

HY-GEN[®]

INNOVATIVE SCIENCE FOR PLANTS



PRODUCT GUIDE

www.hydroponicgenerations.com.au





INNOVATIVE SCIENCE FOR PLANTS

Hydro
Single Part
Nutrients



Hydro
Two Part
Nutrients



Instrument
Calibration
& Care



Plant
Boosting
Supplements



Download your
FREE feed schedules



CONNECTING GROWERS WITH CHEMISTRY

Coco
Two Part
Nutrients



Growing
Media



Plant
Strength



Coco
Single Part
Nutrients



Growth &
Flower
Supplements



pH Testing
& Control



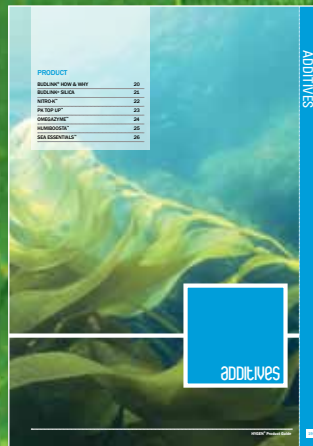
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NUTRIENTS



ADDITIVES



PH TESTING & CONTROL



INSTRUMENT CALIBRATION & CARE



SUBSTRATES FOR CULTIVATION



FEED SCHEDULES & GROWERS GUIDE



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HYDROPONIC GENERATIONS

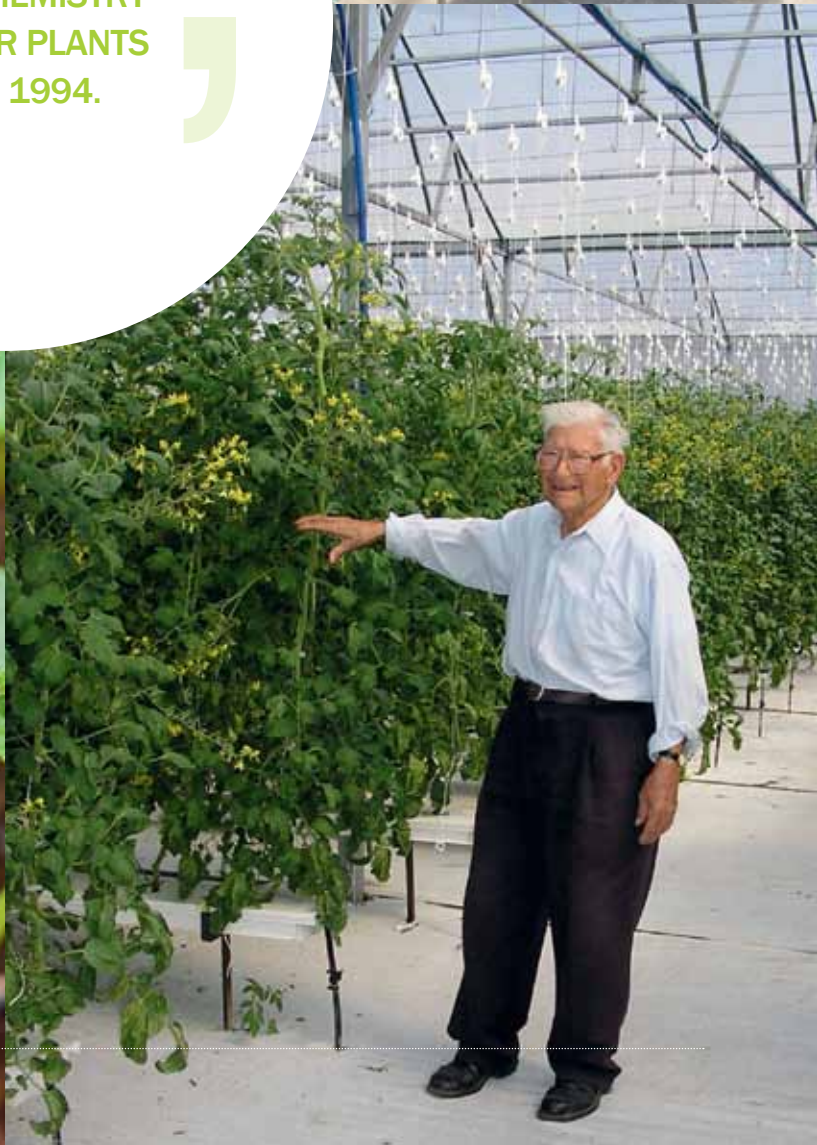
Tel: +61 8 9356 8866

Email: enquiries@hydroponicgenerations.com.au

www.hydroponicgenerations.com.au



CREATING THE
RIGHT CHEMISTRY
FOR YOUR PLANTS
SINCE 1994.



ABOUT US

WHO ARE WE?

At HYDROPONIC GENERATIONS we have been creating the right chemistry for growers and hobbyists since 1994. Our goal is to manufacture and deliver the best-quality, scientifically balanced products for today's commercial farmers and home growers. We are an Australia-based company whose products can be found throughout the world including Antarctica where they are used for hydroponic food production.

Each HY-GEN® product is designed for a specific purpose and optimised for performance while making it simple for growers to use. The HY-GEN® brand represents many years of specialised knowledge accumulated from a broad range of scientific disciplines by our founder chemist and owner.

OUR GUARANTEE

Every batch of finished products is quality tested to ensure that specific standards are met; therefore, every product has a guarantee of consistent quality.

HY-GEN® products contain local and globally sourced high-grade quality ingredients. The ingredients include natural organic components that are carefully selected for their plant health promotion and nutrient transport characteristics. Analytical grade reagents are used in all instrument maintenance and care products. All ingredients are regularly screened to ensure that they meet the most stringent criteria.

Our guarantee of quality also covers our processes and regular rigorous maintenance of all production systems, including the calibration of purification, measuring and scientific quality control systems. In addition, quality control testing is outsourced to ensure that all reporting is unbiased and guarantee that all steps in the process are maintained as optimally as possible.

WHY CHOOSE US?

When you buy a HY-GEN® product, you are also buying 'peace of mind', knowing that we do all the hard work to consistently deliver on our integrity, knowledge and decades of experience in each product. This is our goal so that you can focus on growing your favourite plants while becoming an experienced, expert gardener.

Thank you for choosing and using our HY-GEN® range of products.

**Specialised
Knowledge!**



**Consistent
Quality!**



**Peace
of Mind!**





“ TO RAISE NEW
QUESTIONS, NEW
POSSIBILITIES,
TO REGARD OLD
PROBLEMS FROM A
NEW ANGLE, REQUIRES
CREATIVE IMAGINATION
AND MARKS REAL
ADVANCE IN SCIENCE. ”

Albert Einstein

A NOTE FROM OUR CHEMIST-OWNER

I have been involved in the Hydroponic industry for more than two decades and enjoy being a grower myself. I always endeavour to expand my knowledge of plant science and technology and always strive to investigate and embrace new and emerging science. It is my passion to pass on knowledge, not only about our products but also to impart broader knowledge from many other disciplines which make up the world of science.

Even though many other companies have access to a good knowledge base, few owners have a university trained scientific understanding. They have to rely on *outsourced* experts and even then it comes down to how the information is communicated or more importantly, how it is interpreted. I have more than a decade's experience in research and development. Also, I have taught university undergraduate, post graduate and PhD level students in disciplines including chemistry, botany, crops and pasture, forensic, nutrition, environmental and analytical chemistry.

I have also worked as a scientific consultant at university where I would investigate and solve problems, which were placed in the 'too hard' basket. It didn't matter whether it was determining the source of strange odours found inside potato chip packets or figuring out whether plastic derivatives were suitable for optical lens implants. Every problem had an interesting scientific story.

My goal is to continue growing and sharing knowledge by continuing to educate both hobby and commercial growers. I will also continue to deliver world-class quality products to the local and global markets. Happy Growing!

Sandro Bombardieri
BSc (Chemistry), Post Grad Dip (Chemistry)
DIRECTOR – CHEMIST

*I have always
endeavoured
to expand my
knowledge.*





WELCOME TO HYDROPONICS

WHAT IS HYDROPONICS?

Growing plants without the use of soil is known as *Hydroponics*. It is also known as *soilless culture*. Plants are grown in a nutrient rich solution, which supplies plants with controlled amounts of all the essential minerals they need to grow. In soil, plants have to wait to be watered before nutrient salts are available for absorption. Sometimes, inert growing mediums or substrates such as expanded clay, perlite, mineral rockwool or cocopeat are used during cultivation. Hydroponics adds another dimension to growing where the grower has the ability to control the environment in which plants grow..

WHY HYDROPONICS?

Hydroponics offers the following benefits to hobbyist (or commercial growers).

- Grow what you want when you want.
- Produce crops all year round.
- Reduction in water use.
- Uses clean minerals to feed the plants rather than toxic manures.
- There is no accumulation of heavy metals or pesticides, which can occur in soil.
- Hydroponic systems are re-useable, especially when using NFT or growing in expanded clay.
- Low ongoing costs.
- Can be set up nearly anywhere.

ARE THERE DIFFERENT HYDROPONIC TECHNIQUES?

Many commercial growers and hobbyists use a variety of techniques. They are *solution culture* and *medium* or *substrate* based techniques.

Solution Culture can consist of:

- A continuous flow (NFT – Nutrient Film Technique).
- Static solution (needs aeration).
- Aeroponics (fine mist applied to the root zone).

Substrate Based techniques use a solid inert medium instead of soil. This technique can be *continuous flow* or *ebb and flow* (flood and drain). Substrate based systems may use:

- Lightweight expanded clay aggregate (reusable year after year).
- Perlite (difficult to clean and reuse).
- Rockwool (expensive, limited reusability).
- Cocopeat or coir fiber (breaks down, salt build up can easily occur).

DO I NEED A SPECIAL FERTILISER?

Hydroponic specific fertilisers are essential. They are formulated to contain a complete balance of minerals for healthy plant growth. Fertilisers include all macro elements (*major elements*) such as nitrogen, phosphorous, potassium, calcium, magnesium and sulphur. They also contain micronutrients (*minor elements*), which include trace elements such as iron, copper, zinc, manganese, molybdenum and boron.

Some formulations contain organic extracts such as seaweed, which supply minor elements such as iodine, selenium, nickel and cobalt just to mention a few. Silica is also beneficial to plant strength and disease resistance.

We recommend using this product guide to learn how HY-GEN® fertilisers and additives can help you grow better!

WELCOME TO HYDROPONICS

WHAT DO I NEED TO GET STARTED?

Hydroponic systems usually require some or all of the following:

- Hydroponic nutrients & additives.
- Nutrient solution reservoir.
- Pump (capacity depends on distance between reservoir and growing bed).
- Plumbing and fittings for delivering the nutrient solution.
- Growing system and related substrate (unless using NFT).
- Water (tap water is suitable, however it may require testing).
- Your favourite plants.
- Natural or controlled environment lighting (if growing indoors).

HOW MANY PLANTS CAN I GROW?

Generally the number of plants can be limited by the space and the size of your reservoir, the larger the better. As plants increase in size a large reservoir helps buffer against large frequent pH and nutrient level fluctuations. As a general guide aim for about 3 – 5 litres of nutrient solution per plant for small leafy plants (5 lettuces = 15 litre minimum) and for tall plants like tomato, capsicum and cucumbers aim for 10-15 litres per plant (5 cucumber plants = minimum 50 litres).

*Produce crops
all year round!*



WHAT ABOUT MAINTENANCE?


Maintenance is relatively easy. Follow these steps on a daily or weekly basis:

- Check the nutrient solution pH using a colour pH test kit or electronic pH meter.
- Adjust the pH using pH UP or pH DOWN as required.
- Check nutrient levels using an electrical conductivity (EC) meter. This measures the amount of available dissolved minerals. This is a quicker and easier way to monitor nutrient levels especially if you don't have a green thumb.
- Regularly check nutrient levels visually by monitoring the leaf colour. As general guide, when leaves become light in colour then you will need to feed them a little more fertiliser.
- Completely dump the nutrient reservoir and flush the system regularly and thoroughly to prevent toxic build up of unused salts.

The **HY-GEN® Growers Guide** at the back of this product guide lists a range of suitable pH and EC levels for vegetables, herbs and flowers. There is also a **COCOPEAT** and **HYDRO FEEDING SCHEDULE** for the serious specialised gardener.

WHAT ABOUT PESTS AND DISEASE?

Hydroponically grown plants are still susceptible to insect attack. Netting, sticky insect traps and companion plants can help deter pests. We also recommend safe organic sprays. Healthy plants tend to resist disease, so make sure your pH and nutrient levels are maintained on a weekly or daily basis. Remember, the larger the reservoir the more forgiving your system will be. Additives such as **BUDLINK® Silica** can help improve pest and disease resistance. Silica is usually present as sand in traditional gardens and tends to be left out when growing plants hydroponically. Commercial growers know the benefits of silica, which lends itself to little or no pesticide.



“ QUALITY IS
NOT AN ACT,
IT IS A HABIT. ”

Aristotle

PRODUCT

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NUTRIENTS

HY-GEN® COCOGROW™ TWO PART

IT TAKES TWO
COCOPEAT SPECIFIC
TWO PART
GROWTH FORMULA

HY-GEN® COCOGROW™ TWO PART

HY-GEN® COCOGROW™ is a vegetative stage cocopeat specific nutrient. The nutrient levels are carefully balanced to ensure that ratios between all major and minor elements are optimised to maximise availability. COCOGROW™ contains a natural kelp extract to condition the cocopeat while stimulating and maintaining a healthy root system. It also contains additional calcium, which is essential during the late growth stage to ensure a high number of flowers are *produced* and *retained* by the plant. A lack of calcium can lead to a large number of flowers aborting before they can transition into the fruiting stage. Calcium is commonly used in the commercial cocopeat buffering process to improve cocopeat quality.

Plant nutritional requirements change as they transition from growth to flower. Having an adequate supply of easily absorbed nutrients at optimum ratios will enable a healthy transition. The presence of essential elements such as nitrogen, phosphorous, potassium, calcium, magnesium and trace elements are needed to ensure rapid stem and leaf growth while maintaining strong cell development and structure.

HY-GEN® COCOGROW™ is also designed for use during the first stages of flowering. Use it in conjunction with HY-GEN® COCOBLOOM™ for an optimal transition. It's important to have a *growth specific* and *flower specific* nutrient to get outstanding results – *It really does take two!*

HY-GEN® COCOGROW™ and HY-GEN® COCOBLOOM™ from start to harvest!

- GROWTH SPECIFIC FORMULA
- IMPROVES SEEDLING VIGOUR
- IMPROVES PLANT HEALTH
- CONTAINS NATURAL INGREDIENTS
- OPTIMISED CALCIUM LEVELS
- BALANCED TRACE ELEMENT RATIOS
- ADDED COCO CONDITIONER
- MAXIMUM SOLUBILITY
- SUITABLE FOR SOIL

Based on pure chemistry!



PACK SIZES AVAILABLE

| Code | Description | Box |
|--------|-----------------------------------|-------|
| HCGT01 | 1 Litre Part A & 1 Litre Part B | 12 |
| HCGT05 | 5 Litre Part A & 5 Litre Part B | 1 set |
| HCGT20 | 20 Litre Part A & 20 Litre Part B | 1 set |



**BEST
RESULTS**

Get the best results by using HY-GEN® buffered COCOPEAT. It is pest and disease free and made to a unique standard allowing maximum nutrient availability with no competitive nutrient lock out.

WHEN TO USE

Use HY-GEN® COCOGROW™ during the growth stage until buds and fruit have started to form. To ensure maximum performance, regularly test and flush your system to prevent nutrient and plant waste build up.

Use for:

- Seedlings
- Cuttings
- Growth
- Pre-flower
- Foliar
- Soil

IT TAKES TWO COCOPEAT SPECIFIC TWO PART BLOOM FORMULA



HY-GEN® COCOBLOOM™ TWO PART

HY-GEN® COCOBLOOM™ is a *flowering and fruiting stage* cocopeat specific nutrient. This formulation compliments the COCOGROW™ formula and contains high levels of phosphorous, potassium and trace elements ensuring an adequate supply during the transition from growth to flowering and final harvest.

The nutrient levels are carefully formulated to ensure that optimum ratios between nitrogen and phosphorous are achieved thus maximising flowering and fruiting benefit. All other major and minor flowering elements including potassium, calcium, magnesium, sulphur and trace elements are included and optimised to achieve maximum availability. COCOBLOOM™ also contains a natural kelp extract to condition the cocopeat and to stimulate and maintain a healthy root system.

Once flowering is initiated, flowers and fruit formation require higher levels of phosphorous, potassium and trace elements. COCOBLOOM™ contains soluble forms of these nutrients, which produce the best results by giving improved colour, flavours and yields. It is essential that plants have an adequate supply of these nutrients available at the correct ratios.

Continue using HY-GEN® COCOGROW™ until there are visible signs that flowers and buds have started to form. Use HY-GEN COCOBLOOM™ in conjunction with COCOGROW™ to ensure an optimal transition. It's important to use both *growth specific* and *flower specific* nutrient to get outstanding results – *It really does take two!*

HY-GEN® COCOGROW™ and HY-GEN® COCOBLOOM™ from start to harvest!

- FLOWER SPECIFIC FORMULA
- IMPROVES FLOWER QUALITY
- IMPROVES YIELD
- CONTAINS NATURAL INGREDIENTS
- OPTIMISED CALCIUM LEVELS
- BALANCED TRACE ELEMENT RATIOS
- ADDED COCO CONDITIONER
- MAXIMUM SOLUBILITY
- SUITABLE FOR SOIL

**HY-GEN® Coco
Nutrients also
work well as
foliar sprays.**



PACK SIZES AVAILABLE

| Code | Description | Box |
|--------|-----------------------------------|-------|
| HCBT01 | 1 Litre Part A & 1 Litre Part B | 12 |
| HCBT05 | 5 Litre Part A & 5 Litre Part B | 1 set |
| HCBT20 | 20 Litre Part A & 20 Litre Part B | 1 set |

WHEN TO USE

Use HY-GEN® COCOBLOOM™ only once buds and fruit have started to form. (i.e. 2 – 3 weeks after reducing light hours). To ensure maximum performance, regularly test and flush your system to prevent nutrient and plant waste build up.

Use for: • Pre-flower • Flowering • Fruiting
• Foliar • Soil



HINTS & TIPS

To help you fine tune your results, you can find a COCOPEAT FEEDING SCHEDULE at the back of this product guide or download one from our website www.hydroponicgenerations.com.au

CORNUCOPIA COCOGROW™ SINGLE PART

BEING SINGLE IS EASIER

COCOPEAT SPECIFIC SINGLE PART GROW FORMULA



CORNUCOPIA COCOGROW™ SINGLE PART

CORNUCOPIA COCOGROW™ is a *single part*, vegetative stage cocopeat *specific nutrient*. The chemistry is similar to our cocopeat specific two part formulations. The nutrient levels are carefully formulated to ensure that ratios between all major and minor elements are optimised and *readily soluble* when mixed with water. Additional calcium and a natural kelp extract are added to condition the cocopeat while stimulating and maintaining a healthy root system.

Calcium is responsible for maintaining strong cell structure and vigour. During the late growth stage additional calcium ensures a high number of flowers are produced and retained by the plant. A lack of calcium can lead to a large number of flowers aborting before they can transition into the fruiting stage.

Nutrient requirements change as plants transition from growth to flowering. CORNUCOPIA COCOGROW™ accommodates this transition by supplying adequate levels of absorbable nutrients at the correct ratios. These essential nutrients include nitrogen, phosphorous, potassium, calcium, magnesium, trace elements and organic extracts are needed to ensure rapid stem and leaf growth.

CORNUCOPIA COCOGROW™ is formulated to meet the requirements throughout growth and is designed for use during the first stages of flowering. It should be used in conjunction with CORNUCOPIA COCOBLOOM™ for an optimal transition. It's important to have a *growth specific* and *flower specific* nutrient to guarantee outstanding results. Use *one single bottle* for growth and one single bottle for bloom – *Single is easy!*

- GROWTH SPECIFIC FORMULA
- IMPROVES SEEDLING VIGOUR
- IMPROVES PLANT HEALTH
- CONTAINS NATURAL INGREDIENTS
- OPTIMISED CALCIUM LEVELS
- BALANCED TRACE ELEMENT RATIOS
- ADDED COCO CONDITIONER
- SINGLE BOTTLE FOR EASY USE
- READILY SOLUBLE
- SUITABLE FOR SOIL

*Best for
beginners!*



PACK SIZES AVAILABLE

| Code | Description | Box |
|--------|-------------|-----|
| CCGS01 | 1 Litre | 12 |
| CCGS05 | 5 Litre | 2 |

WHEN TO USE

Use CORNUCOPIA COCOGROW™ during the growth stage and until buds and fruit have started to form. To ensure maximum performance, regularly test and flush your system to prevent nutrient and plant waste build up.

- Use for:
- Seedlings
 - Pre-flower
 - Cuttings
 - Foliar
 - Growth
 - Soil

DID YOU KNOW?

CORNUCOPIA SINGLE PART COCO nutrients have been carefully formulated using balanced density and advanced ion chemistry and manufactured using high-grade soluble nutrients. COCO nutrients contain natural ingredients to condition cocopeat while keeping roots healthy.

BEING SINGLE IS EASIER

COCOPEAT SPECIFIC
SINGLE PART
BLOOM FORMULA

CORNUCOPIA COCOBLOOM™ SINGLE PART

CORNUCOPIA COCOBLOOM™ is a *single part, flowering and fruiting stage cocopeat specific nutrient*. The chemistry is similar to our cocopeat specific two part formulations and compliments the CORNUCOPIA COCOROW™ formula. The difference is that it is all in one easy to use bottle.

The nutrient levels are carefully formulated ensuring optimum ratios between nitrogen and phosphorous are achieved to give maximum flowering and fruiting benefit. All other major and minor elements are optimised and *readily soluble* when diluted in water. We include additional calcium and a natural kelp extract to condition the coco peat while stimulating and maintaining a healthy root system.

As flowering is initiated, flowers and fruit formation will require higher levels of phosphorous, potassium and trace elements. COCOBLOOM™ contains soluble forms of these nutrients, which produce the best results by giving improved colour, flavours and yields. It's essential that plants have an adequate supply of easily absorbable nutrients available at the correct ratios.

CORNUCOPIA COCOGROW™ is also designed for use during the early stages of flowering. Continue using COCOGROW™ until there are visible signs that flowers and buds have clearly started to form. Start using COCOBLOOM™ in conjunction with the COCOGROW™ to ensure an optimal transition. This is the best-optimised way to follow the plant's changing requirements. It's important to use both *growth specific* and *flower specific* nutrient to get outstanding results. Use *one single bottle* for grow and *one single bottle* for bloom – *Single is easy!*

- FLOWER SPECIFIC FORMULA
- IMPROVES FLOWER QUALITY
- IMPROVES YIELD
- CONTAINS NATURAL INGREDIENTS
- OPTIMISED CALCIUM LEVELS
- BALANCED TRACE ELEMENT RATIOS
- ADDED COCO CONDITIONER
- SINGLE BOTTLE FOR EASY USE
- READILY SOLUBLE
- SUITABLE FOR SOIL

*Optimised
for flowering!*



PACK SIZES AVAILABLE

| Code | Description | Box |
|--------|-------------|-----|
| CCBS01 | 1 Litre | 12 |
| CCBS05 | 5 Litre | 2 |

WHEN TO USE

Only use CORNUCOPIA COCOBLOOM™ when buds and fruit have formed. To ensure maximum performance, regularly test and flush your system to prevent nutrient and plant waste build up..

Use for:

- Pre-flower
- Flowering
- Fruiting
- Foliar
- Soil

DID YOU
KNOW?

SINGLE PART nutrients are also manufactured without compromising calcium, phosphorous or sulphur ratios. Single part nutrients make life simple, just shake and pour.

HY-GEN® HYDRO GROWTH TWO PART

**THEY MAKE A
GREAT COUPLE!**
HYDROPONIC SPECIFIC
TWO PART
GROWTH FORMULA



HY-GEN® HYDRO GROWTH TWO PART

HY-GEN® HYDRO GROWTH is a *vegetative, growth stage specific nutrient*. It is suitable for NFT (Nutrient Film Technique), expanded clay, perlite and various other inert soilless substrates. *Two part nutrients* have been carefully formulated and balanced using advanced ion chemistry ensuring maximum solubility. HYDRO GROWTH nutrients also work well as foliar sprays.

All nutrient levels are carefully calculated and formulated to ensure that the ratios between nitrogen, phosphorous, calcium, potassium, magnesium and trace elements are optimised for maximum availability. These elements are needed to ensure rapid stem and leaf growth and can support the transition into early flowering and are needed to accommodate the plant's changing nutrient requirements.

Calcium is responsible for maintaining strong cell structure and vigour. During the late growth stage additional calcium ensures a high number of flowers are produced and retained by the plant. A lack of calcium can lead to a large number of flowers aborting before they can transition into the fruiting stage.

HY-GEN® HYDRO GROWTH is formulated to meet the requirements throughout growth and is designed for use during the first stages of flowering. It should be used in conjunction with HY-GEN® HYDRO BLOOM to guarantee an optimal transition. It's important to have a *growth specific and flower specific nutrient* to achieve outstanding results – *They really do make a great couple!*

HY-GEN® HYDRO GROWTH and HY-GEN® HYDRO BLOOM from start to harvest!

- GROWTH SPECIFIC FORMULA
- IMPROVES SEEDLING VIGOUR
- IMPROVES PLANT HEALTH
- OPTIMISED CALCIUM LEVELS
- HIGHLY SOLUBLE
- BALANCED TRACE ELEMENTS
- SUITABLE FOR SOIL

*High calcium
ensures more
flower retention.*



PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-----------------------------------|-------|
| HGT01 | 1 Litre Part A & 1 Litre Part B | 12 |
| HGT05 | 5 Litre Part A & 5 Litre Part B | 1 set |
| HGT20 | 20 Litre Part A & 20 Litre Part B | 1 set |

WHEN TO USE

Use HY-GEN® HYDRO GROWTH during the growth stage and until buds and fruit have started to form. To ensure maximum performance, regularly test and flush your system to prevent nutrient and plant waste build up.

Use for:

- Seedlings
- Cuttings
- Growth
- Pre-flower
- Foliar
- Soil

DID YOU
KNOW?

HY-GEN® HYDRO TWO PART and SINGLE PART formulas have the same final analysis. So, you can choose which way you want to grow. One bottle or two? – you choose!

THEY MAKE A GREAT COUPLE!

HYDROPONIC SPECIFIC TWO PART BLOOM FORMULA



HY-GEN® HYDRO BLOOM TWO PART

HY-GEN® HYDRO BLOOM is a flowering and fruiting stage specific nutrient. It's suitable for NFT (Nutrient Film Technique), expanded clay, perlite and various other inert soilless substrates. The HYDRO BLOOM formula incorporates higher levels of phosphorous, potassium and trace elements to support the transition from growth to flowering and eventual final harvest. The formulation compliments the HYDRO GROWTH formula. The nutrient levels are carefully formulated to ensure that the perfect ratios between nitrogen and phosphorous are achieved to ensure the plant gains maximum flowering and fruiting benefit. Calcium, potassium, magnesium, sulphur and trace elements are also optimised to maximise availability.

As flowering is initiated, flowers and fruit formation will require higher levels of phosphorous, potassium and trace elements. COCOBLOOM™ contains soluble forms of these nutrients, which produce the best results by improving colour, flavours and yields. It's essential that plants have an adequate supply of these easily absorbed nutrients available at the correct ratios.

Continue using HY-GEN® HYDRO GROWTH until there are visible signs of flowers and buds. Start using HYDRO BLOOM in conjunction with HYDRO GROWTH to ensure an optimal transition. This will be the best way to meet the plants changing requirements. It's important to use a growth specific and flower specific nutrient to get outstanding results – They really do make a great couple!

HY-GEN® HYDRO GROWTH and HY-GEN® HYDRO BLOOM from start to harvest!

- BLOOM SPECIFIC FORMULA
- PK ENHANCED FORMULA
- IMPROVES FLOWER QUALITY
- IMPROVES YIELD
- HIGH SOLUBILITY
- BALANCED TRACE ELEMENTS
- SUITABLE FOR SOIL

Increased PK helps improves flower quality.



PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-----------------------------------|-------|
| HBT01 | 1 Litre Part A & 1 Litre Part B | 12 |
| HBT05 | 5 Litre Part A & 5 Litre Part B | 1 set |
| HBT20 | 20 Litre Part A & 20 Litre Part B | 1 set |

WHEN TO USE

Use HY-GEN® HYDRO BLOOM once buds and fruit have started to form. To ensure maximum performance, regularly test and flush your system to prevent nutrient and plant waste build up.

Use for: • Pre-flower • Flowering • Fruiting
• Foliar • Soil



HINTS & TIPS

Optimise your results by using our HYDRO FEEDING SCHEDULE at the back of this product guide or download one from our website www.hydroponicgenerations.com.au

HY-GEN® HYDRO GROWTH SINGLE PART

BEING SINGLE IS EASIER

HYDROPONIC SPECIFIC
SINGLE PART
GROWTH FORMULA

HY-GEN® HYDRO GROWTH SINGLE PART

HY-GEN® HYDRO GROWTH is a *vegetative, growth stage specific nutrient*. It's suitable for NFT (Nutrient Film Technique), expanded clay, perlite and other soilless substrates. *Single part nutrients* have been carefully manufactured using balanced density advanced ion chemistry. They have the same analysis as our two part Hydro nutrients without compromising calcium, phosphorous or sulphur levels. HYDRO GROWTH nutrients also work well as foliar sprays.

Nutrient levels are carefully formulated to ensure that all major and minor trace elements are optimised for maximum availability. These elements ensure rapid stem and leaf growth while accommodating the plant's changing nutrient requirements during the transition into early flowering.

Calcium is responsible for maintaining strong cell structure and vigour. During the late growth stage adequate levels ensure that a high number of flowers are produced and retained by the plant. The lack of calcium can lead to a high number of flowers aborting before they can transition into the fruiting stage, giving poor results.

HY-GEN® HYDRO GROWTH meets plants requirements throughout growth and is designed for use during the first stages of flowering. Use it in conjunction with HY-GEN® HYDRO BLOOM to guarantee an optimal transition. It's important to have a growth specific and flower specific nutrient to guarantee outstanding results. Use *one single bottle for grow* and *one single bottle for bloom* – *Single is easy!*

HY-GEN® HYDRO GROWTH and HY-GEN® HYDRO BLOOM from start to harvest!

- GROWTH SPECIFIC FORMULA
- IMPROVES SEEDLING VIGOUR
- IMPROVES PLANT HEALTH
- OPTIMISED CALCIUM LEVELS
- BALANCED TRACE ELEMENTS
- SINGLE BOTTLE FOR EASY USE
- HIGHLY SOLUBLE
- SUITABLE FOR SOIL

Fast Dissolving.



PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| HGS01 | 1 Litre | 12 |
| HGS05 | 5 Litre | 2 |

WHEN TO USE

Use HY-GEN® HYDRO GROWTH during the growth stage and until buds and fruit have started to form. To ensure maximum performance, regularly test and flush your system to prevent nutrient and plant waste build up.

Use for:

- Seedlings
- Cuttings
- Growth
- Pre-flower
- Foliar
- Soil

DID YOU
KNOW?

HY-GEN® HYDRO TWO PART and SINGLE PART formulas have the same final analysis. So, you can choose which way you want to grow. One bottle or two? – you choose!

BEING SINGLE IS EASIER

HYDROPONIC SPECIFIC
SINGLE PART
BLOOM FORMULA

HY-GEN® HYDRO BLOOM SINGLE PART

HY-GEN® HYDRO BLOOM is a *flowering and fruiting stage specific nutrient*. It's suitable for NFT (Nutrient Film Technique), expanded clay, perlite and other soilless substrates. *Single part nutrients* have been carefully manufactured using balanced density advanced ion chemistry. They have the same analysis as our two part Hydro nutrients without compromising calcium, phosphorous or sulphur levels.

HYDRO BLOOM incorporates higher levels of phosphorous, potassium and trace elements to support the transition from flowering to final harvest. Optimum ratios between nitrogen and phosphorous are used to ensure maximum flowering and fruiting benefit. Calcium, potassium, magnesium, sulphur and trace elements are also optimised to maximise availability.

When flowering is initiated, flower and fruit formation requires higher levels of phosphorous, potassium and trace elements. HYDRO BLOOM contains high quality forms of these absorbable nutrients which give improved colour, flavours and yields. It's essential that plants have an adequate supply of these nutrients at the correct ratios.

Continue using HY-GEN® HYDRO GROW until there are visible signs of flowers and buds. Use HYDRO BLOOM in conjunction with the HYDRO GROWTH to ensure an optimal transition into flower. This is the best way to meet the plants changing requirements. It's important to have a growth specific and flower specific nutrient to guarantee outstanding results. Use *one single bottle for grow* and *one single bottle for bloom* – *Single is easy!* HY-GEN® HYDRO GROWTH and HY-GEN® HYDRO BLOOM from start to harvest!

- BLOOM SPECIFIC FORMULA
- PK ENHANCED FORMULA
- IMPROVES FLOWER QUALITY
- IMPROVES YIELD
- BALANCED TRACE ELEMENTS
- SINGLE BOTTLE FOR EASY USE
- HIGH SOLUBILITY
- SUITABLE FOR SOIL

*Balanced for
flowers and fruit.*



PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| HBS01 | 1 Litre | 12 |
| HBS05 | 5 Litre | 2 |

WHEN TO USE

Use HY-GEN® HYDRO BLOOM once buds and fruit have started to form. To ensure maximum performance, regularly test and flush your system to prevent nutrient and plant waste build up.

Use for: • Pre-flower • Flowering • Fruiting
• Foliar • Soil

HINTS
& TIPS

Natural hormones produced by the plant are responsible for the transition into flowering, not the nutrients. However, while the transition occurs, the nutrients must be available in the correct balanced quantities in order to achieve the best results.

The background of the page is a vibrant underwater photograph of a kelp forest. Sunlight filters through the water, creating a dappled light effect on the green and brown seaweed. A large, white, circular graphic is centered on the page, containing text and a quote symbol.

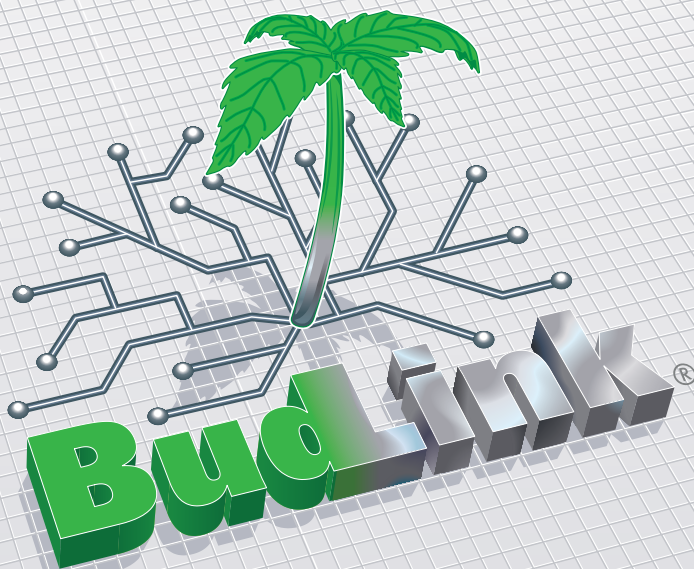
“ NATURE PROVIDES
THE SOLUTIONS –
WE JUST
USE THEM. ”

Hydroponic Generations

PRODUCT

| | |
|--------------------|----|
| BUDLINK® HOW & WHY | 20 |
| BUDLINK® SILICA | 21 |
| NITRO-K™ | 22 |
| PK TOP UP™ | 23 |
| OMEGAZYME™ | 24 |
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| SEA ESSENTIALS™ | 26 |

additives



HOW & WHY

- INCREASES WEIGHT AND BULK
- HELPS NUTRIENT UPTAKE
- STRENGTHENS PLANTS
- IMPROVES DISEASE RESISTANCE
- IMPROVES CELL INTEGRITY

Why can't silica be included in the components of two-part nutrients to the level that it is in say BudLink®?

For silica to remain in solution at high concentration it requires alkaline conditions (i.e. pH greater than 7). If a silica solution concentrate were added to the 'A' or 'B' parts of a two-part nutrient solution, a precipitation reaction with nutrient elements would occur. Nutrient deficiency problems are likely to result from this. This is why BudLink® provides the grower with a separate, easy to use silica supplement. Also by keeping silica separate, it allows the grower to apply silica at any desired rate. This is an advantage especially when crop specific rates are required. Another advantage is that BudLink® can be applied as a separate foliar application to help fight pests. BudLink® should be considered as part 'C' to all existing two-part nutrients.

How does it reduce moisture loss?

BudLink's active silica compound accumulates largely as hydrated silica (silica bound by water) most abundantly in walls of epidermal cells in root, stem and leaf cells. This binding relationship leads to improved growth resulting from a higher mechanical stability and strength in leaves and stems. This in turn also leads to an improved light interception and higher photosynthetic capacity. This gives rise to a more efficient utilization of water and hence reduced moisture loss.

In what way does BudLink® assist in the efficient uptake of nutrients?

By adding increasing quantities of silica to the nutrient solution there is a corresponding increase in uptake and deposition of silica in the plant tissue. It has been found that there is also a competitive uptake between silica and other elements such as manganese and iron, at the solution/root interface. This competition is beneficial since it prevents the build up of toxic levels of manganese in plant tissue through uptake. It has also been reported that the silica may actually increase the tolerance to high manganese concentrations or to an imbalance in phosphorus and zinc supply. Silica can be regarded as a facilitator of a more efficient nutrient uptake process.

How does it improve cell development?

Silica is readily deposited into the cell walls of plants during cell development and division. This produces a 'silica-cellulose framework', which in turn strengthens cell walls. A little like adding mortar to brickwork. It has been demonstrated, by way of scanning electron microscopy and energy dispersive X-ray analysis, that once deposited into cell walls, the silica cannot be remobilized by the plant. It is recommended that a continuous supply of BudLink® be added to the nutrient solution thus allowing its incorporation into new growth from transplanting onward.

How does it stimulate plant immune system & resistance to pest attack?

Plants grown hydroponically have been found to be more prone to insect and bacterial attack than their soil grown counterparts. Research has shown that this is partly due to the lack of silica in hydroponic nutrient formulations, normally present in soil (ca. 10ppm). Since the silica is deposited into the cell structure it provides a physical barrier against fungal attack. The use of BudLink® has demonstrated a significant reduction in bacterial attack such as pythium and powdery mildew when applied to the nutrient solution or as a foliar spray. Silica accumulates around points of infection with a similar increase in plant produced anti-infection compounds thus improving protection. The improved cell integrity brought on by the deposition of silica into the cell structure also provides a barrier to insect attack. In trials on commercial crops it was found that insect numbers did not increase due to their inability to penetrate and feed from the plants. Once applications ceased all new growth was attacked. It should be noted that the Organic Growers groups approve the use of silica for disease and pest control.

How do you account for the increase in weight & bulk?

As the concentration of silica in nutrient solutions is increased, there is a corresponding increase in the accumulation of silica in plant tissue. This improves photosynthetic capacity, cell development, water utilization, nutrient uptake and disease resistance. These factors give rise to a healthier more highly productive plant, which results in an increased production, weight and bulk per plant as demonstrated by research.



THE MISSING LINK

BUILDS STRENGTH, WEIGHT & DISEASE RESISTANCE

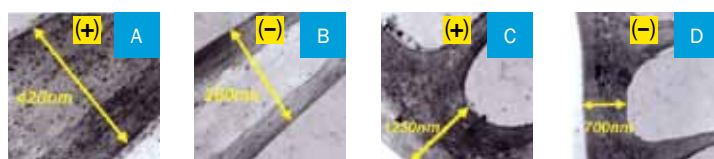
Silica - Formulated from the Ground Up

BUDLINK® SILICA

BUDLINK® is the original and ultimate liquid silica product enjoyed by growers across the world since 1997. BUDLINK's unique recipe has been formulated from the ground up and includes other beneficial elements. BUDLINK® is effective at all stages of growth and flowering. BUDLINK® compensates for differing plant nutrient requirements, which occur in the presence of silica in the same way a body builder's nutritional requirements change as their body changes. BUDLINK® is not a hormone but a plant builder which improves strength and ability to fight against bacteria and insects. It should always be used as part of every regular feeding program.

BUDLINK's active ingredients are imbedded into the plant's cell walls producing plants with thicker and greener foliage. When used as a foliar spray it is easily absorbed by the leaves and also forms a barrier against airborne bacteria and chewing insects and improves harsh light level resilience. It will build strength, add weight and improve the plant's natural disease resistance. Without it you are missing the most important link for achieving outstanding results. BUDLINK® – *The Missing Link!*

EFFECT OF SILICA ON CELL WALLS



- INCREASE WEIGHT AND BULK
- HELPS NUTRIENT UPTAKE
- STRENGTHENS CELL WALLS
- IMPROVES DISEASE RESISTANCE
- IMPROVES YIELD

< Electron micrographs of epidermal cells showing differences in cell wall structure, cell wall thickness, and cell wall density (+/- Silicates) (Magnifications: A & B x 40,000; C & D x 8,000)

PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| BL010 | 1 Litre | 12 |
| BL020 | 2 Litre | 5 |
| BL050 | 5 Litre | 2 |
| BL200 | 20 Litre | 1 |

WHEN TO USE

BUDLINK® is suitable for all growing systems including cocopeat, expanded clay, perlite, vermiculite, peat moss and NFT. BUDLINK® should be added every time you add nutrient to your tank.

Use for: • Seedlings • Growth • Flowering
• Fruiting • Foliar • Soil

HINTS & TIPS

For improved performance and results use BUDLINK® as 'Part C' when making up your nutrient solution. Use BUDLINK® at the same rate as Part A and Part B (do not exceed 5ml per litre). For example: 3mL Part A + 3mL Part B + 3mL of BUDLINK® per litre of water. *No other silica product is easier to use!*

NITRO CHARGE YOUR ~~CAR~~

PLANTS

Improves Growth Performance
from Take Off



NITRO-K™

NITRO-K™ is formulated using organic based nitrogen, potassium and chelated trace elements. It's designed to boost and improve root, leaf and stem health. The organic acids in NITRO-K™ improve nutrient solubility and availability. Additional potassium helps to facilitate the transition into flowering.

Plants absorb nitrogen, potassium and trace elements at a rapid rate throughout their life cycle, especially during the vegetative stage. As available levels fall, the growth rate begins to slow. NITRO-K™ can be used to quickly correct nitrogen deficiencies or to simply increase nitrogen levels as required.

Using NITRO-K™ regularly gives your plants a continued supply of valuable nitrogen, potassium and trace elements when they are most needed. When used as a foliar spray it can quickly correct nutrient deficiencies, keeping your plants in top health.

Continue using NITRO-K™ until there are visible signs of flowers and buds then start using PK TOP UP™. This will ensure a continued supply of potassium for flowering while nitrogen is replaced by additional phosphorous needed for fruit production. Using the two products in succession will give improved colour, flavours and yields.

Give your plants the *Nitro Charged Boost* they need!



- ORGANIC NITROGEN & POTASSIUM
- IMPROVES NUTRIENT UPTAKE
- INCREASES GROWTH RATES
- IMPROVES PLANT HEALTH
- STRENGTHENS LEAF & STEM STRUCTURE
- PRE-FLOWERING BOOSTER
- SUITABLE FOR SOIL

PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| NK005 | 500mL | 12 |
| NK010 | 1 Litre | 12 |
| NK050 | 5 Litre | 2 |
| NK200 | 20 Litre | 1 |

WHEN TO USE

Use NITRO-K™ during the vegetative cycle and into early flowering. NITRO-K™ is suitable for all 'run to waste' and 're-circulating' systems. Regularly flush your system to prevent nutrient and plant waste build up.

Use for:

- Seedlings
- Cuttings
- Growth
- Early Flowering
- Foliar
- Soil

DID YOU KNOW?

Nitrogen and Potassium are one of the most mobile nutrient elements. If the supply of these elements becomes deficient in new shoots, plant will transport them from older leaves. This will cause them to become yellow and necrotic making them susceptible to attack by pathogens.

GET MORE QUALITY TOP UP YIELDS

Bloom to Harvest



PK TOP UP™

PK TOP UP™ is formulated using high quality soluble ingredients which supply additional levels of phosphorus, potassium and trace elements levels during the flowering and fruiting stage. Potassium and phosphorous improve flower and fruit colour as well as enhance the quality and final flavour of the produce. PK TOP UP's highly concentrated formula means you only need a small dose to achieve fantastic results.

During early flowering and fruit set, plants absorb higher levels of phosphorous and potassium. As levels fall, the growth and flowering rates can slow, leading to aborted flowers and fruit. When used regularly, PK TOP UP™ can be used to quickly correct deficiencies or to simply return phosphorus, potassium and trace elements back to optimal levels.

Continue using NITRO-K™ until there is visible signs of flowers and buds forming then start using PK TOP UP™. This will ensure a continued supply of potassium for flowering and additional phosphorous needed for fruit production. Using the two products in succession will improve colour, flavours and yields. The improved quality and yields will clearly be visible in the final harvest.

Top Up your yields and give yourself a better quality harvest!



- **POTASSIUM & PHOSPHOROUS BOOSTER**
- **TRACE ELEMENT BOOSTER**
- **IMPROVES FLOWER QUALITY**
- **IMPROVES YIELDS**
- **STRENGTHENS CELLS IN ROOTS & FRUITS**
- **IMPROVES BUFFERING CAPACITY**

PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| PK005 | 500mL | 12 |
| PK010 | 1 Litre | 12 |
| PK050 | 5 Litre | 2 |
| PK200 | 20 Litre | 1 |

WHEN TO USE

Use PK TOP UP™ once flowers begin to form. PK TOP UP™ is suitable for all 'run to waste' and 're-circulating' systems. Regularly flush your system to prevent nutrient and plant waste build up.

Use for:

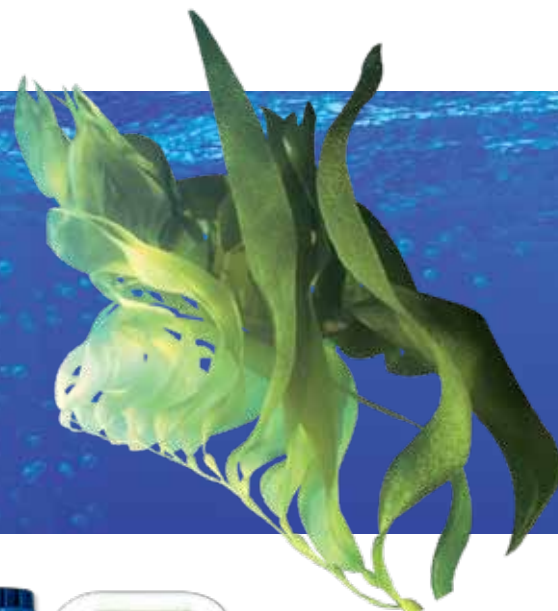
- Flowering
- Fruiting
- Foliar
- Soil

DID YOU KNOW?

PK TOP UP™ contains chelated trace elements are essential to the function of enzymes in plants. Organic and chelated trace elements are readily available to the plant through a broader pH range of 4 to 9 compared to mineral salt-based elements, which can easily become insoluble and unavailable in this range.

ORGANIC PLANT TONIC

Growth & Root Mass Enhancer



OMEGAZYME™

OMEGAZYME™ is a blend of natural sea kelp selected specifically for their root and shoot promoting properties. The organic compounds are known to enhance and accelerate root repair and root system development. They are also known to actively promote vegetative growth and stimulate early flower production. The raw plant ingredients used are carefully prepared using a cold pressed method, which ensures the naturally high levels of these boosters remain strongly active.

OMEGAZYME™ contains natural organic bound, readily absorbable, trace elements, which also stimulate root repair and growth while promoting new vegetative growth. The ingredients in OMEGAZYME™ ultimately aid in the natural transport processes occurring within the plant rhizosphere. In a way it behaves as a tonic for the rhizosphere. The process helps resist stress brought on by drought, over watering, nutrient deficiency and root diseases.

It is excellent for use on new cuttings and effective on all plants and safe to use in aquaponic systems. It is also a great pre-conditioner or pre-soak for cocopeat. Continue using OMEGAZYME™ until flowers and buds form then commence using it with SEA ESSENTIALS™ until fruits begin to form. This will optimise the transition into fruit production and maximise yield potential.

Get your plants off to a healthy start – *a plant tonic like no other!*



- PROMOTES ROOT GROWTH & REPAIR
- PROMOTES GROWTH & FLOWERING
- BENEFICIAL TO CUTTINGS
- HELPS AGAINST TRANSPLANT SHOCK
- NATURAL CHELATED TRACE ELEMENTS
- ORGANIC MINERALS
- IMPROVES PLANT HEALTH

PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| OZ005 | 500mL | 12 |
| OZ010 | 1 Litre | 12 |
| OZ020 | 2 Litre | 5 |
| OZ050 | 5 Litre | 2 |
| OZ200 | 20 Litre | 1 |

WHEN TO USE

Use OMEGAZYME™ as a soak for cuttings and seedlings to promote new root growth. OMEGAZYME™ is suitable for all 'run to waste' and 're-circulating' systems. Regularly flush your system to prevent nutrient and plant waste build up.

Use for:

- Seedlings
- Cuttings
- Growth
- Early Flowering
- Foliar
- Soil

DID YOU KNOW?

Farmers have long known the benefits of kelp as a natural source of nutrition and essentially, a tonic for soil grown crops.

BOOSTED HEALTH BOOSTED YIELDS

**Improves Nutrient Availability
& Uptake During Grow & Bloom**



HUMIBOOSTA™

HUMIBOOSTA™ is formulated using a blend of *Humic* and *Fulvic* acids to improve nutrient solubility thus enabling maximum nutrient availability. They are selected and derived from various natural deposits and processed sources. Additional macro nutrient forms of these organic acids ensure that background nutrient levels are replenished throughout all stages of plant development. The list of nutrients include calcium, magnesium and potassium.

HUMIBOOSTA™ assists in maintaining health in the *rhizosphere* while encouraging beneficial microbes, especially when cultivating in cocopeat, soil and hydroponic systems. *Humic* and *Fulvic* acid are known for their ability to bind to nutrients, making them more absorbable. HUMIBOOSTA is suitable for all systems and can be used through all stages of plant growth and flower and fruit development.

HUMIBOOSTA™ is also a source of additional magnesium, which supports healthy vegetative growth. Magnesium plays a key role in photosynthesis since it is an essential building block for chlorophyll production during photosynthesis. Another benefit is the addition of soluble calcium, which is essential during the late growth stage to ensure a high number of flowers are *produced* and *retained* by the plant. The lack of calcium can lead to a large number of flowers aborting before they can transition into the fruiting stage.

Give your plants the boost they deserve from start to harvest –
Boosted health gives boosted yields!



- CALCIUM & MAGNESIUM ENHANCED
- OPTIMISES ROOT FUNCTION
- IMPROVES NUTRIENT TRANSPORT
- HELPS CHLOROPHYLL PRODUCTION
- IMPROVES FLOWER/FRUIT PRODUCTION & YIELD QUALITY
- FOR USE THROUGH ALL STAGES
- SUITABLE FOR SOIL

PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| HU005 | 500mL | 12 |
| HU010 | 1 Litre | 12 |
| HU050 | 5 Litre | 2 |
| HU200 | 20 Litre | 1 |

WHEN TO USE

Use HUMIBOOSTA™ through all stages of plant growth and flower development. HUMIBOOSTA™ is suitable for all 'run to waste' and 're-circulating' systems. Regularly flush your system to prevent nutrient and plant waste build up.

Use for:

- Seedlings
- Growth
- Flowering
- Fruiting
- Foliar
- Soil



Humic and *fulvic* acids are natural organic compounds, which vary, in molecular size. While some of the larger humic acids are too big to enter plant roots some of the smaller molecules (fulvic acids) have the ability to transport themselves in and out of plants. This makes them excellent nutrient carriers.

ESSENTIALLY MORE BLOOM BOOSTER & HEALTH IMPROVER

Promoting a Healthy Rhizosphere



SEA ESSENTIALS™

SEA ESSENTIALS™ is formulated using a unique blend of sea plants including kelp, seaweed and seagrass. Each of these has its own unique plant health promoting properties, micronutrient content and flower promoting properties. The presence of high levels of potassium and trace elements is an additional benefit since it provides plants with a natural source beneficial to flower and fruit development.

Sea plants are known for their high amino acid and natural stimulant content. The naturally occurring compounds also help to promote nutrient uptake and healthy roots in the *rhizosphere* while encouraging beneficial microbes. SEA ESSENTIALS™ is also low in sodium compared to other products derived from sea plants. It also contains organically bound trace elements such as iodine, which is beneficial to human health.

SEA ESSENTIALS™ can be used through all stages of plant growth and flower development. Use OMEGAZYME™ until there are visible signs of flowers and buds then start using it with SEA ESSENTIALS™ until fruit begin to form. This will optimise the transition into fruit production and maximise yield potential.

Give your plants more of the essentials and get more out – *Essentially more!*



- PROMOTES FLOWERING
- IMPROVES YIELD & FLAVOUR QUALITY
- IMPROVES ROOT & SHOOT HEALTH
- STRENGTHENS CELL WALLS
- IMPROVES DISEASE RESISTANCE
- LOW SODIUM
- SUITABLE FOR SOIL

PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| SE005 | 500mL | 12 |
| SE010 | 1 Litre | 12 |
| SE050 | 5 Litre | 2 |
| SE200 | 20 Litre | 1 |

WHEN TO USE

SEA ESSENTIALS™ can be used through all stages of plant growth, flower and fruit development. SEA ESSENTIALS™ is suitable for all 'run to waste' and 're-circulating' systems. Regularly flush your system to prevent nutrient and plant waste build up.

Use for:

- Flowering
- Fruiting
- Foliar
- Soil

DID YOU
KNOW?

Sea and ocean plants are a rich source of nutrition for animals, humans and plants.

PRODUCT

| | |
|-----------------|----|
| PH TEST KIT | 28 |
| COMPLETE PH KIT | 29 |
| PH UP | 30 |
| PH DOWN | 31 |

pH TESTING
& CONTROL

KNOW THE IMPORTANCE OF pH



HY-GEN pH TEST KIT

What is pH and when should it be checked?

In hydroponics 'pH' is an extremely important factor. The pH is a scientific term used to describe the amount of acidity or alkalinity in a nutrient solution. If not monitored and adjusted regularly plants can become either weak or die.

pH is expressed as a series of numbers which represent degrees of acidity or alkalinity. The range used is usually between 1 and 14. Pure water has a neutral pH of 7. Values from 1 to 7 are degrees of acidity whereas 7 to 14 are degrees of alkalinity. The nutrient solution should always be kept slightly acidic and typically in a range between 5.8 to 6.5 which is suitable for most plants.

Nutrients will be more readily available for adsorption once the pH is set to the optimum range, therefore maximising their uptake. If the pH is too high or too low pH it can interfere with the absorption of important nutrients such as iron, calcium, magnesium, etc. It's essential that growers monitor and maintain a stable pH to make sure that the plant roots are healthy.

Testing the nutrient solution pH is made easy with a HY-GEN® pH Test Kit. The kit comes supplied with a test tube, colour chart and concentrated indicator solution. Testing only requires *one drop* of indicator.

- SIMPLE TO USE
- ACCURATE COLOUR CHART
- CONCENTRATED INDICATOR SOLUTION
- ONLY ONE DROP REQUIRED
- MULTIPLE TESTS



*Check your
pH daily!*

pH TEST KITS CONTAINS

| Code | Description | Box |
|-------|--------------------------------------|-----|
| TK000 | 5ml Test Tube | 12 |
| | 15ml Concentrated indicator solution | |
| | Colour Chart with 4.5 to 7.5 range | |

WHEN TO USE

The pH should be checked daily and always after water or additives are added to your tank. Test the solution only after the tank has been mixed thoroughly and allowed to stand for at least 30-60 minutes.

DID YOU KNOW?

The wrong pH reading can make the best nutrient solution perform poorly. Check your pH after you have finished adding your nutrient concentrates and additives to your tank. Mix well and allow at least 30-60 minutes to equilibrate before testing.

TAKE CONTROL OF pH

OPTIMISE NUTRIENT PERFORMANCE



HY-GEN COMPLETE pH KIT

HY-GEN® COMPLETE pH KIT is an easy and accurate way to keep track of the nutrient solution pH. The kit gives the added ability to adjust your pH using the pH UP and pH DOWN solutions provided. Adjusting the pH is quite easy and after some time and experience it becomes an art as you start to learn more about your plants and growing system.

The concentrated indicator solution allows you to obtain a reading by using just one drop in the test tube provided. The calibrated colour chart provided helps test your pH to within 0.5 of a pH unit. Testing and adjusting your nutrient solution regularly will ensure your plants are healthy and happy.

Testing and adjusting the nutrient solution pH is made easy with a HY-GEN® Complete pH Kit. The kit comes supplied with a test tube, 1mL transfer pipette, 150mL pH Up, 150mL pH Down, colour chart and concentrated indicator solution. Testing only requires one drop of indicator.

- SIMPLE TO USE
- ACCURATE COLOUR CHART
- CONCENTRATED INDICATOR SOLUTION
- ONLY ONE DROP REQUIRED
- pH UP AND DOWN SOLUTION
- MULTIPLE TESTS
- TRANSFER PIPETTE FOR EASY USE

*Use care when
altering your pH.*



pH TEST KITS CONTAINS

| Code | Description | Box |
|-------|--------------------------------------|-----|
| CK000 | 5ml Test Tube | 12 |
| | 1mL Transfer Pipette | |
| | 150mL pH UP / 150mL pH DOWN | |
| | 15ml Concentrated indicator solution | |
| | Colour Chart (pH 4.5 to 7.5 range) | |

WHEN TO USE

The pH should be checked daily and always after water or additives are added to your tank. Adjust your pH when it falls below 5.8 or rises above 6.5. Once adjusted mix well and allow 60 minutes before re-testing and adjusting.

HINTS & TIPS

Always start by using half as much pH UP or pH DOWN as you need so that the pH is changed gradually. Don't forget to pre-dilute the pH UP or pH DOWN in some water before you add the mixture to your nutrient tank.

pH UP FOR THE PERFECT pH WHEN YOUR pH IS TOO LOW



HY-GEN® pH UP

HY-GEN® pH UP contains a 45% solution of potassium hydroxide, which can be added to your growing system to RAISE the pH. It's recommended to make up your nutrient solution first and allow it to equilibrate. This can take up to 60 minutes depending on the size of your tank. Always add the required amount of pH UP to a small separate container of water and mix well before adding to your nutrient tank.

- SUITABLE FOR HYDROPONICS
- FOOD GRADE INGREDIENTS
- HIGHLY SOLUBLE
- CONCENTRATED FORMULA
- CHILD RESISTANT CAP FOR ADDED SAFETY



NOTE: Always use safety glasses and caution when using this product. KEEP AWAY FROM CHILDREN.

*pH Adjustment
made easy!*



PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| PU025 | 250mL | 24 |
| PU050 | 500mL | 12 |
| PU100 | 1 Litre | 12 |
| PU500 | 5 Litre | 2 |

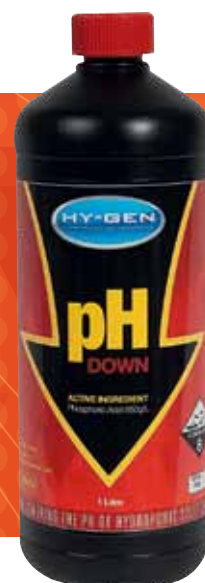
WHEN TO USE

Use pH UP every time your pH is *too low*. Adjust the pH only after tap water or additives are added to your tank. Once adjusted mix well and allow 30-60 minutes before re-testing and adjusting.

HINTS & TIPS

Optimise your results by using our *GROWERS GUIDE* provided at the back of this booklet.

pH DOWN FOR THE PERFECT pH WHEN YOUR pH IS TOO HIGH



HY-GEN® pH DOWN

HY-GEN® pH DOWN contains 85% *food grade* Orthophosphoric acid and will to LOWER the pH when added to your growing system. It's recommended that you prepare your nutrient solution first and allow it to equilibrate; this can take up to 60 minutes depending on the size of your tank. Always add the required amount of pH DOWN to a small separate container of water and mix well before adding to your nutrient tank.

- SUITABLE FOR HYDROPONICS
- FOOD GRADE INGREDIENTS
- HIGHLY SOLUBLE
- CONCENTRATED FORMULA
- CHILD RESISTANT CAP FOR ADDED SAFETY



NOTE: Always use safety glasses and caution when using this product. KEEP AWAY FROM CHILDREN.

PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| PD025 | 250mL | 24 |
| PD050 | 500mL | 12 |
| PD100 | 1 Litre | 12 |
| PD500 | 5 Litre | 2 |

*Food grade
ingredients!*




WHEN TO USE

Use pH DOWN every time your pH is *too high*. Adjust the pH only after tap water or additives are added to your tank. Once adjusted mix well and allow 30-60 minutes before re-testing and adjusting.

HINTS & TIPS

Always pre-dilute pH UP, pH DOWN and any other product with water before adding to your tank.

A background image featuring laboratory glassware, including two round-bottom flasks filled with a clear liquid and a molecular model with dark spheres and connecting rods. A white circular overlay is centered on the image, containing a quote in green text.

“ THE EXPECTATIONS
OF LIFE DEPEND
UPON DILIGENCE;
THE MECHANIC THAT
WOULD PERFECT HIS
WORK MUST FIRST
SHARPEN HIS TOOLS. ”

Confucius

PRODUCT

| | |
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| pH BUFFER 4 | 34 |
| pH BUFFER 7 | 34 |
| 2.76 CONDUCTIVITY | 34 |
| PROBE CLEANER | 35 |
| pH ELECTRODE STORAGE | 35 |

INSTRUMENT CALIBRATION & CARE

PRECISION & ACCURACY ANALYTICAL GRADE SOLUTIONS



pH BUFFER 4

The ideal pH range for a nutrient solution is typically between 5.8 and 6.5. A pH value above or below this range can increase the likelihood that some nutrients become unavailable to the plant. A pH value of 6.3 typically works well for most plants.

Some electronic meters require a 'two point' calibration. pH BUFFER 4 is important as the lower calibration point in the two point calibration process. This will ensure that meters accurately reflect the true reading at the lower end of the range.



PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| B4025 | 250mL | 20 |
| B4050 | 500mL | 12 |
| B4100 | 1L | 12 |

pH BUFFER 7

pH BUFFER 7 is important as the upper calibration point in the 'two point' calibration of electronic meters. Regularly calibrate your pH meter with both pH BUFFER 4 and pH BUFFER 7 calibration solutions to ensure that your meter is operating with precision and accuracy between pH 4 and 7.

Monitor the pH on a daily basis. As plants grow, demand for nutrients increase. This means the pH can fluctuate and therefore should be tested and adjusted to maintain an optimum working nutrient solution. Nutrient requirements vary from plant to plant; therefore the ideal pH varies from plant to plant also.

SOLUTIONS SCIENTISTS USE

HY-GEN® Calibrations solutions are made according to international standards. The pH ELECTRODE STORAGE and PROBE CLEANER solutions are the same quality as those used in laboratories for the safe cleaning and storage of electronic meters. All calibration and care solutions are made using high quality analytical grade constituents.

HY-GEN® is the mark of guaranteed quality. All formulations and procedures have been prepared under careful supervision by our qualified chemist who has more than 25 years experience.

PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| B7025 | 250mL | 20 |
| B7050 | 500mL | 12 |
| B7100 | 1L | 12 |

CONDUCTIVITY 2.76

It is essential to calibrate your EC (electrical conductivity) meter with CONDUCTIVITY 2.76 solution regularly. The measurement of available nutrient in the solution is measured as the electrical conductivity. The units used to report the readings are millisiemens per centimetre (mS/cm), Conductivity Factor (cF) or parts per million (ppm).

The conductivity increases with nutrient strength. Distilled or deionised water will give a near zero reading. As a general guide for hydroponics: 1mS/cm = 10cF = 700ppm. Nutrient requirements vary from plant to plant; therefore the ideal conductivity varies from plant to plant also.

PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| EC025 | 250mL | 20 |
| EC050 | 500mL | 12 |
| EC100 | 1L | 12 |

DID YOU KNOW?

We believe that pH Buffer calibration solutions should only contain the purest analytical grade ingredients without any artificial dyes. That is why our solutions are clear!

MAKE YOUR METERS LAST ANALYTICAL GRADE SOLUTIONS



PROBE CLEANER

It is recommended that the electrodes be cleaned regularly with HY-GEN® PROBE CLEANER solution. It is recommended that you clean your meter before calibrating or storing it. This will ensure that it operates with accuracy and precision once calibrated. When not in use, always keep your pH electrode stored in HY-GEN® pH ELECTRODE STORAGE solution.

pH electrodes may show slow response due to the build up of organic and inorganic contaminants which coat or clog them. Regular cleaning with HY-GEN® PROBE CLEANER solution can prolong the life of your meter and maximise electrode performance. Probe cleaner solution can also be used to remove contaminants from conductivity meter electrodes, making this product a worthwhile investment.

pH ELECTRODE STORAGE

Always keep pH electrodes stored in HY-GEN® pH ELECTRODE STORAGE solution. This storage solution is the same formula used by scientists in laboratories to store glass pH electrodes. pH electrode storage solutions maximise electrode performance and extends electrode life. pH electrodes should never be stored dry. Buffers or distilled water are not suitable for storage of pH electrodes. Distilled water will cause ions to leach out of the glass bulb and render your electrode useless.

The electrodes can become coated with contaminants, which build up over time. It is recommended that the electrodes be cleaned regularly with probe cleaner solution before calibrating your meter.

- MADE ACCORDING TO INTERNATIONAL STANDARDS
- SAFE CLEANING AND STORAGE OF ELECTRONIC METERS
- GUARANTEED QUALITY



PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| PC025 | 250mL | 20 |
| PC050 | 500mL | 12 |
| PC100 | 1L | 12 |


PACK SIZES AVAILABLE

| Code | Description | Box |
|-------|-------------|-----|
| ES025 | 250mL | 20 |
| ES050 | 500mL | 12 |
| ES100 | 1L | 12 |

Daily instrument care & maintenance ensures optimum performance.

HINTS & TIPS

Ensure that calibration solutions are kept free from contamination. DO NOT return used liquid to the bottle and NEVER dip meters directly into the bottle otherwise it will give inaccurate calibrations and lead to poor crop health.



“ IN ALL THINGS
OF NATURE THERE
IS SOMETHING
OF THE MARVELOUS. ”

Aristotle

PRODUCT

HY-GEN® COCOPEAT

39

SUBSTRATES
FOR
CULTIVATION



TRUSTED BY COMMERCIAL GROWERS CHEMIST PRESCRIBED BUFFERING PROCESS Premium Quality Cocopeat



HY-GEN® COCOPEAT

HY-GEN® COCOPEAT is a 100% natural coir hydroponic growing medium and sourced from some of the world's largest coconut producers. It is prepared and processed under strict guidelines to meet high standards and quality.

HYDROPONIC GENERATIONS has reviewed internationally certified processes and formulated a unique buffering process. This ensures consistent quality in each batch, meeting the highest standards. HY-GEN® COCOPEAT batches are regularly laboratory tested to ensure they meet the analysis listed on each bag. This is a guarantee of quality in the same way the analysis is listed on each bottle of HY-GEN® quality nutrients.

HY-GEN® COCOPEAT is pH stabilised to maintain steady pH conditions around the root zone. Calcium / Magnesium are used to buffer the cocopeat and to eliminate nuisance chemicals such as sodium. HY-GEN® COCOPEAT is compatible with soluble coco specific nutrients such as HY-GEN® COCOGROW and COCOBLOOM two-part formula and CORNUCOPIA COCOGROW and CORNUCOPIA COCOBLOOM single part formula.

HY-GEN® COCOPEAT is great for the home gardener and large-scale commercial growers. It's suitable for a broad number of crops and can also be used as bedding for worm farms since it does not contain any added harmful chemicals.

- NATURAL & BIODEGRADABLE
- RENEWABLE RESOURCE
- CALCIUM & MAGNESIUM BUFFERED
- pH STABLE
- HIGH WATER HOLDING AND AIR FILL POROSITY
- EXCELLENT DRAINAGE
- NO HARMFUL CHEMICALS ADDED
- LOW SALT

PACK SIZES AVAILABLE

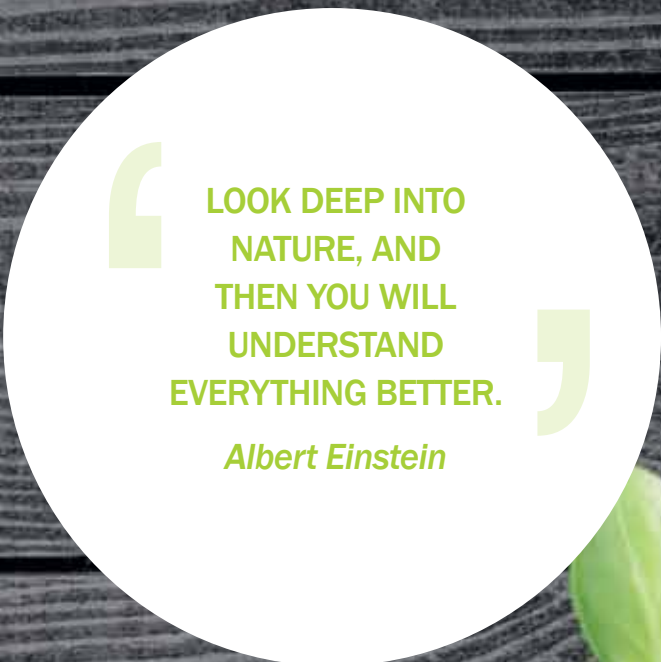
| Code | Description | Box |
|---------|------------------------------|------------|
| CPB650 | 650g / 10 Litres Coco Bricks | 24 |
| CPB5KG | 5kg / 70 Litres Coco Bricks | 110/pallet |
| CPBAG50 | 50 Litres Cocopeat Bags | 50/pallet |

Ready to Use!



**DID YOU
KNOW?**

HY-GEN® COCOPEAT contains a naturally occurring fungus called Trichoderma. Its presence helps protect against pathogens such as Pythium.



LOOK DEEP INTO
NATURE, AND
THEN YOU WILL
UNDERSTAND
EVERYTHING BETTER.

Albert Einstein

SCHEDULE

| | |
|--------------------------------------|----|
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FEED SCHEDULES & GROWERS GUIDE



COCOPEAT FEEDING SCHEDULE

- Applications are based on 10 Litres of water. Rates are for part A and part B. (e.g. WEEK 1 is 20ml Part A and 20ml Part B)
- The EC target is based on RO or demineralised water. Tap water quality may vary depending on location. This will affect final EC readings.
- The supplements and plant boosters are organically based and can safely be used at higher dosage rates.
- This feeding schedule should be used as a guide only. Growers should continually monitor their plants and establish their own ideal growing conditions. Consult with your local hydroponic store for further advice.

**PH RANGE
5.8-6.5**



| | Nutrient | | Nutrient Supplements | | Plant Boosting Supplements | | Specifications | | |
|---------------------|---------------------|----------------------|---|--|--|---|---|---|-----------|
| | COCO GROW™ Nutrient | COCO BLOOM™ Nutrient | BUDLINK® Improves plant strength, disease resistance and weight^ | NITRO-K™ with trace elements Enhance Growth Stage | PK TOP UP™ with trace elements Enhance Flower Stage | OMEGAZYME™ Stimulates roots and metabolism, high natural auxin level, can be used for cuttings | HUMIBOOSTA™ Boost flowering and nutrient uptake – Fulvic/ Humic acid Blend | SEA ESSENTIALS™ Root & Flower enhancer | EC Target |
| Seedlings /Cuttings | 15mL | | 10mL | | | 15mL | | | 0.8 |
| Week 1 | 20mL | | 20mL | 5mL | | 20mL | 5mL | | 1.2 |
| Week 2 | 25mL | | 25mL | 10mL | | 20mL | 10mL | | 1.8 |
| Week 3 | 30mL | | 30mL | 15mL | | 25mL | 10mL | | 2.1 |
| Week 4 | 30mL | | 30mL | 20mL | | 30mL | 10mL | 10mL | 2.2 |
| Week 5 | 20mL | 10mL | 30mL | 10mL | | 20mL | 15mL | 10mL | 2.2 |
| Week 6 | 10mL | 20mL | 30mL | 10mL | | 10mL | 15mL | 15mL | 2.2 |
| Week 7 | | 30mL | 30mL | | 5mL | | 15mL | 15mL | 2.2 |
| Week 8 | | 30mL | 30mL | | 10mL | | 10mL | 20mL | 2.1 |
| Week 9 | | 30mL | 30mL | | 15mL | | 10mL | 20mL | 2.1 |
| Week 10 | | 30mL | 25mL | | 20mL | | 10mL | 20mL | 2.1 |
| Week 11 | | 30mL | 25mL | | 20mL | | | 20mL | 1.8 |
| Week 12 | | 30mL | 25mL | | 10mL | | | 20mL | 1.8 |

[^] BUDLINK® should always be used with nutrient as part C. It compliments nutrients and helps compensate for changes in nutrient uptake in the presence of silica.

www.hydroponicgenerations.com.au





HYDRO FEEDING SCHEDULE

- Applications are based on 10 Litres of water. Rates are for part A and part B. (e.g. WEEK 1 is 20ml Part A and 20ml Part B)
- The EC target is based on RO or demineralised water. Tap water quality may vary depending on location. This will affect final EC readings.
- The supplements and plant boosters are organically based and can safely be used at higher dosage rates.
- This feeding schedule should be used as a guide only. Growers should continually monitor their plants and establish their own ideal growing conditions. Consult with your local hydroponic store for further advice.

**PH RANGE
5.8-6.5**



| | Nutrient | | | Nutrient Supplements | | Plant Boosting Supplements | | | Specifications |
|------------------------|--------------------------------|-------------------------------|---|---|---|---|---|---|----------------|
| | GROWTH Two Part Nutrient | BLOOM Two Part Nutrient | BUDLINK® Improves plant strength, disease resistance and weight [^] | NITRO-K™ with trace elements Enhance Growth Stage | PK TOP UP™ with trace elements Enhance Flower Stage | OMEGAZYME™ Stimulates roots and metabolism, high natural auxin level, can be used for cuttings | HUMIBOOSTA™ Boost flowering and nutrient uptake – Fulvic/ Humic acid Blend | SEA ESSENTIALS™ Root & Flower enhancer | |
| Seedlings /Cuttings | 15mL | | 10mL | | | 15mL | | | 0.8 |
| Week 1 | 20mL | | 20mL | 5mL | | 20mL | 5mL | | 1.2 |
| Week 2 | 25mL | | 25mL | 10mL | | 20mL | 10mL | | 1.7 |
| Week 3 | 30mL | | 30mL | 20mL | | 25mL | 10mL | | 2.1 |
| Week 4 | 30mL | | 30mL | 20mL | | 30mL | 10mL | 10mL | 2.1 |
| Week 5 | 20mL | 10mL | 30mL | 10mL | | 20mL | 15mL | 10mL | 2.1 |
| Week 6 | 10mL | 20mL | 30mL | 10mL | | 10mL | 15mL | 15mL | 2.1 |
| Week 7 | | 30mL | 30mL | | 10mL | | 15mL | 15mL | 2.1 |
| Week 8 | | 30mL | 30mL | | 10mL | | 10mL | 20mL | 2.0 |
| Week 9 | | 30mL | 30mL | | 15mL | | 10mL | 20mL | 2.0 |
| Week 10 | | 30mL | 25mL | | 20mL | | 10mL | 20mL | 2.0 |
| Week 11 | | 30mL | 25mL | | 20mL | | | 20mL | 1.8 |
| Week 12 | | 30mL | 25mL | | 10mL | | | 20mL | 1.8 |

[^] BUDLINK® should always be used with nutrient as part C. It compliments nutrients and helps compensate for changes in nutrient uptake in the presence of silica.



www.hydroponicgenerations.com.au



COCOPEAT FEEDING SCHEDULE

- Applications are based on 10 Litres of water. Rates are for single part nutrients only.
- The EC target is based on RO or demineralised water. Tap water quality may vary depending on location. This will affect final EC readings.
- The supplements and plant boosters are organically based and can safely be used at higher dosage rates.
- This feeding schedule should be used as a guide only. Growers should continually monitor their plants and establish their own ideal growing conditions. Consult with your local hydroponic store for further advice.

**PH RANGE
5.8-6.5**



| | Nutrient | | Nutrient Supplements | Plant Boosting Supplements | | | Specifications | | |
|---------------------|--------------------------------|---------------------------------|----------------------|---|---|---|----------------|---|---|
| | CORNUCOPIA COCO GROW™ Nutrient | CORNUCOPIA COCO BLOOM™ Nutrient | | BUDLINK® Improves plant strength, disease resistance and weight^ | NITRO-K™ with trace elements Enhance Growth Stage | PK TOP UP™ with trace elements Enhance Flower Stage | | OMEGAZYME™ Stimulates roots and metabolism, high natural auxin level, can be used for cuttings | HUMIBOOSTA™ Boost flowering and nutrient uptake – Fulvic/ Humic acid Blend |
| Seedlings /Cuttings | 30mL | | 10mL | | | 15mL | | | 0.8 |
| Week 1 | 40mL | | 20mL | 5mL | | 20mL | 5mL | | 1.2 |
| Week 2 | 50mL | | 25mL | 10mL | | 20mL | 10mL | | 1.8 |
| Week 3 | 60mL | | 30mL | 15mL | | 25mL | 10mL | | 2.1 |
| Week 4 | 60mL | | 30mL | 20mL | | 30mL | 10mL | 10mL | 2.2 |
| Week 5 | 40mL | 20mL | 30mL | 10mL | | 20mL | 15mL | 10mL | 2.2 |
| Week 6 | 20mL | 40mL | 30mL | 10mL | | 10mL | 15mL | 15mL | 2.2 |
| Week 7 | | 60mL | 30mL | | 5mL | | 15mL | 15mL | 2.2 |
| Week 8 | | 60mL | 30mL | | 10mL | | 10mL | 20mL | 2.1 |
| Week 9 | | 60mL | 30mL | | 15mL | | 10mL | 20mL | 2.1 |
| Week 10 | | 60mL | 25mL | | 20mL | | 10mL | 20mL | 2.1 |
| Week 11 | | 60mL | 25mL | | 20mL | | | 20mL | 1.8 |
| Week 12 | | 60mL | 25mL | | 10mL | | | 20mL | 1.8 |

[^] BUDLINK® should always be used with nutrient as part C. It compliments nutrients and helps compensate for changes in nutrient uptake in the presence of silica.





HYDRO FEEDING SCHEDULE

- Applications are based on 10 Litres of water. Rates are for single part nutrients only.
- The EC target is based on RO or demineralised water. Tap water quality may vary depending on location. This will affect final EC readings.
- The supplements and plant boosters are organically based and can safely be used at higher dosage rates.
- This feeding schedule should be used as a guide only. Growers should continually monitor their plants and establish their own ideal growing conditions. Consult with your local hydroponic store for further advice.

PH RANGE 5.8-6.5



| | Nutrient | | Nutrient Supplements | | Plant Boosting Supplements | | | Specifications | |
|------------------------|-----------------------------------|----------------------------------|---|---|---|---|---|---|-----------|
| | GROWTH Single Part Nutrient | BLOOM Single Part Nutrient | BUDLINK® Improves plant strength, disease resistance and weight^ | NITRO-K™ with trace elements Enhance Growth Stage | PK TOP UP™ with trace elements Enhance Flower Stage | OMEGAZYME™ Stimulates roots and metabolism, high natural auxin level, can be used for cuttings | HUMIBOOSTA™ Boost flowering and nutrient uptake – Fulvic/ Humic acid Blend | SEA ESSENTIALS™ Root & Flower enhancer | EC Target |
| Seedlings /Cuttings | 30mL | | 10mL | | | 15mL | | | 0.8 |
| Week 1 | 40mL | | 20mL | 5mL | | 20mL | 5mL | | 1.2 |
| Week 2 | 50mL | | 25mL | 10mL | | 20mL | 10mL | | 1.7 |
| Week 3 | 60mL | | 30mL | 20mL | | 25mL | 10mL | | 2.1 |
| Week 4 | 60mL | | 30mL | 20mL | | 30mL | 10mL | 10mL | 2.1 |
| Week 5 | 40mL | 20mL | 30mL | 10mL | | 20mL | 15mL | 10mL | 2.1 |
| Week 6 | 20mL | 40mL | 30mL | 10mL | | 10mL | 15mL | 15mL | 2.1 |
| Week 7 | | 60mL | 30mL | | 10mL | | 15mL | 15mL | 2.1 |
| Week 8 | | 60mL | 30mL | | 10mL | | 10mL | 20mL | 2.0 |
| Week 9 | | 60mL | 30mL | | 15mL | | 10mL | 20mL | 2.0 |
| Week 10 | | 60mL | 25mL | | 20mL | | 10mL | 20mL | 2.0 |
| Week 11 | | 60mL | 25mL | | 20mL | | | 20mL | 1.8 |
| Week 12 | | 60mL | 25mL | | 10mL | | | 20mL | 1.8 |

[^] BUDLINK® should always be used with nutrient as part C. It compliments nutrients and helps compensate for changes in nutrient uptake in the presence of silica.



General Grower's Guide



Flower Crops

| | pH | EC (mS/cm ²) | cF | ppm | Category |
|-----------------|---------|--------------------------|-------|-----------|----------|
| African Violets | 6.0-7.0 | 1.2-1.5 | 12-15 | 840-1050 | L |
| Anthurium | 5.0-6.0 | 1.6-2.0 | 16-20 | 1120-1400 | M |
| Antisetsicism | 6.5 | 1.6-2.0 | 16-20 | 1120-1400 | M |
| Aphelandra | 5.0-6.0 | 1.8-2.4 | 18-24 | 1260-1680 | M |
| Aster | 6.0-6.5 | 1.8-2.4 | 18-24 | 1260-1680 | M |
| Begonia | 6.5 | 1.4-1.8 | 14-18 | 980-1260 | L |
| Bromeliads | 5.0-7.5 | 0.8-1.2 | 8-12 | 560-840 | L |
| Caladium | 6.0-7.5 | 1.6-2.0 | 16-20 | 1120-1400 | M |
| Canna | 6.0 | 1.8-2.4 | 18-24 | 1260-1680 | M |
| Carnation | 6.0 | 2.0-3.5 | 20-35 | 1260-2450 | H |
| Chrysanthemum | 6.0-6.2 | 1.8-2.5 | 18-25 | 1400-1750 | H |
| Cymbidiums | 5.5 | 0.6-1.0 | 6-10 | 420-560 | L |
| Dahlia | 6.0-7.0 | 1.5-2.0 | 15-20 | 1050-1400 | M |
| Dieffenbachia | 5.0-6.0 | 1.8-2.4 | 18-24 | 1400-1680 | H |
| Dracaena | 5.0-6.0 | 1.8-2.4 | 18-24 | 1400-1680 | H |
| Ferns | 6.0 | 1.6-2.0 | 16-20 | 1120-1400 | M |
| Ficus | 5.5-6.0 | 1.6-2.4 | 16-24 | 1120-1680 | M |
| Freesia | 6.5 | 1.0-2.0 | 10-20 | 700-1400 | M |
| Impatiens | 5.5-6.0 | 1.8-2.0 | 18-20 | 1260-1400 | M |
| Gerbera | 5.0-6.5 | 2.0-2.5 | 20-25 | 1400-1680 | H |
| Gladiolus | 5.5-6.5 | 2.0-2.4 | 20-24 | 1400-1680 | H |
| Monstera | 5.0-6.0 | 1.8-2.4 | 18-24 | 1400-1680 | H |
| Palms | 6.0-7.5 | 1.6-2.0 | 16-20 | 1120-1400 | M |
| Roses | 5.5-6.0 | 1.5-2.5 | 15-25 | 1050-1750 | M |
| Stock | 6.0-7.0 | 1.6-2.0 | 16-20 | 1120-1400 | M |

Vegetable Crops

| | pH | EC (mS/cm ²) | cF | ppm | Category |
|-----------------|---------|--------------------------|-------|-----------|----------|
| Artichoke | 6.5-7.5 | 0.8-1.8 | 8-18 | 560-1260 | L |
| Asparagus | 6.0-6.8 | 1.4-1.8 | 14-18 | 980-1260 | L |
| Bean(Common) | 6.0 | 2.0-4.0 | 20-40 | 1400-2800 | H |
| Beetroot | 6.0-6.5 | 1.8-5.0 | 18-50 | 1260-3500 | H |
| Broad Bean | 6.0-6.5 | 1.8-2.2 | 18-22 | 1260-1540 | M |
| Broccoli | 6.0-6.8 | 2.8-3.5 | 28-35 | 1960-2450 | H |
| Brussels Sprout | 6.5 | 2.5-3.0 | 25-30 | 1750-2100 | H |
| Cabbage | 6.5-7.0 | 2.5-3.0 | 25-30 | 1750-2100 | H |
| Capsicum | 6.0-6.5 | 1.8-2.2 | 18-22 | 1260-1540 | M |
| Carrots | 6.3 | 1.6-2.0 | 16-20 | 1120-1400 | M |
| Cauliflower | 6.5-7.0 | 1.5-2.0 | 15-20 | 1050-1400 | M |
| Celery | 6.5 | 1.8-2.4 | 18-24 | 1260-1680 | M |
| Cucumber | 5.5 | 1.7-2.5 | 17-25 | 1190-1750 | M |
| Eggplant | 6.0 | 2.5-3.5 | 25-35 | 1750-2450 | H |
| Endive | 5.5 | 2.0-2.4 | 20-24 | 1400-1680 | M |
| Fodder | 6.0 | 1.8-2.0 | 18-20 | 1260-1400 | M |
| Garlic | 6.0 | 1.4-1.8 | 14-18 | 980-1260 | L |
| Leek | 6.5-7.0 | 1.4-1.8 | 14-18 | 980-1260 | L |
| Lettuces | 6.0-7.0 | 0.8-1.2 | 8-12 | 560-840 | L |
| Marrow | 6.0 | 1.8-2.4 | 18-24 | 1260-1680 | M |
| Okra | 6.5 | 2.0-2.4 | 20-24 | 1400-1680 | H |
| Onions | 6.0-6.7 | 1.4-1.8 | 14-18 | 980-1260 | L |
| Pak-choi | 7.0 | 1.5-2.0 | 15-20 | 1050-1400 | M |
| Parsnip | 6.0 | 1.4-1.8 | 14-18 | 980-1260 | L |
| Pea | 6.0-7.0 | 0.8-1.8 | 8-18 | 980-1260 | L |
| Pepino | 6.0-6.5 | 2.0-3.0 | 20-50 | 1400-3500 | H |
| Potatoes | 5.0-6.0 | 2.0-2.5 | 20-25 | 1400-1750 | H |
| Pumpkin | 5.5-7.5 | 1.8-2.4 | 18-24 | 1260-1680 | M |
| Raddish | 6.0-7.0 | 1.6-2.2 | 16-22 | 840-1540 | M |
| Spinach | 6.0-7.0 | 1.8-2.3 | 18-23 | 1260-1610 | M |
| Silverbeet | 6.0-7.0 | 1.8-2.3 | 18-23 | 1260-1610 | M |
| Sweet Corn | 6.0 | 1.6-2.4 | 16-24 | 840-1680 | M |
| Sweet Potato | 5.5-6.0 | 2.0-2.5 | 20-25 | 1400-1750 | H |
| Taro | 5.0-5.5 | 2.5-3.0 | 25-30 | 1750-2100 | H |
| Tomatoes | 6.0-6.5 | 2.0-4.0 | 20-50 | 1400-3500 | H |
| Turnip | 6.0-6.5 | 1.8-2.4 | 18-24 | 1260-1680 | M |
| Zucchini | 6.0 | 1.8-2.4 | 18-24 | 1260-1680 | M |

Herbs

| | pH | EC (mS/cm ²) | cF | ppm | Category |
|---------------|---------|--------------------------|-------|-----------|----------|
| Basil | 5.5-6.5 | 1.0-1.6 | 10-16 | 700-1120 | L |
| Chicory | 5.5-6.0 | 2.0-2.4 | 20-24 | 1400-1680 | H |
| Chives | 6.0-6.5 | 1.8-2.2 | 18-22 | 1260-1540 | M |
| Fennel | 6.4-6.8 | 1.0-1.4 | 10-14 | 700-980 | L |
| Lavender | 6.4-6.8 | 1.0-1.4 | 10-14 | 700-980 | L |
| Lemon Balm | 5.5-6.5 | 1.0-1.6 | 10-16 | 700-1120 | L |
| Marjoram | 6.0 | 1.6-2.0 | 16-20 | 1120-1400 | M |
| Mint | 5.5-6.0 | 2.0-2.4 | 20-24 | 1400-1680 | H |
| Mustard Cress | 6.0-6.5 | 1.2-2.4 | 12-24 | 840-1680 | M |
| Parsley | 5.5-6.0 | 0.8-1.8 | 8-18 | 560-1260 | L |
| Rosemary | 5.5-6.0 | 1.0-1.6 | 10-16 | 700-1120 | L |
| Sage | 5.5-6.5 | 1.0-1.6 | 10-16 | 700-1120 | L |
| Thyme | 5.5-7.0 | 0.8-1.6 | 8-16 | 560-1120 | L |
| Watercress | 6.5-6.8 | 0.4-1.8 | 4-18 | 280-1260 | L |

Fruit

| | pH | EC (mS/cm ²) | cF | ppm | Category |
|---------------|---------|--------------------------|-------|-----------|----------|
| Banana | 5.5-6.5 | 1.8-2.2 | 18-22 | 1260-1540 | M |
| Black Currant | 6.0 | 1.4-1.8 | 14-18 | 980-1260 | L |
| Blueberry | 4.0-5.0 | 1.8-2.0 | 18-20 | 1260-1400 | M |
| Melon | 5.5-6.0 | 2.0-2.5 | 20-25 | 1400-1750 | H |
| Passionfruit | 6.5 | 1.6-2.4 | 16-24 | 840-1680 | M |
| Paw Paw | 6.5 | 1.6-2.4 | 16-24 | 840-1680 | M |
| Pineapple | 5.5-6.0 | 2.0-2.4 | 20-24 | 1400-1680 | H |
| Red Currant | 6.0 | 2.0-2.4 | 20-24 | 1400-1680 | H |
| Rhubarb | 5.5-6.0 | 1.4-1.8 | 14-18 | 840-1400 | M |
| Strawberries | 6.0 | 1.8-2.2 | 18-22 | 1260-1540 | M |
| Watermelon | 5.8 | 1.8-2.4 | 18-24 | 1260-1680 | M |



KEY L = Low
M = Medium
H = High

HYDROPONIC GENERATIONS

Tel: +61 8 9356 8866

Email: enquiries@hydroponicgenerations.com.au

www.hydroponicgenerations.com.au

NOTE: This is intended as a guide only. Growers should establish their own optimum pH and EC levels depending on their growing medium, system and environment.



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