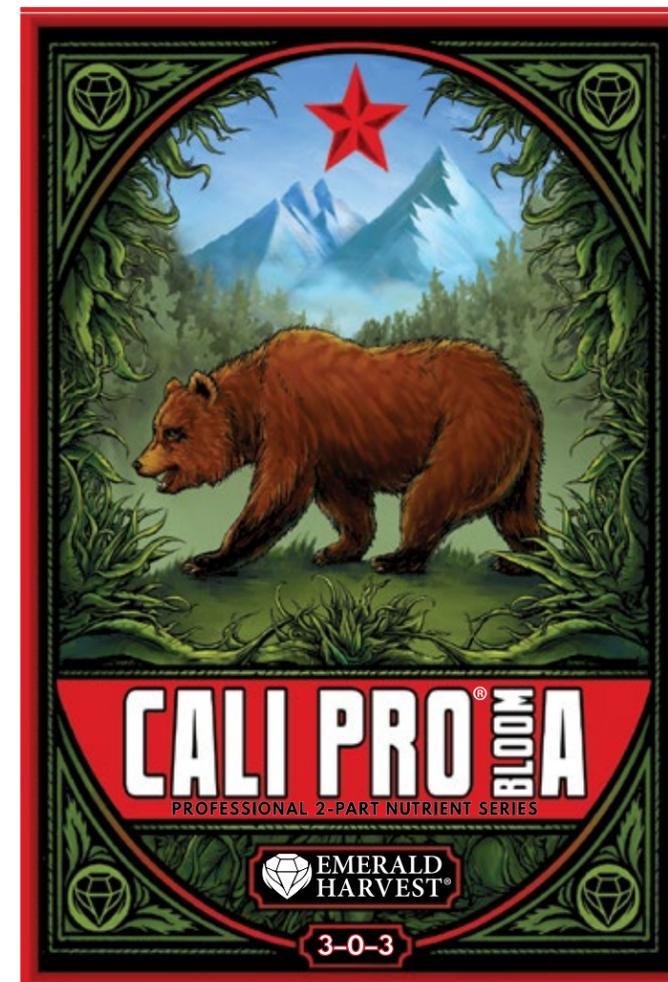
- Store away from direct sunlight and avoid temperatures below 45°F (7.2°C) to avoid crystallization.

CHARACTERISTICS:

- **Appearance:** has the same consistency as water, but slightly heavier:
 - Grow is clearer and colored green.
 - Bloom is a rusty red, as it contains iron and calcium.
- **Aroma:** vaguely like the ocean.
- **Texture:** salt water.
- **Spoilage:** has a shelf life of 3 years or more if stored under normal conditions.

Available sizes: 1 qt, 2 qt, 1 gal, 2.5 gal, 6 gal, 55 gal, 270 gal





**3-0-0
GUARANTEED ANALYSIS**

Total nitrogen (N).....	3.0%
0.5% ammoniacal nitrogen	
2.0% nitrate nitrogen	
0.5% urea nitrogen	
Calcium (Ca).....	2.0%
Boron (B).....	0.02%
Cobalt (Co).....	0.0005%
Copper (Cu).....	0.005%
0.005% chelated copper (Cu)	
Iron (Fe).....	0.1%
0.1% chelated iron (Fe)	
Manganese (Mn).....	0.04%
0.04% chelated manganese (Mn)	
Molybdenum (Mo).....	0.002%
Sodium (Na).....	0.1%
Zinc (Zn).....	0.02%
0.02% chelated zinc (Zn)	

Derived from calcium nitrate, ammonium nitrate, urea, cobalt nitrate, iron EDTA, sodium borate, sodium molybdate, copper EDTA, manganese EDTA, zinc EDTA

**2-2-5
GUARANTEED ANALYSIS**

Total nitrogen (N).....	2.0%
0.3% ammoniacal nitrogen	
1.7% nitrate nitrogen	
Available phosphate (P ₂ O ₅).....	2.0%
Soluble potash (K ₂ O).....	5.0%
Magnesium (Mg)	0.5%
0.5% water-soluble magnesium (Mg)	
Sulfur (S).....	0.5%
0.5% combined sulfur (S)	

Derived from potassium nitrate, monopotassium phosphate, magnesium nitrate, ammonium nitrate, magnesium sulfate

 **EMERALD HARVEST®**
SIMPLE, EASY SUCCESS

**3-0-3
GUARANTEED ANALYSIS**

Total nitrogen (N).....	3.0%
2.5% nitrate nitrogen	
0.5% urea nitrogen	
Soluble potash (K ₂ O).....	3.0%
Calcium (Ca).....	2.0%
Boron (B).....	0.02%
Cobalt (Co).....	0.0005%
Copper (Cu).....	0.005%
0.005% chelated copper (Cu)	
Iron (Fe).....	0.1%
0.1% chelated iron (Fe)	
Manganese (Mn).....	0.04%
0.04% chelated manganese (Mn)	
Molybdenum (Mo).....	0.002%
Sodium (Na).....	0.1%
Zinc (Zn).....	0.02%
0.02% chelated zinc (Zn)	

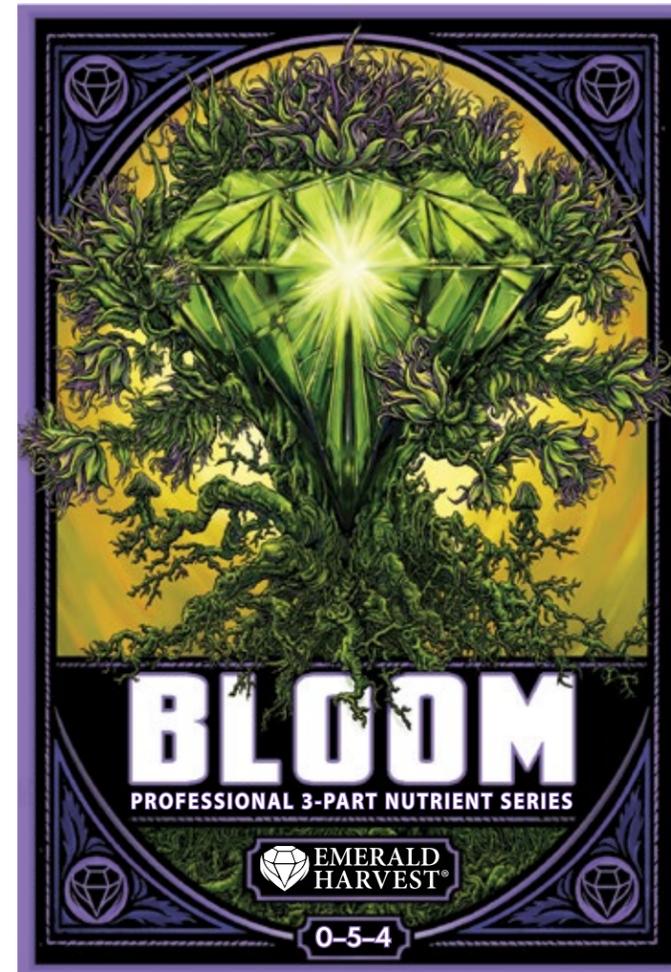
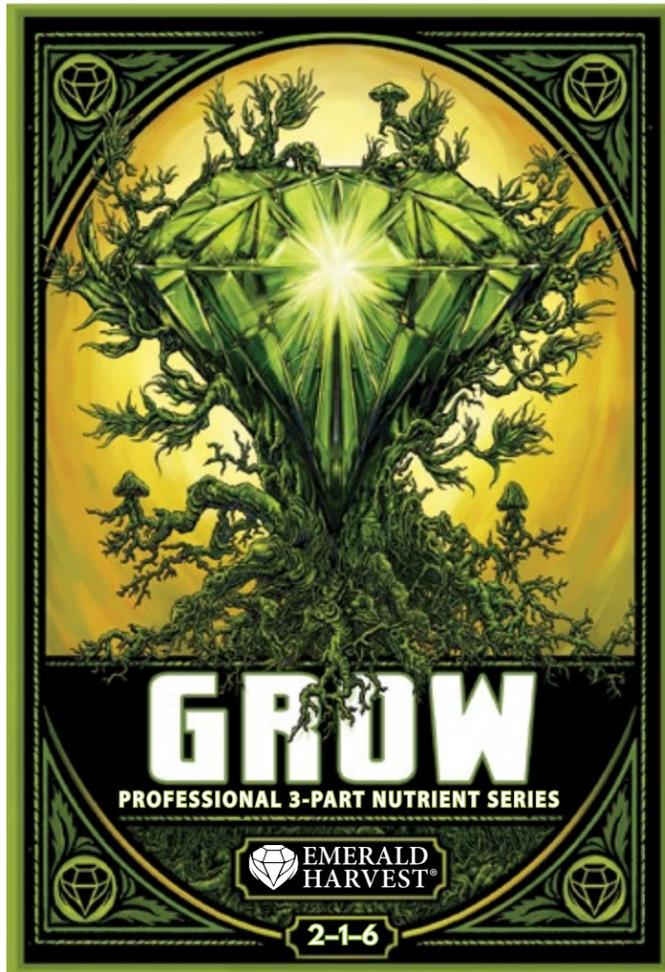
Derived from potassium nitrate, calcium nitrate, urea, cobalt nitrate, iron EDTA, sodium borate, sodium molybdate, copper EDTA, manganese EDTA, zinc EDTA

**1-4-6
GUARANTEED ANALYSIS**

Total nitrogen (N).....	1.0 %
1.0 % nitrate nitrogen	
Phosphate disponible (P ₂ O ₅).....	4.0 %
Soluble potash (K ₂ O).....	6.0%
Magnesium (Mg).....	1.0%
1.0% water-soluble magnesium (Mg)	
Sulfur (S).....	0.5%
0.5% combined sulfur (S)	

Derived from monopotassium phosphate, potassium nitrate, magnesium nitrate, magnesium sulfate

 **EMERALD HARVEST®**
SIMPLE, EASY SUCCESS



GROW, MICRO, BLOOM

PROFESSIONAL 3-PART NUTRIENT SERIES

Revitalize your feeding program.

With Grow, Micro, Bloom, you enjoy maximum freedom to fine-tune your feeding program. Our 3-part base nutrients are popular with growers who know their crops well and want to tailor application rates from feeding to feeding. If you're a pro, you know your crop's nutritional needs change depending on the specific strain, season and other growing conditions. Grow, Micro, Bloom helps you control crop nutrition.

TIPS & TRICKS:

- Add Micro first (after balancing the pH of the water). Follow it up with Grow and Bloom, in any order, and then mix in any or all of the supplements, one at a time. Stir thoroughly before feeding the nutrient solution to your plants.
- Store away from direct sunlight and avoid temperatures below 48°F (8.8°C) to prevent crystallization.

CHARACTERISTICS:

- **Appearance:** Grow is green, Micro is rusty red and Bloom is purplish red. All have the consistency of water.
- **Aroma:** vaguely like the ocean.
- **Texture:** like salt water.
- **Spoilage:** has a shelf life of 3 years or more if kept under normal conditions.

Available sizes: 1 qt, 2 qt, 1 gal, 2.5 gal, 6 gal, 55 gal, 270 gal



2-1-6 GUARANTEED ANALYSIS

Total nitrogen (N).....	2.0%
0.5% ammoniacal nitrogen	
1.5% nitrate nitrogen	
Available phosphate (P ₂ O ₅).....	1.0%
Soluble potash (K ₂ O).....	6.0%
Magnesium (Mg).....	0.2%
0.2% water-soluble magnesium (Mg)	
Sulfur (S).....	0.5%
0.5% combined sulfur (S)	

Derived from potassium sulfate, monopotassium phosphate, potassium nitrate, monoammonium phosphate, magnesium nitrate, ammonium nitrate, ammonium sulfate, magnesium sulfate

5-0-1 GUARANTEED ANALYSIS

Total nitrogen (N).....	5.0%
0.5% ammoniacal nitrogen	
4.0% nitrate nitrogen	
0.5% urea nitrogen	
Soluble potash (K ₂ O).....	1.0%
Calcium (Ca).....	4.0%
Boron (B).....	0.02%
Cobalt (Co).....	0.0005%
Copper (Cu).....	0.005%
0.005% chelated copper (Cu)	
Iron (Fe).....	0.1%
0.1% chelated iron (Fe)	
Manganese (Mn).....	0.04%
0.04% chelated manganese (Mn)	
Molybdenum (Mo).....	0.002%
Sodium (Na).....	0.1%
Zinc (Zn).....	0.03%
0.03% chelated zinc (Zn)	

Derived from calcium nitrate, ammonium nitrate, potassium nitrate, urea, cobalt nitrate, iron EDTA, sodium borate, sodium molybdate, copper EDTA, manganese EDTA, zinc EDTA

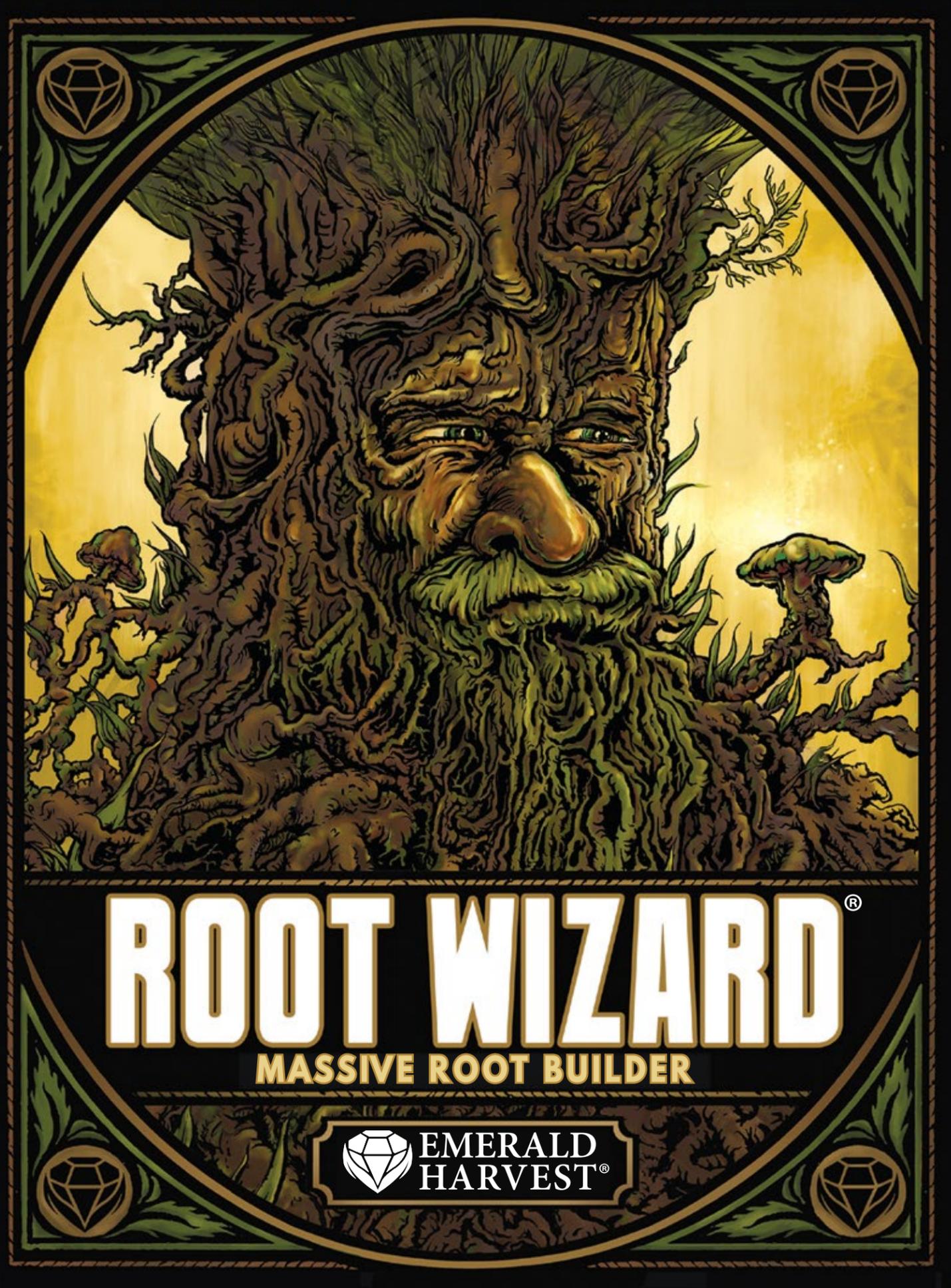
0-5-4 GUARANTEED ANALYSIS

Available phosphate (P ₂ O ₅).....	5.0%
Soluble potash (K ₂ O).....	4.0%
Magnesium (Mg).....	0.5%
0.5% water-soluble magnesium (Mg)	
Sulfur (S).....	1.0%
1.0% combined sulfur (S)	

Derived from monopotassium phosphate, potassium sulfate, magnesium sulfate



EMERALD HARVEST®
SIMPLE, EASY SUCCESS



SUPPLEMENTS

ROOT WIZARD[®] MASSIVE ROOT BUILDER

Profit from the roots up.

Get more nutes into the roots with Root Wizard, a massive root builder containing multiple strains of plant growth-promoting rhizobacteria (PGPRs) that invigorate the root zone of plants growing in hydroponic gardens. These myriad beneficial bacteria help increase root mass and enable your plants to absorb more nutrients more efficiently. Root Wizard inoculates the rhizosphere, rooting out problems where it matters most.

nutrient uptake takes place. PGPRs do this in three ways:

- They stimulate plants to expand their root systems by developing longer roots and longer root hairs.
- They ingest, digest and discharge organic matter and thereby convert it into essential elements.
- They leave fresh organic matter behind when they die.

A diverse ecosystem is more stable and vibrant.

BENEFITS:

- **You get a higher return on your investment in nutrients.** Root Wizard equips plants to absorb more nutrients more efficiently, increasing growth and flowering and reducing nutrient waste. Root Wizard's living colonies of beneficial bacteria serve to increase nutrient uptake. Six strains of plant growth-promoting rhizobacteria, or PGPRs, are supplied by Root Wizard, such as *Bacillus subtilis* and *Bacillus licheniformis*. PGPRs colonize the rhizosphere, where they assist in the nutrient cycle by breaking down organic matter, converting it to bioavailable forms and depositing these nutrients directly at the root tips, where the bulk of
- **You protect your investment by fostering a diverse ecosystem in the root zone.** Inoculation of the rhizosphere with beneficial bacteria helps keep any one strain of microbe from predominating. The more beneficial microbes you add to your crop's root zone, and the greater their overall

ROOT WIZARD[®] MASSIVE ROOT BUILDER



CONTAINS NON-PLANT-FOOD INGREDIENTS:

Active ingredients—viable bacterial spores:

<i>Bacillus amyloliquefaciens</i>	2.5 x 10 ⁷ cfu/mL
<i>Bacillus licheniformis</i>	2.0 x 10 ⁷ cfu/mL
<i>Bacillus subtilis</i>	2.0 x 10 ⁷ cfu/mL
<i>Bacillus laevolacticus</i>	2.0 x 10 ⁷ cfu/mL
<i>Bacillus pasteurii</i>	1.0 x 10 ⁷ cfu/mL
<i>Paenibacillus azotofixans</i>	1.0 x 10 ⁶ cfu/mL





population, the more diversity of microbial life you encourage among the roots. A diverse ecosystem is more stable and vibrant. For example, *Bacillus licheniformis* and *Bacillus amyloquelaciens* both help perform this function.

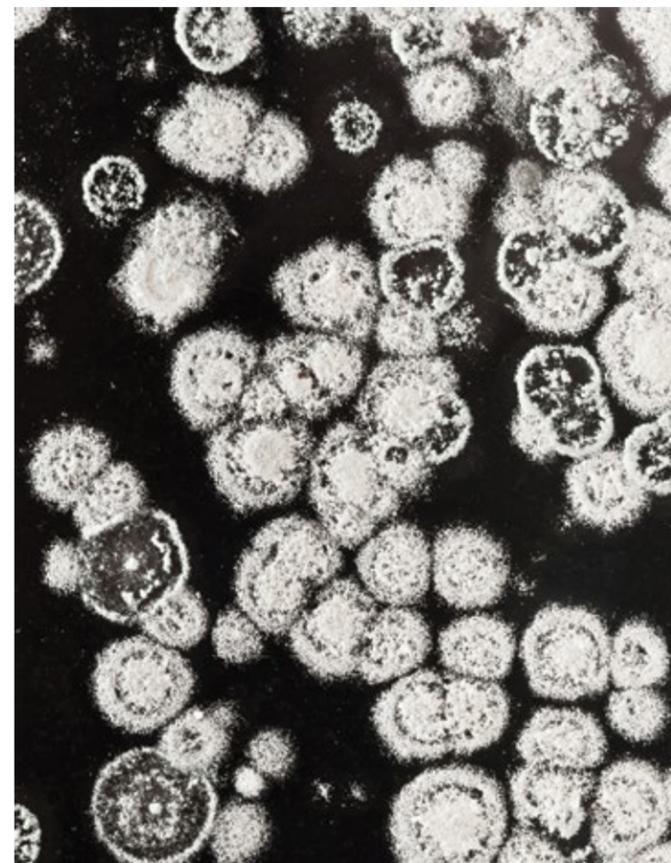
TIPS & TRICKS:

- Use Root Wizard in either hydroponic growing media or in soil. It won't clog your lines.
- Use as a foliar spray to coat leaves with beneficial bacteria on the upper plant.

CHARACTERISTICS:

- **Appearance:** honey-colored.
- **Aroma:** a bit like yogurt.
- **Texture:** slightly viscous and slippery.
- **Spoilage:** contains natural ingredients that need to be kept out of direct sunlight. For best results, use soon after opening. Its shelf life is 18 months or more.

Available sizes: 1 qt, 2 qt, 1 gal, 2.5 gal, 6 gal, 55 gal, 270 gal



PROFIT FROM THE ROOTS UP

HONEY CHOME[®]

AROMA AND RESIN ENRICHER

Enjoy your sweet success.

Honey Chome is our gold-standard aroma and resin enricher. It is designed to increase the market value of your crops by boosting terpene and flavonoid production for better fragrance, flavor, potency and color—the qualities most desired by growers. Three sources of carbohydrates boost your yields by fueling growth and flowering and by feeding the beneficial microbial life that build up roots. With Honey Chome, you get vibrant crops with big roots that soak up nutes.

BENEFITS:

- **You get stickier, more resinous harvests with better aroma and flavor, more potency and richer color—all of which add up to greater market value by weight. Honey Chome is formulated to increase production of terpene-rich essential oils and pigment-rich flavonoids:**
 - Terpenes are the building blocks of many compounds, including the essential oils (resins and saps) of many species of plants. They are released by crops both as a defense mechanism to repel herbivorous insects and as

a kind of biochemical beacon to attract symbiotic organisms such as beneficial insects or even birds. Terpenes are closely associated with the most desirable qualities of medicinal crops—their fragrance, flavor and potency:

- The higher the concentration of terpenes, the more fragrant the flowers. Terpenes such as esters, phenols and other volatile aromatic compounds are responsible for fragrance. Indeed, different specific terpenes, esters and so on correspond to different specific fragrances (e.g., woody, minty, lemony, etc.).
- The higher the concentration of terpenes, the more flavorful the fruits. Aromatic compounds such as terpenes are also flavorful. Indeed, fragrance and flavor are closely related, with aromatic compounds providing and augmenting flavor.
- The higher the concentration of terpenes, the better the medicine. The compounds prized by many growers accumulate in plant essential oils—and remain there after harvest.

0.5–0.5–1 GUARANTEED ANALYSIS

Total nitrogen (N).....	0.5%
0.5% nitrate nitrogen	
Available phosphate (P ₂ O ₅).....	0.5%
Soluble potash (K ₂ O).....	1.0%
Magnesium (Mg).....	0.5%
0.5% water-soluble magnesium (Mg)	

Derived from magnesium nitrate, monopotassium phosphate, potassium sulfate

ALSO CONTAINS NON-PLANT-FOOD INGREDIENTS:

2.0%.....	cane sugar (microbe food)
1.0%.....	palm sugar (microbe food)
2.0%.....	agave nectar (microbe food)



HONEY CHOME[®]

AROMA AND RESIN ENRICHER



0.5–0.5–1

EMERALD HARVEST[®]
SIMPLE, EASY SUCCESS



You get stickier, more resinous harvests with better aroma and flavor, more potency and richer color.

– Flavonoids include anthoxanthins, anthocyanins, flavones and other polyphenolic compounds. They are responsible for the yellow, red and blue pigmentation in buds, fruits and flower petals that attract pollina-

tor animals. Flavonoids are antioxidants and have other benefits when ingested by human beings. The higher the concentration of flavonoids, the richer the coloration of your harvest.

- **You supply your plants with additional energy for more vigorous vegetative growth and flowering.** Plants manufacture carbohydrates internally during photosynthesis and then use the carbs as fuel to drive growth. Although the ability of roots to uptake sugars is in dispute, it appears that simple carbohydrates (e.g., monosaccharides) are easily absorbable. Honey Chome contains a range of simple carbohydrate sources—cane sugar, palm sugar and agave nectar—that are easily absorbed by the roots.
- **You increase nutrient uptake—and ultimately yields—by providing the beneficial microbes in the root zone with a clean source of food:**
 - **Honey Chome provides microbial inoculants with the energy they need to thrive.** Just as plants use carbohydrates for energy, so do beneficial bacteria and fungi. They consume sugars, root exudates (plant waste) and other organic material in the rhizosphere. This ramps up their reproduction and community activity. More microbial activity means even more organic matter is converted into bioavailable nutrients. It also means longer, stronger roots capable of absorbing more nutrients. And more nutrients means more growth and flowering—and bigger harvests.
 - **Honey Chome supplies the right amount of carbohydrates for a functioning rhizosphere.**

Although some experienced growers swear by pure molasses, it is difficult to determine precisely how much of the sweet stuff to add to your reservoir. All microbes—beneficial and harmful ones alike—feed on the sugars in molasses and other carb sources. An overload of carbs may do more harm than good by supplying more food than the beneficial microbes need and allowing the harmful ones to thrive on the surplus. In this way, the delicate microbial ecosystem in the root zone is upset. Honey Chome contains just enough carbohydrates to sustain a vibrant microbial inoculant population.

TIPS & TRICKS:

- Do not use as a foliar spray; apply only at the roots. Application to leaves risks “suffocating” your plant.
- Apply to seedlings or cuttings at 1/2 the label rate to stimulate growth. Seedlings may exhibit heightened growth rates when fed simple sugars.

CHARACTERISTICS:

- **Appearance:** milky honey color.
- **Aroma:** sweet, as if it were edible.
- **Texture:** viscous, like warm honey.
- **Spoilage:** contains sugars that need to be kept out of direct sunlight. The bottle should be tightly sealed. For best results, use soon after opening. Its shelf life is 2 years or more.

Available sizes: 1 qt, 2 qt, 1 gal, 2.5 gal, 6 gal, 55 gal, 270 gal

**ENJOY YOUR
SWEET SUCCESS**

 **EMERALD HARVEST®**
SIMPLE, EASY SUCCESS



EMERALD GODDESS®

PREMIUM PLANT TONIC



2-1-4

EMERALD GODDESS®

PREMIUM PLANT TONIC

Love your plants.

Emerald Goddess is a versatile plant tonic that supports vibrant, productive crops. Designed to be the most potent biocatalyst on the market today, it is a rich natural tea containing compounds found in nature, including alfalfa and kelp extract, humic acid, vitamin B₁ and other beneficial additives. This potpourri of invigorating ingredients helps your valuable plants grow strong and bear big fruits. Emerald Goddess loves your plants as much as you do!

BENEFITS:

- **You get robust, rapidly growing plants due to biocatalytic effects.** Biocatalysts speed up chemical reactions. For example, alfalfa and other natural ingredients help produce a hormone response in plants, improving shoot development, root growth and overall yields. Furthermore, kelp extract stimulates growth at the cellular level so your plants remain sturdy and strong throughout their life cycle:
 - *Emerald Goddess harnesses natural plant-hormone processes triggered by alfalfa and other natural in-*

redients. These promote growth and development in plants when they release auxins and cytokinins and other growth hormones. Auxins regulate growth, while cytokinins complement auxins and support cell growth and division. They are also linked to budding and leaf formation and, therefore, to higher yields. Alfalfa also contains the natural plant growth factor triacontanol, prized by many growers for encouraging root development and aiding in photosynthesis.

- *Emerald Goddess contains kelp extract, derived from nature's fastest growing plant.* Kelp extract is a powerful component of our top-quality plant tonic. It contains growth hormones such as auxins and other compounds that stimulate growth. For example, cytokinins, which promote both leaf and root growth at the cellular level, are found in kelp and other kinds of seaweed. Additionally, kelp extract increases plant chlorophyll content and can stimulate early flowering and fruiting.

2-1-4 GUARANTEED ANALYSIS	
Total nitrogen (N).....	2.0%
0.1% ammoniacal nitrogen	
0.8% nitrate nitrogen	
0.1% other water-soluble nitrogen	
1.0% urea nitrogen	
Available phosphate (P ₂ O ₅).....	1.0%
Soluble potash (K ₂ O).....	4.0%

Derived from potassium nitrate, monopotassium phosphate, urea, kelp extract, alfalfa meal

ALSO CONTAINS NON-PLANT-FOOD INGREDIENTS:
 0.1%.....humic acid derived from leonardite
 0.01%.....vitamin B₁ (thiamine) derived from thiamine mononitrate



 **EMERALD HARVEST®**
SIMPLE, EASY SUCCESS

- **Your plants absorb more nutrients for larger yields and less wastage.** Leonardite, which is often used as a soil conditioner, is a rich natural source of humic acid. **Emerald Goddess contains humic acid that helps foster a rich root environment and organic processes your plants need:**

- Humic acid is a natural chelator. It binds with other compounds to create a chelating effect that allows your plants to uptake minerals that they otherwise wouldn't absorb. This reduces waste and allows your crops to get the most from your feeding program.

- Humic acid improves soil fertility. It is important for ion (cation) exchange, which is the process by which plants get many essential elements, such as potassium, calcium and magnesium. Higher cation exchange usually equates to higher soil fertility.

- **You profit from accelerated growth.** Emerald Goddess is brimming with natural compounds proven to be beneficial to plants. It contains extracts from nutrient-rich, quick-growing alfalfa and other components that provide nitrogen and phosphorus boosts:

- Emerald Goddess provides alfalfa, a nutrient powerhouse. While it grows, alfalfa absorbs nitrogen and

Emerald Goddess is brimming with natural compounds proven to be beneficial to plants.

stores it, making it a rich source of this essential element. It also contains phosphorus, potassium, sulfur, iron and zinc. Alfalfa contributes to feeding beneficial fungi

and bacteria at the roots. It also contains the natural plant growth factor triacontanol, which encourages development of abundant root mass and aids in photosynthesis.

- Emerald Goddess boosts potassium and nitrogen levels to improve the size and quality of fruits. It also facilitates efficient water use in the plant and resistance to certain stressors, including frost and drought.

- **You minimize risk at harvest.** **Emerald Goddess contains vitamin B, and other natural compounds that make your plants stronger and more resilient.** Thiamine (B₁) may even help increase your plant's systematic acquired resistance (SAR) to fungi, bacteria and pests.

- You take pleasure in feeding your plants compounds that are kind to the Earth. The natural ingredients in Emerald Goddess don't have as heavy an impact on the environment as mineral ingredients do. **Emerald Goddess is designed to be a guilt-free supplement for your garden.**

TIPS & TRICKS:

- Use on any plant strain at any phase of the crop life cycle.
- Can be used alone for light-feeding plants or as a supplement to hydroponic base nutrients for heavy-feeding high-value crops.
- Use together with the "king" of the Emerald Harvest line, King Kola, to help your crops reach their maximum bloom-boosting potential.
- Use as a foliar spray in dilution and ideally mixed with a surfactant.
- Use as a root drench in soil or dense growing media.

CHARACTERISTICS:

- **Appearance:** dark coffee color. Note: It can stain.
- **Aroma:** strong smell of the earth and sea combined. It's a little intense, but once diluted, it has a pleasant earthy smell. (Your plants think it smells like heaven!)
- **Texture:** a bit viscous.
- **Spoilage:** contains natural ingredients that need to be stored in a relatively cool space away from direct sunlight. For best results, use soon after opening. Its shelf life is 18 months or more.

Available sizes: 1 qt, 2 qt, 1 gal, 2.5 gal, 6 gal, 55 gal, 270 gal

LOVE YOUR PLANTS



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KING KOLA®

POWERFUL BLOOM BOOSTER

Reign supreme and rule your garden.

King Kola is the only bloom booster you need for early, mid and late flowering. In addition to a boost of phosphorus and potassium, it is the only product of its kind that contains protein from hemp. While

You only need one bloom booster—not three!

other bloom boosters contain bovine or other animal-based proteins, King Kola contains a vegetable source of protein, which can aid floral development and assist chelation for better nutrient uptake. You don't need three bloom boosters when the "king" is at court.

BENEFITS:

- **You only need one bloom booster—not three!** Many brands seek to maximize their revenue at your expense by needlessly offering separate bloom boosters for early, mid and late flowering. Not Emerald Harvest. All-in-one King Kola is designed to be simple and easy to use without sacrificing effectiveness. *King Kola saves you money.*
- **You get bigger yields and better harvests for bigger profits:**

0.3-2-3 GUARANTEED ANALYSIS	
Total nitrogen (N).....	0.3%
0.15% ammoniacal nitrogen	
0.05% other water-soluble nitrogen	
0.1% water-insoluble nitrogen	
Available phosphate (P ₂ O ₅).....	2.0%
Soluble potash (K ₂ O).....	3.0%

Derived from potassium sulfate, monopotassium phosphate, monoammonium phosphate, hemp seed flour

- King Kola is the only bloom booster on the market that contains hemp seed flour, which is rich in protein:
 - Hemp seeds are almost 25% protein that is equal or better in quality to animal-based proteins while being more environmentally friendly to produce:
 - o Bovine (i.e., cow) or other animal-based proteins are used in certain competing bloom boosters, if they contain any proteins at all. However, animal-based proteins are not an ideal match for the vegetable protein profiles of plants.
 - o Vegetable-based proteins are suitable for crops because they more closely match the protein profiles of plants. Indeed, the proteins in hemp seed flour precisely mirror the protein profiles of the high-value crops you grow. In a natural environment, plants age, die and decompose exactly where they once sprouted, grew and stood. The microbial life in the soil breaks their tissues down



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into bioavailable compounds. These compounds, in turn, feed the next generation of plants—the descendants of the very mother plant. And so the cycle goes.

- The protein in hemp seeds is rich in the proteins albumin and edestin.
- King Kola contains extra phosphorus and potassium to top off the amount of these two **consummate bloom-boosting elements supplied by your base nutrient**:
 - Phosphorus is linked to faster, more productive yields:
 - o Phosphorus initiates budding earlier and more prolifically, assisting in transition and putting your plants in pole position for a fast, strong finish.
 - o Phosphorus quickens the time to crop maturity for a shorter flowering phase and overall crop life cycle—which means more harvests per annum and higher revenue.
 - Potassium supports flowering and makes crops strong:
 - o Potassium increases photosynthesis and is crucial to fruit and flower formation, including enzyme activation and protein synthesis.
 - o Potassium helps strengthen stalks and stems and makes crops hardier.
 - Both phosphorus and potassium may improve the quality of fruits.

TIPS & TRICKS:

- Use in early, mid and late flowering. The king is the only bloom booster you need throughout flowering!
- Apply as a foliar spray to improve crop resistance to stress.

CHARACTERISTICS:

- **Appearance:** milky green color, like the color of our bottles.
- **Aroma:** slightly nutty and mildly earthy. Smells edible.
- **Texture:** milky.
- **Spoilage:** contains natural ingredients that need to be kept out of direct sunlight. For best results, use soon after opening. Its shelf life is 18 months or more.

Available sizes: 1 qt, 2 qt, 1 gal, 2.5 gal, 6 gal, 55 gal, 270 gal



REIGN SUPREME AND RULE YOUR GARDEN



CAL-MAG

CALCIUM-MAGNESIUM SUPPLEMENT



2-0-0

CAL-MAG

CALCIUM-MAGNESIUM SUPPLEMENT

Grow lush, green plants.

Emerald Harvest Cal-Mag is more than just a calcium-magnesium supplement. In contrast to competing products, our Cal-Mag contains kelp extract—a natural source of nitrogen and other helpful compounds—making it different from standard products of its kind. Cal-Mag helps minimize the risk of calcium or magnesium deficiencies when you use coco coir and other growing media, provides chelation to help your plants absorb more nutrients generally and results in greener, stronger, more productive crops.

BENEFITS:

- **You safeguard your crop by avoiding calcium or magnesium deficiencies.** Such deficiencies are all too common and can happen in any garden. However, certain growing media put your plants at a higher risk of deficiencies. In particular, coco coir can lock out some of the calcium and magnesium you feed your plants. *Cal-Mag minimizes the risk of calcium and magnesium deficiencies from happening under any growing conditions.*
- **You get a better return on your investment in nutrients.** Cal-Mag increases nutrient uptake. More of the nutrients you feed your crops actually get used as plant food, rather than binding to the growing medium or running to waste:
 - Calcium helps lengthen the roots. Longer roots take up

more nutrients.

- Magnesium activates enzymes that help plants absorb nutrients.
- **You cultivate greener, stronger, more productive crops:**
 - **Cal-Mag promotes crop development:**
 - Calcium supports vibrant growth:
 - o Calcium encourages cell division.
 - o Calcium is essential for strong cell walls.
 - Magnesium activates many enzymes required for

You cultivate greener, stronger, more productive crops

growth and assists in the manufacture of proteins, the building blocks of life.

- Nitrogen supports vegetative growth.
- **Cal-Mag provides plants with abundant energy for**

2-0-0 GUARANTEED ANALYSIS

Total nitrogen (N).....	2.0%
0.1% ammoniacal nitrogen	
1.9% nitrate nitrogen	
Calcium (Ca).....	3.0%
Magnesium (Mg).....	0.5%
0.5% water-soluble magnesium (Mg)	

Derived from calcium nitrate, magnesium sulfate, calcium acetate, magnesium acetate, kelp extract



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growth and flowering. Magnesium is essential for chlorophyll production; indeed, it is a chlorophyll component. Chlorophyll is essential for photosynthesis, the process by which plants convert light into energy by metabolizing carbohydrates. Energy drives both vegetative growth and flowering.



TIPS & TRICKS:

- Use as needed, rather than as part of your regular feeding schedule. For example:
 - It can feed hungry plants undergoing a rapid vegetative growth spurt, in transition or at peak flowering. During such times, plants greatly benefit from extra calcium and magnesium.
 - It can help minimize the risk of deficiencies when you use other brands' base nutrients that may not have as many essential elements. (Emerald Harvest's 2-part and 3-part professional base nutrient series contain the essential elements plants need to grow).
- Soak coco coir and other soilless growing media with Cal-Mag before planting.

CHARACTERISTICS:

- **Appearance:** dark brown to black liquid.
- **Aroma:** like salt water, but a bit "funky" like the beach.
- **Texture:** mildly viscous and a bit oily.
- **Spoilage:** has a shelf life of 3 years or more if kept under normal conditions.

Available sizes: 1 qt, 2 qt, 1 gal, 2.5 gal, 6 gal, 55 gal, 270 gal

GROW LUSH, GREEN PLANTS



STURDY STALK®

POTASSIUM SILICATE SUPPLEMENT



0-0-1

STURDY STALK®

POTASSIUM SILICATE SUPPLEMENT

Build inner strength.

Sturdy Stalk, Emerald Harvest's premium potassium silicate supplement, is a valuable addition to your feeding program at crucial stages in the crop life cycle when fruits and flowers are putting on girth and weight. The silica in the formulation helps increase the rigidity and thickness of plant cell walls, making your crops sturdier. Sturdy crops can better withstand environmental stressors and support heavy yields. Sturdy Stalk also helps increase the potency of harvests and gives an added boost to blooms.

Sturdy crops can better withstand environmental stressors and support heavy yields.

BENEFITS:

- **You grow tough plants that can support heavier yields.** *Sturdy Stalk gives greater mechanical strength to plant cells—and, by extension, to the plant as a whole.* Plants stand upright thanks to elements and compounds such as silicon and lignin, which serve as the “cement” or “glue” between the brick-like components of plant cell walls. Silicon is rarely found in its elemental form in nature; instead, it typically occurs as silica (SiO₂). The silica you feed your crops adds more silicon, which in turn strengthens plant cells. Stronger cells make stronger plants. Stronger plants stand straighter and do not lodge (bend) as easily under the weight of heavy fruits and flowers.

0-0-1	
GUARANTEED ANALYSIS	
Soluble potash (K ₂ O).....	1.0%

Derived from potassium silicate

ALSO CONTAINS NON-PLANT-FOOD INGREDIENTS:
0.4% silica (SiO₂) derived from potassium silicate

- **You protect your investment by fending off environmental stressors and by reducing the risk of desiccation.** Silicon-fortified plant cells are also thicker:
 - **Sturdy Stalk shields your crops.** Thicker cell walls put up a more impregnable barrier against outside factors that may damage the plant.
 - **Sturdy Stalk helps prevent your crops from drying out.** Thicker cell walls help retain moisture, making your outdoor crops more drought resistant and your indoor crops less prone to dehydration and desiccation beneath the intense artificial lighting of your grow room.
- **You aid flowering.** Sturdy Stalk contains a boost of potassium that helps plants flower. Potassium silicate is not only a silicon source; it's a potassium source. “Vitamin K” is one of the two primary macronutrients most closely associated with flowering.
- **You get a yield boost from more energy:**
 - Sturdy Stalk frees up crop energy. Plants expend enormous amounts of energy playing the part of “bricklayer.”





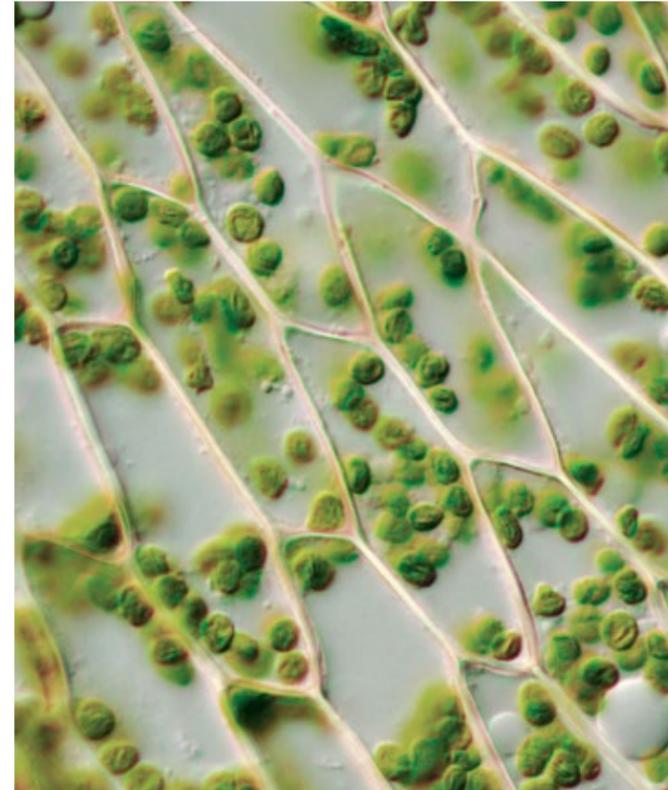
By providing your plants with bioavailable silica, you reduce their “construction” efforts and free them to redirect some of their energy elsewhere.

- Sturdy Stalk contributes energy. Potassium helps your crops photosynthesize, the process by which plants con-

vert light into energy by metabolizing carbohydrates. Energy drives both vegetative growth and flowering.

TIPS & TRICKS:

- Use as needed, rather than as part of a regular feeding schedule. For example:
 - It can bolster crops during stressful times in the crop life cycle, such as transition or transplanting.
 - It can support bulking buds during mid or late flowering.
- Use on top of (not in place of) a quality bloom booster. Although Sturdy Stalk does increase flowering, it does not contain sufficient potassium to serve as a stand-alone bloom booster.
- Use alone on a watering day or mix it last after other nutrients and then feed the nutrient solution to your crops immediately. The potassium silicate in the formulation is highly reactive with other nutrient ingredients.



CHARACTERISTICS:

- **Appearance:** like lemonade.
- **Aroma:** slightly caustic.
- **Texture:** watery.
- **Spoilage:** its shelf life is 10 years or more.

Available sizes: 1 qt, 2 qt, 1 gal, 2.5 gal, 6 gal, 55 gal, 270 gal

build inner STRENGTH



IDEAL pH RANGE AFTER MIXING NUTRIENTS IS: 5.8–6.3

- Do not mix pH Up with pH Down.
- Users of this product are responsible for applying, storing and disposing of it responsibly.
- This product is used to raise the pH of a nutrient solution to which plant fertilizers have been added. Do not use for other purposes.

Suitable for all hydroponic systems. Please refer to www.emeraldharvest.co for complete instructions.

IDEAL pH RANGE AFTER MIXING NUTRIENTS IS: 5.8–6.3

- Do not mix pH Down with pH Up.
- Users of this product are responsible for applying, storing and disposing of it responsibly.
- This product is used to lower the pH of a nutrient solution to which plant fertilizers have been added. Do not use for other purposes.

Suitable for all hydroponic systems. Please refer to www.emeraldharvest.co for complete instructions.



pH UP PREMIUM pH ALKALIZER

Get it just right.

Our premium pH adjusters, pH Up and pH Down, let you fine-tune the pH of the growing medium. This enables you to regulate the pH for optimal nutrient uptake and stable conditions for beneficial microbes living in the root zone. When the pH of the nutrient solution stays in the “sweet spot” (pH 5.5–6.5), sufficient essential elements remain available to the plant roots for heavy yields and bountiful harvests.

All Emerald Harvest premium base nutrients and supplements are pH buffered, so if you’re using our full product line, you probably won’t need to adjust the pH of your nutrient solution. However, when growing in certain mediums, such as rockwool, or coco coir, you may want to fine-tune the pH.

Note: pH Up will raise the pH of your nutrient solution; pH Down will lower it.

TIPS & TRICKS:

- Add to your nutrient solution just a little at a time. Test the pH periodically until the readings are in your desired range.
- Your plants may only need a small quantity of this product. The amount necessary will depend on water quality



pH DOWN PREMIUM pH ACIDIFIER

and the strength of other nutrients and supplements present in the solution.

CHARACTERISTICS:

- **Appearance:** a slightly viscous liquid that looks cloudy or milky.
- **Aroma:** no real aroma.
- **Spoilage:** shelf life of 3 years or more if stored under normal conditions.
- **Special care for pH Up:** extremely alkaline, can burn skin. Do NOT touch. Wash off immediately with vinegar if it contacts skin.
- **Special care for pH Down:** extremely acidic, can burn skin. Do NOT touch. Wash off immediately with baking soda if it contacts skin.

STEPS FOR MIXING SUCCESS

Mixing order for Emerald Harvest premium base nutrients and supplements

1. Add Emerald Harvest premium base nutrients and supplements to water in the amounts indicated by our feeding chart. This creates your nutrient solution.
2. Mix the nutrient solution thoroughly, until base nutrients and supplements have entirely dissolved and the solution appears uniform.
3. Let the nutrient solution sit for a few minutes.
4. Calibrate your pH meter.
5. Measure the pH of your nutrient solution. The ideal pH range for hydroponic gardens is 5.8–6.3. If necessary, apply pH Up to raise the pH or pH Down to lower it.

FAQs ABOUT pH

What is pH and why is it important for my garden?

The abbreviation pH stands for potential hydrogen: the measure of how acidic or basic (alkaline) a substance is. A scale from 1 to 14 is used to describe the amount of hydrogen ions in a liquid solution: pH 7 is defined as neutral; below 7 is acidic; above 7 is





alkaline. Pure water is pH 7. Each of the essential elements required for plant growth (i.e., nitrogen, potassium, phosphorus, calcium, magnesium, etc.) has its own ideal pH range for absorption by the plant roots. When the pH of the nutrient solution is too high, certain elements (e.g., iron or manganese) could be wholly or partially “locked out,” while too low a pH could cause other elements (e.g., phosphorus) to have trouble absorbing. Therefore, at too high or too low a pH, your crop could suffer from nutrient deficiencies.

The ideal pH range for hydroponic gardens is between 5.8–6.3, but if you’re getting between 5.5–6.5 you’re still in the “sweet spot.” Although a slightly higher or lower pH is fine for short periods (i.e., a few hours), the general rule is to stay in the recommended pH range. We cannot stress enough that continued exposure to a pH that is too high or too low can damage the health of—or even kill—your plants.

What does “pH buffered” mean?

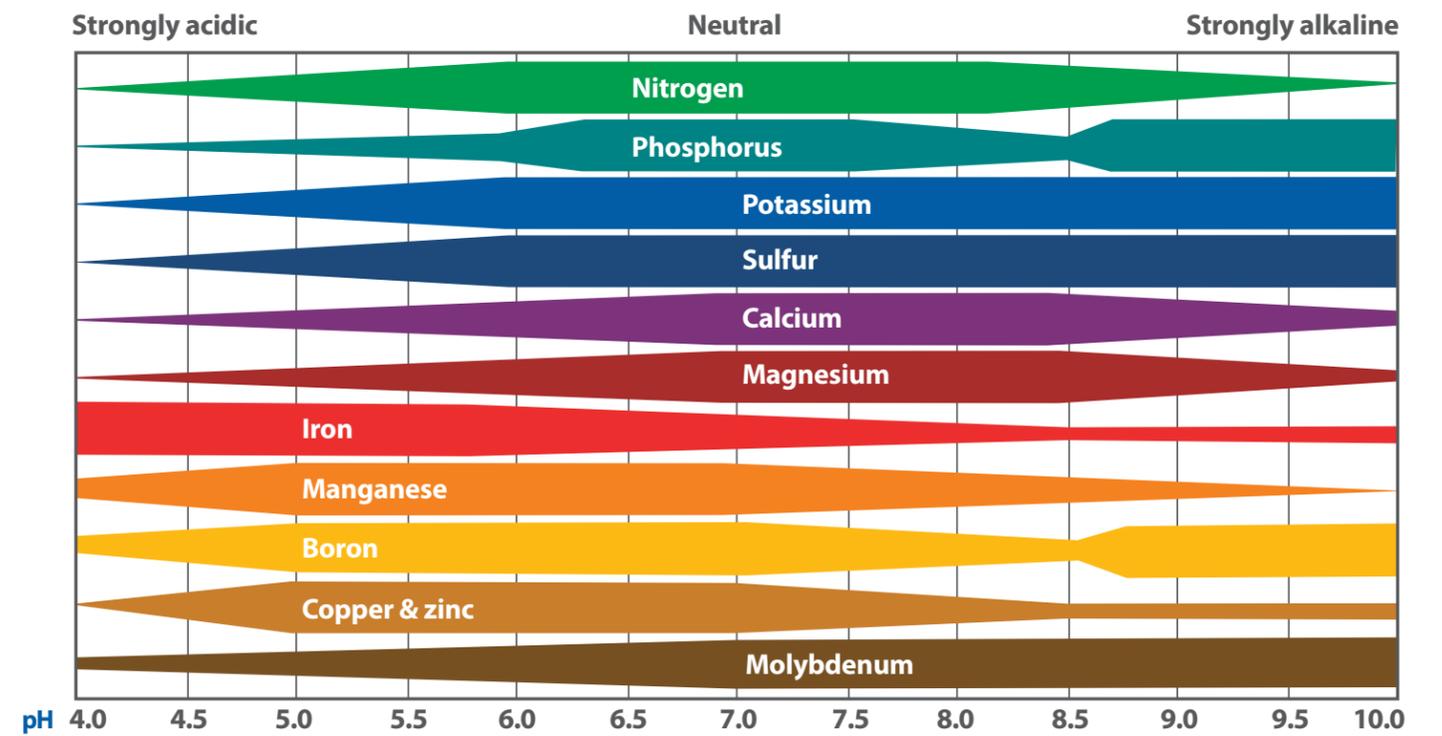
A liquid solution is pH buffered if it is capable of resisting small changes in its pH. All Emerald Harvest professional base nutrients and supplements are pH buffered, so gardens that use only the Emerald Harvest product line should already have balanced pH. Ideally, your garden’s pH should stay reasonably stable, plus or minus a few decimal points. However, water supplies, additional supple-



ments from other brands and your choice of growing medium can also affect the pH of the nutrient solution.

How often should I check the pH level?

You should always check the pH of the nutrient solution before feeding as well as before and after watering. If you use an automated hydroponic system, check the pH daily and track it throughout the grow. Very good pH tri-meters are available at hydroponic stores that give you a constant pH, PPM and temperature reading of your reservoir.



AWARDED **BEST NUTRIENT**
COMPANY **5** **TIMES**
IN A
ROW



EMERALD HARVEST®
SIMPLE, EASY SUCCESS

Available at all leading hydroponic retail stores.
emeraldharvest.co