JEFF WINTERBORNE'S

# proactive

PROFESSIONAL HYDROPONIC NUTRITION


***"Proactive Professional Hydroponic Nutrition will change everything you thought you knew about hydroponic nutrition"***

JEFF WINTERBORNE, AUTHOR, "HYDROPONICS, INDOOR HORTICULTURE".

# INTRODUCING...

proactive nutrients, a new UK based company with over 20 years of experience in the indoor horticultural industry. We have formulated a revolutionary new nutrient range and specific regime which consists of every single element vital to plant growth, health and optimum yield. This is a simple 6 part schedule which provides everything your plants require.

Our products are produced with an in depth knowledge and understanding. We are here to provide clients and end users with an exceptional service and a product line that will out perform all others.

We are very thorough regarding quality control. Closely monitored testing has been carried out in the creation of all our products. We have adapted several different trains of thought from some of the most experienced commercial growers and manufacturers of nutrients in order to come up with a unique product range which is very different from all of the others available for the indoor hydroponic market today. It's complete enough to give you killer yields but at the same time, simple enough to be used on a commercial scale.

During testing and studies in the development of the proactive nutrient range, even with a collective range of knowledge from several very experienced people, we still learned new things as we went along and applied this 6 stage technique, then tweaked and customized formulas until we were satisfied that every single thing we have on the menu is absolutely perfect.

We are very proud of this range of nutrients; they are a game changer and we invite all indoor gardeners, commercial, hobby and all in between to try our range and reap the rewards of the most complete, scientifically produced and thought out nutrient range ever created for our market!

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# CONTENTS



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# ROOT STIMULATOR

SEED **WEEK 1-2**

GROW **WEEK 1-4**

BLOOM **WEEK 1-2**


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# ROOT STIMULATOR

**N:9.5 | P:3.9 | K:7.8**

## CRAM PACKED WITH AMINO & HUMIC ACIDS AND THE UNIQUE ACRECIACTIV™ MOLECULE

### The proactive Root Stimulator Methodology...

This well balanced N-P-K fertiliser, containing amino acids, humic acids (200G/L) and the ACRECIACTIV™ Molecule, will dramatically stimulate the root development of your plants. ACRECIACTIV™ is a purified compound produced naturally by plants to resist environmental stresses.

The synergistic combination in proactive Root Stimulator of this molecule with pure L-amino acids and pure humic acids will encourage the root development of plants from early stages, and optimise their natural ability to assimilate and absorb nutrients. proactive Root Stimulator improves plant vigour while limiting stressors such as drought, salinity, frost and other environmental stresses.

### Dosage

0.25ml to 1ml per litre.
See Feedcharts on page 13 - 16.

### Composition

N - 9.5% | P205 - 3.9% | K20 - 7.8%
ACRECIACTIV™

### Usage

Reservoir

### Storage Conditions

Keep away from frost

# ALL-IN-ONE NUTRIENT


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# ALL-IN-ONE NUTRIENT

**N:8.9 | P:2.7 | K:7.2**

## GROW & BLOOM A&B IN ONE EASY TO USE COMPLETE LIQUID FORMULA

### The proactive All-In-One Nutrient Methodology...

Supplies a unique combination of nitrogen, phosphorus, potassium, magnesium and trace elements essential to the progress of your crop. proactive's unique balance in trace elements mimic plant sap and are largely under a chelated form - increasing their level of absorption, assimilability and circulation within the plant.

proactive All-In-One Nutrient activates the metabolism of each and every plant cell. This action improves photosynthesis and the plant's capacity for drawing mineral elements up through the root system - allowing for better nutrient absorption and transfer.

This N-P-K fertilizer solution (8.9-2.7-7.2), with balanced trace-elements, also contains specific amino acids and bio-nutritional activators of selected breeds. Amino acids are the base building blocks of proteins. Plants need a lot of energy to produce them, and they are the first carbon source available for plants. In case of stress or low growth, an amino acid application will boost the plant's metabolism. Amino acids stimulate growing and development and are always made available to the rooting system with proactive All-In-One Nutrient. This singular combination with bio-activators enables the optimization of your plant's response to natural attacks, creating an elicitor effect.

### Dosage

0.5ml to 3ml per litre.
See Feedcharts on page 13 - 16.

### Composition

N - 8.9% | P2O5 - 2.7% | K2O - 7.2% | MgO - 0.11% | SO3 - 0.11% | B - 420 ppm | Cu - 120 ppm | Fe - 210 ppm | Mn - 420 ppm | Mo - 40 ppm | Zn - 340 ppm

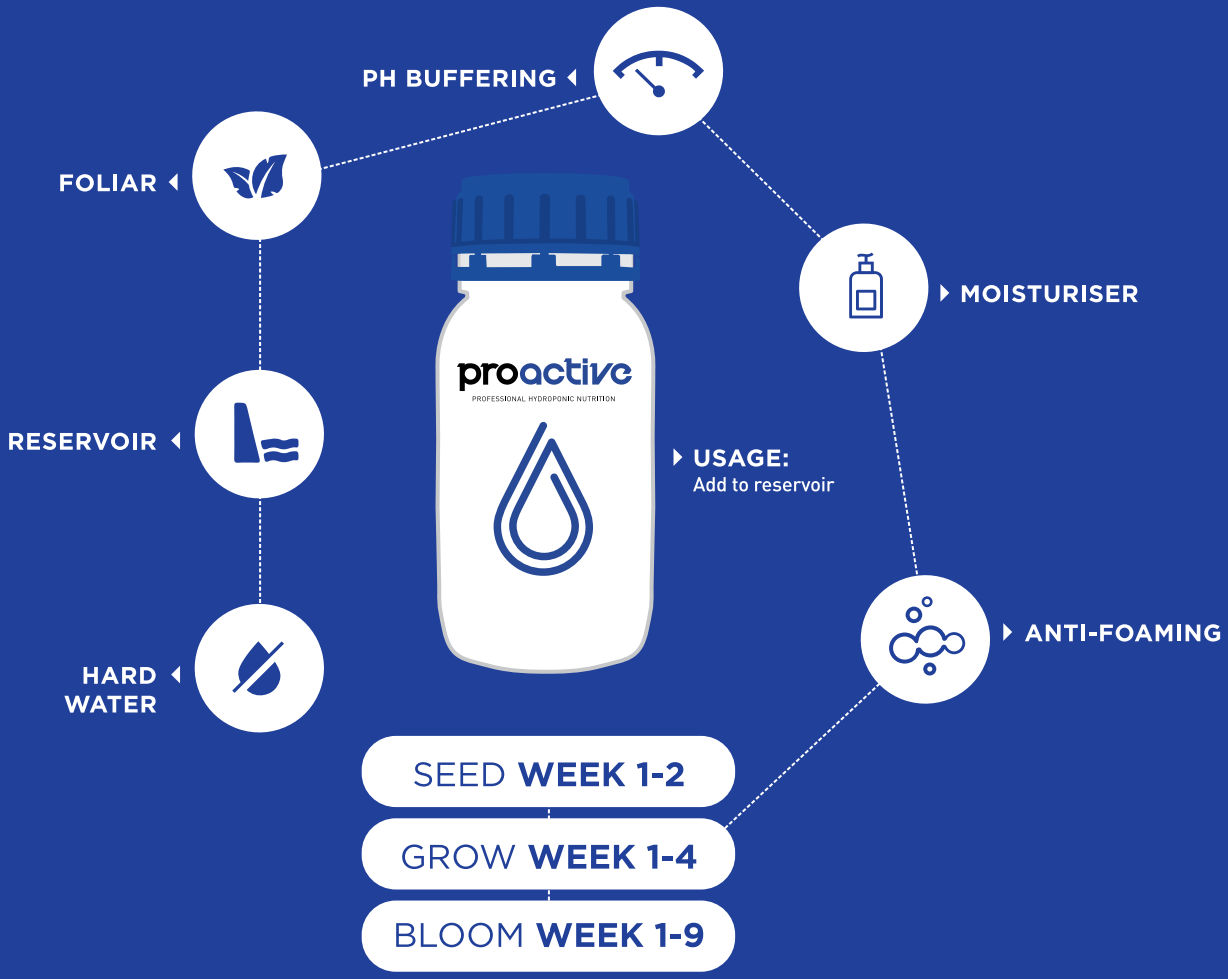
### Usage

Reservoir and Foliar

### Storage Conditions

Min. 0 °C / max. +35 °C

# pH WATER CONDITIONER

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# pH WATER CONDITIONER

**N:7.0 | P:0.0 | K:0.0**

## BECAUSE PLAIN OLD TAP WATER SIMPLY DOESN'T CUT IT!

### The proactive pH Water Conditioner Methodology...

Contains two sequestering agents that will neutralize the cations of hard waters and reduce their impact on your plants. Hard water cations can lock out and prevent the uptake of nutritional elements from your reservoir while disabling active ingredients. Using proactive pH Water Conditioner will greatly reduce the negative effects of hard water - preventing the lock out of nutrients and stopping the degradation of active ingredients in your reservoir or sprayer!

proactive pH Water Conditioner will balance the water used in your nutrient reservoir while acidifying and buffering its pH value – greatly limiting the effects of alkaline hydrolysis. The benefits of pH Water Conditioner are pH and nutrient stabiliser (buffering efficacy), moisturiser (wetting agent effect) and significantly reduces foaming of reservoir solution.

### Dosage

0.1ml to 1ml per litre.
See Feedcharts on page 13 - 16.

### Composition

Ammonium propionate 20% p/v,water conditioning agents, acidifying agents, pH buffers, anti-foaming agent

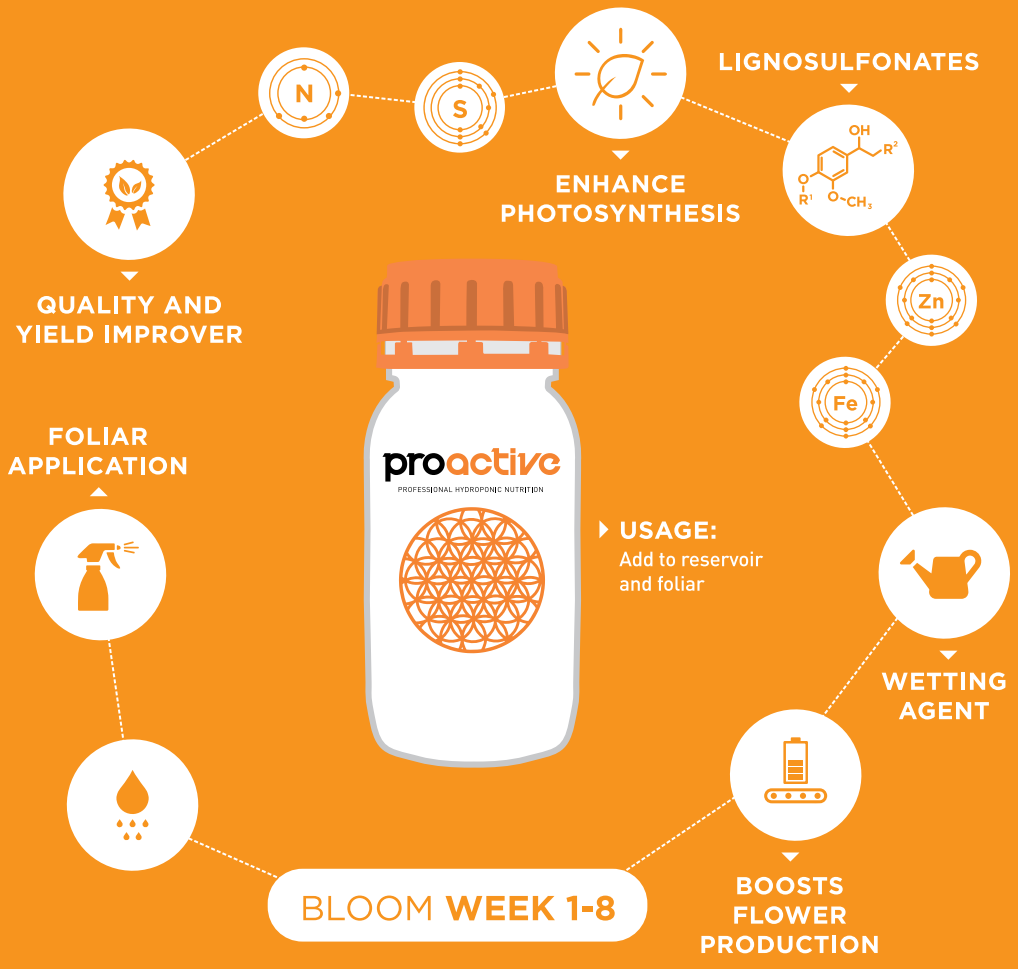
### Usage

Reservoir and Foliar

### Storage Conditions

Keep above 5°C to preserve the integrity of the product

# BOOST & FUNGICIDE

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# BOOST & FUNGICIDE

**N:9.0 | P:0.0 | K:0.0**

## A UNIQUE COMPOSITION DESIGNED AND DEVELOPED FOR COMMERCIAL HORTICULTURE

### The proactive Boost & Fungicide Effect Methodology...

Guarantees high yields and improved crop quality, while preventing and correcting sulphur deficiencies in your crop via a simple foliar application. proactive Boost & Fungicide Effect contains high concentrations of sulphur in a selected and pure form to ensure maximum efficiency. This ready-to-use liquid is easy and safe to use with a very “soft” action on foliage.

proactive Boost & Fungicide Effect contains nitrogen and sulphur which are essential constituents of proteins.

Their enzymatic role will enhance photosynthesis and have a significant effect on powdery mildew. proactive Boost & Fungicide Effect has a Lignosulfonates base - an organic compound extracted from wood (lignin).It encompasses natural chelating properties and a capacity to form stable and soluble complexes with metallic ions (Iron-Cu-Mn-Zn). Its natural adjuvant properties act as a wetting agent, improve adhesion, and have a softening effect which avoids crystallization.

### Dosage

0.25ml to 1ml per litre.
See Feedcharts on page 13 - 16.

### Composition

SO3 - 75% | N - 9%

### Usage

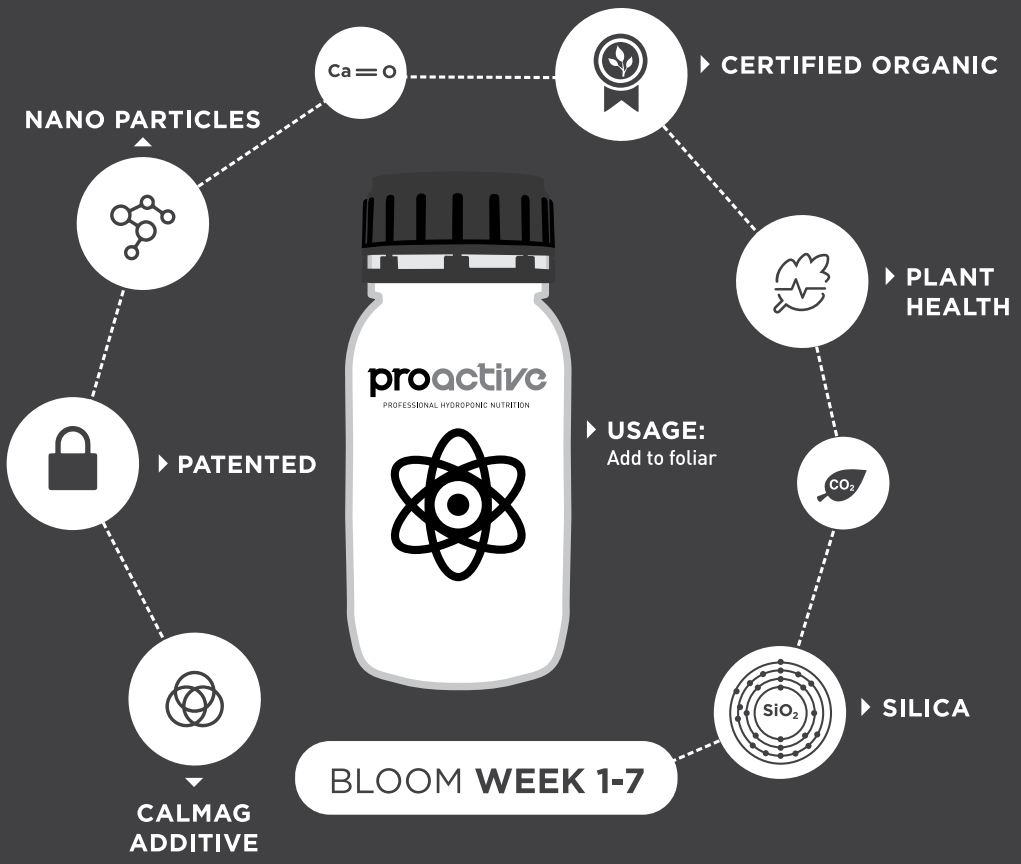
Reservoir and Foliar

Level of absorption is between 80 to 90%

### Storage Conditions

Keep away from frost

# NANO POWER POWDER

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# NANO POWER POWDER

**N:0.0 | P:0.0 | K:0.0**

## INCREASES CO2 LEVELS WITHIN THE LEAVES AND GUARANTEES OPTIMUM PLANT PERFORMANCE

### The proactive Nano Power Powder Methodology...

A result of our patented manufacturing process which produces nanoparticles of calcite. proactive Nano Power Powder has a clear effect on CO2 content inside leaves, guaranteeing improved performance of the plant.

proactive Nano Power Powder contains calcium which will improve yield quality, and silica to increase the plant's natural resistance to environmental stresses. Nano Power Powder allowed for use in organic farming, in accordance with the EC regulation n° 834/2007.

### Instructions For Use

For best results, use sufficient water to achieve an even crop coverage to the point of run-off. Avoid spraying in very strong sunlight and/or very high temperatures. If possible, apply during evening or early morning especially if day-time temperatures exceed 28°C. Very young foliage and crops under stress may be more susceptible to scorch. Lower doses should be applied in these circumstances and the application interval reduced accordingly. Refer to the Crop Recommendations on this label for application rates and timings for individual crops.

### Dosage

2 spoons per litre - weeks 1-7 of bloom period
See Feedcharts on page 13 - 16.

### Usage

Reservoir and Foliar

### Mixing

1. Fill the spray tank with half the required amount of water and start agitation. Add Nano Power Powder, the rest of the water, and maintain agitation.
2. Do not allow the mixture to stand without agitation.
3. After spraying, clean and rinse the spraying equipment thoroughly.

### Composition

3% Total Magnesium oxide (MgO)
41.7% Total Calcium oxide (Ca0)
8% Total Silicon dioxide (SiO2)

### Storage Conditions

Keep away from frost

# SELF DEFENCE

GROW **WEEK 1-4**

BLOOM **WEEK 1-8**


**LEAF DENSITY**

**CELL WALLS**

**ROOT SYSTEM**

**TRICHODERMA**

**PATENTED**

**ENZYMES**

**USAGE:**
Add to reservoir and foliar

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# SELF DEFENCE

**N:0.0 | P:0.0 | K:0.0**

## PUTS YOUR PLANTS ON HIGH ALERT AGAINST THE FIRST SIGNS OF DISEASE

### The proactive Self Defence Methodology...

Acts as a vaccine, putting your plants on high alert against the first signs of disease. Contributing to the meristematic activity within your plants at a very high level.

proactive Self Defence will improve yields and quality through the unique effect of our choice of enzymes - penetrating the plant through the rooting system.

The benefits of Self Defence are higher production of peroxidases, improving the overall crop quality, thickening of the cell wall, thereby increasing leaf density and preventative action against any spores germinating on leaf surfaces. The extraction and concentration method of the enzymes has been patented worldwide.

### Dosage

0.25ml to 0.5ml per litre.
See Feedcharts on page 13 - 16.

### Usage

Reservoir and Foliar

### Composition

CaO - 12.5%

Breed of enzymes extracted from Trichoderma SP

### Storage Conditions

Min. 0 °C / max. +35 °C

# WHICH FEEDCHART SHOULD I BE USING?

The amount of nutrient you use will be affected by the type of Growing Method (Active or Passive), and your choice of Growing Media (Soil, Hydroponics, Coco).

## 1 PASSSIVE SYSTEMS WITH HYDROPONIC MEDIA

**EXAMPLE MEDIA**


Rockwool

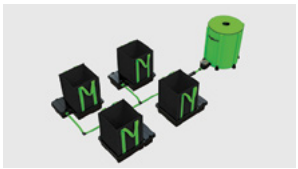

Perlite

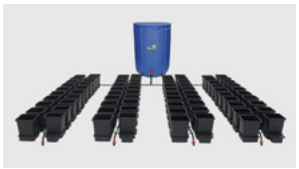

Vermiculite


Growstones


Coco

**EXAMPLE SYSTEM**


Alien Easy Feed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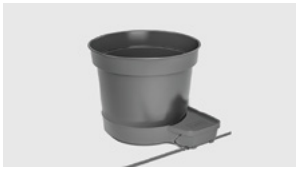

GoGro


Octogrow

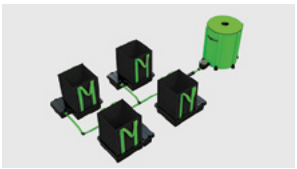
▶ **Go to page 18**

## 2 PASSSIVE SYSTEMS WITH SOIL MEDIA

**EXAMPLE MEDIA**


GoGro

**EXAMPLE SYSTEM**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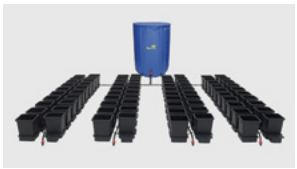
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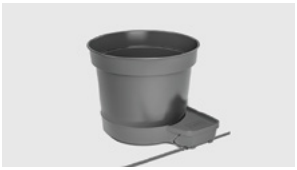

GoGro


Octogrow


Quadgrow

▶ **Go to page 20**

# 3 RUN TO WASTE / RECIRCULATIVE SYSTEMS WITH HYDROPONIC MEDIA

**EXAMPLE MEDIA**


Rockwool


Perlite


Vermiculite


Growstones


Coco

**EXAMPLE SYSTEM**


NFT


Wilma


Aquafarm


IWS


Brummie Bubbler


Multiflow

▶ **Go to page 22**

# 4 RUN TO WASTE / RECIRCULATIVE SYSTEMS WITH SOIL MEDIA

**EXAMPLE MEDIA**


GoGro

**EXAMPLE SYSTEM**

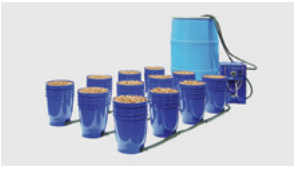

NFT


Wilma


Aquafarm


IWS


Brummie Bubbler


Multiflow

▶ **Go to page 24**

# PASSIVE HYDROPONIC / COCO SYSTEMS

**This chart, like all nutrient charts, should be treated as a guide, not an exact plan. We are confident this chart is accurate however tap water from area to area differs.**

With passive hydroponics, to get it right, you must learn to read your tank and your plants. Firstly, do NOT grow blindly, you MUST have an EC meter and a pH meter no matter what if you wish to be successful!

We recommend adding the pH Water Conditioner to your water first. Mix it in well and leave for 10 minutes, then you can dose in your additives according to the chart depending on which WEEK you are dosing for. You then add our All-in-One nutrient. Although we have given you the dosage on our chart, it is strongly recommended to add the base nutrient gradually and check the EC with a calibrated EC meter until you reach the desired EC level. Once you have got to this stage and allowed everything to mix in for another 10 minutes or so, check the pH value of the solution again, you will find you may need to add pH down at the end. Do not exceed 0.75ml per litre of the water conditioner, as primarily, this is not a pH down. If the desired pH is not met, use pH down to achieve desired pH level. Do not keep adding water conditioner to lower the pH. A pH level of 6.0 - 6.5 is the ideal range to be in.

Due to the varying mediums people employ with this technique, we have dialled back the strength of nutrients used. The chart opposite applies if you are running a predominantly inert hydroponic medium like perlite. If you are using an active medium in these systems like soil then you will need to decrease the food levels to that of the passive soil chart. i.e half of this one. Remember less is best, you can increase the food levels as the plant calls for it.

Before every application, the bottles should be shaken vigorously, and the same principle employed in the tank, ie. a decent recirculating pump or circulation pump should be employed.

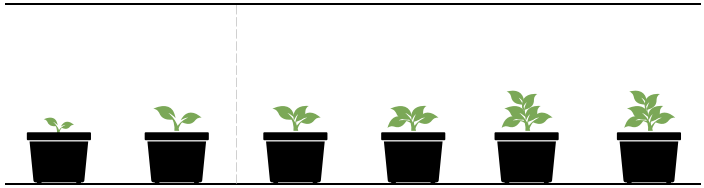
Due to the stagnant nature of passive hydroponics systems, and the fact these are industrial strength commercial grade nutrients, it is imperative that a circulation pump is employed in your tank. Bubbling air, although it will benefit the tank re the oxygenation it will not cut it re the mixing of tanks contents as the heavy elements within the proactive range will tend to settle to the bottom of the tank.

From time to time it would be good practice to top feed and collect the run off so as to compare what was fed. With this knowledge you can make said alterations. i.e if you are feeding the plants an ec of 1 and a ph of 6 and the run off comes out at ec of 1.2 and ph of 6.5 then adjust the tank to ec of 0.8 and ph of 5.5. Do this until the run off matches the feed. Obviously the same applies in reverse if the opposite happens.

This will stop the potential of any type of nutrient build-up or lock out, and will ensure the correct application of this range.

The chart includes a starting background tap water EC reading of 0.4

## WATER TANK



| PROPAGATION | | VEGETATION / GROW PERIOD | | | |
|---|---|---|---|---|---|
| LIGHT: 20 HOURS | | LIGHT: 18 HOURS | | | |
| E.C. 0.8 | | E.C. 0.8 | | | |
| WEEK 1 | WEEK 2 | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 |
| 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE |
| 0.5ml PER LITRE | 0.5ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE |
| | | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE |

## FOLIAR FEEDING

Nutrients to add to your sprayer

(Can be mixed in one spray bottle or as three separate bottles)

**REGULAR FOLIAR**

Spray **ONCE** per WEEK

**INTENSIVE FOLIAR**

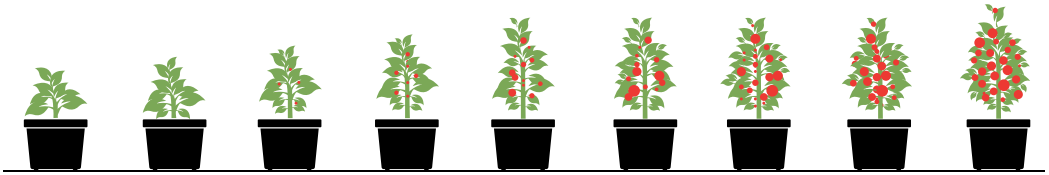
Spray **3 TIMES** per WEEK

***Shake vigorously before each use.***

- WHEN DO I SPRAY MY LEAVES?
  For use in low light or no light levels, ideally 1 hour before the lights go on. Not to be used at night as the plants' fruits will stay wet.
- HOW MUCH DO I SPRAY?
  Leaves should have a nice even covering from the stem to the the leaf tips. Spray until just before drippage.
- WHAT HAPPENS IF I SPRAY TOO MUCH?
  If you spray too much, a residue will build up on the leaves, which may look unsightly. Do not overspray.

# proactive BY Jeff Winterborne

1



| FLOWERING / BLOOM PERIOD | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| LIGHT: 12 HOURS | | | | | | | | |
| E.C. 0.9 | E.C. 1.0 | | E.C. 1.1 | | | E.C. 1.3 | | |
| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 | WEEK 7 | WEEK 8 | WEEK 9 |
| 0.5ml PER LITRE | 0.75ml PER LITRE | 0.75ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1.5ml PER LITRE | 1.5ml PER LITRE | FLUSH |
| 0.25ml PER LITRE | 0.25ml PER LITRE | | | | | | | |
| 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | |
| 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | |

| FLOWERING / BLOOM PERIOD | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 | WEEK 7 | WEEK 8 | WEEK 9 |
| 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | | |
| 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | | |
| 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | | |

**Key:**

- All-In-One Nutrient
- Root Stimulator
- Self Defence
- Boost & Fungicide
- Nano Power Powder

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# PASSIVE SOIL SYSTEMS

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Due to the varying mediums people employ with this technique, we have dialled back the strength of nutrients used. The chart opposite applies if you are running a predominantly soil based medium. If you are using a purely inert medium in these systems like perlite then you can increase the food levels up to that of the soil run to waste chart. i.e double of this one. Remember less is best, you can increase the food levels as the plant calls for it.

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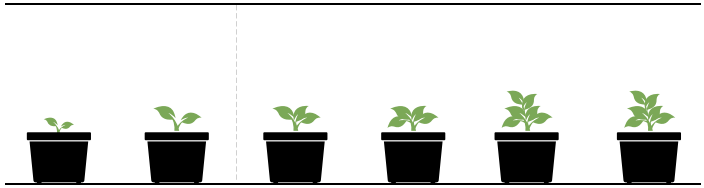

| PROPAGATION | | VEGETATION / GROW PERIOD | | | |
|---|---|---|---|---|---|
| LIGHT: 20 HOURS | | LIGHT: 18 HOURS | | | |
| E.C. 0.6 | | E.C. 0.6 | | | |
| WEEK 1 | WEEK 2 | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 |
| 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE |
| 0.25ml PER LITRE | 0.25ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE |
| | | 0.06ml PER LITRE | 0.06ml PER LITRE | 0.06ml PER LITRE | 0.06ml PER LITRE |

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Nutrients to add to your sprayer

(Can be mixed in one spray bottle or as three separate bottles)

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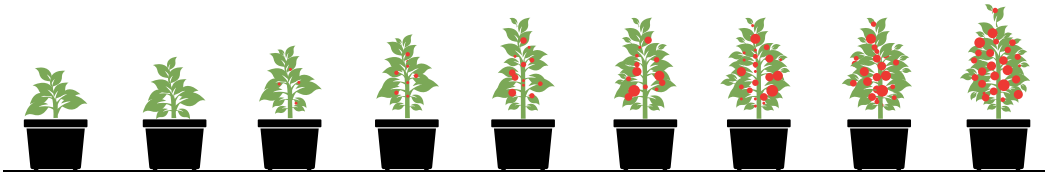
proactive BY Jeff Winterborne

2



## FLOWERING / BLOOM PERIOD

### LIGHT: 12 HOURS

| E.C. 0.7 | E.C. 0.8 | | E.C. 0.9 | | | E.C. 1.0 | | |
|---|---|---|---|---|---|---|---|---|
| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 | WEEK 7 | WEEK 8 | WEEK 9 |
| 0.25ml PER LITRE | 0.375ml PER LITRE | 0.375ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.75ml PER LITRE | 0.75ml PER LITRE | FLUSH |
| 0.125ml PER LITRE | 0.125ml PER LITRE | | | | | | | |
| 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | |
| 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | |

## FLOWERING / BLOOM PERIOD

| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 | WEEK 7 | WEEK 8 | WEEK 9 |
|---|---|---|---|---|---|---|---|---|
| 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | | |
| 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | | |
| 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | | |

**Key:**

- All-In-One Nutrient
- Root Stimulator
- Self Defence
- Boost & Fungicide
- Nano Power Powder

**www.growproactive.com**

# RUN TO WASTE & RECIRCULATING ACTIVE HYDROPONIC /

**This chart, like all nutrient charts, should be treated as a guide, not an exact plan. We are confident this chart is accurate however tap water from area to area differs.**

With run to waste and recirculation hydroponics, to get it right, you must learn to read your tank and your plants. Firstly, do NOT grow blindly, you MUST have an EC meter and a pH meter no matter what if you wish to be successful!

We recommend adding the pH Water Conditioner to your water first. Mix it in well and leave for 10 minutes, then you can dose in your additives according to the chart depending on which WEEK you are dosing for. You then add our All-in-One nutrient. Although we have given you the dosage on our chart, it is strongly recommended to add the base nutrient gradually and check the EC with a calibrated EC meter until you reach the desired EC level. Once you have got to this stage and allowed everything to mix in for another 10 minutes or so, check the pH value of the solution again, you will find you may need to add pH down at the end. Do not exceed 0.75ml per litre of the water conditioner, as primarily, this is not a pH down. If the desired pH is not met, use pH down to achieve desired pH level. Do not keep adding water conditioner to lower the pH. A pH level of 6.0 - 6.5 is the ideal range to be in.

Before every application, the bottles should be shaken vigorously, and the same principle employed in the tank, ie. a decent recirculating pump or circulation pump should be employed.

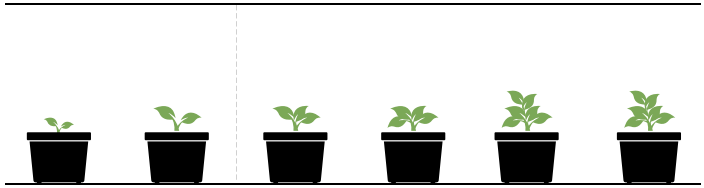
**Now comes the secret of recirculating hydroponics...**

During growth, as your plants drink and absorb nutrition from your nutrient reservoir, the volume of water will go down. When this level has gone down by approximately 50% check your EC level and pH value. If your EC level is the same as when you dosed your tank, this means your plants are absorbing water and nutrients at the same pace, which means you are spot on. If the EC level has dropped, this means your plants are absorbing nutrients fast and are actually underfed. If the EC level has raised, you guessed it, your plants are overfed. So as you fill up your half full nutrient reservoir with fresh water, diluting the solution down, you are now armed with the knowledge you need to pro rata and adjust the solution accordingly with pH Water Conditioner at half the previous strength, then additives, followed by your All-in-One Nutrient to achieve the desired EC level. Finally adjust the pH value with a little more pH down if necessary.

We only recommend a reservoir dump or drain away if your plants show signs of deficiencies or severe overfeeding or some other anomaly you are unable to figure out. In this case, just to be safe, drain down the reservoir and fill it with fresh water and flush the plants for 24 hours, then drain down the reservoir and refill with fresh water and redo nutrients and start again! Simple and easy and far less wasteful!!!

The chart includes a starting background tap water EC reading of 0.4

## WATER TANK



| PROPAGATION | | VEGETATION / GROW PERIOD | | | |
|---|---|---|---|---|---|
| LIGHT: 20 HOURS | | LIGHT: 18 HOURS | | | |
| E.C. 1.4 | | E.C. 1.6 | | | |
| WEEK 1 | WEEK 2 | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 |
| 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE |
| 1ml PER LITRE | 1ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE |
| | | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE |

## FOLIAR FEEDING

Nutrients to add to your sprayer

(Can be mixed in one spray bottle or as three separate bottles)

**REGULAR FOLIAR**

Spray **ONCE** per WEEK

**INTENSIVE FOLIAR**

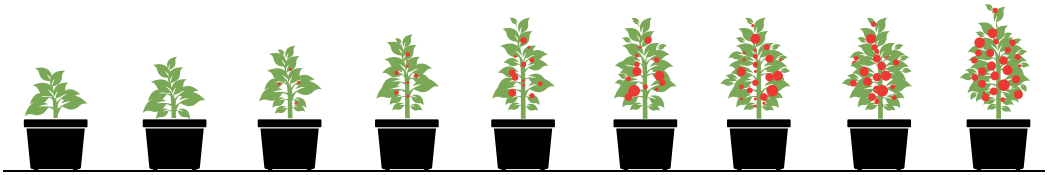
Spray **3 TIMES** per WEEK

***Shake vigorously before each use.***

- WHEN DO I SPRAY MY LEAVES?
  For use in low light or no light levels, ideally 1 hour before the lights go on. Not to be used at night as the plants' fruits will stay wet.
- HOW MUCH DO I SPRAY?
  Leaves should have a nice even covering from the stem to the the leaf tips. Spray until just before drippage.
- WHAT HAPPENS IF I SPRAY TOO MUCH?
  If you spray too much, a residue will build up on the leaves, which may look unsightly. Do not overspray.

# proactive BY Jeff Winterborne

3



## FLOWERING / BLOOM PERIOD

LIGHT: 12 HOURS

| E.C. 1.6 | E.C. 1.7 | | E.C. 1.8 | | | E.C. 2.0 | | |
|---|---|---|---|---|---|---|---|---|
| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 | WEEK 7 | WEEK 8 | WEEK 9 |
| 1ml PER LITRE | 1.5ml PER LITRE | 1.5ml PER LITRE | 2ml PER LITRE | 2ml PER LITRE | 2ml PER LITRE | 3ml PER LITRE | 3ml PER LITRE | FLUSH |
| 0.5ml PER LITRE | 0.5ml PER LITRE | | | | | | | |
| 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | |
| 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | |

## FLOWERING / BLOOM PERIOD

| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 | WEEK 7 | WEEK 8 | WEEK 9 |
|---|---|---|---|---|---|---|---|---|
| 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | | |
| 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | | |
| 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | | |

**Key:**

- All-In-One Nutrient
- Root Stimulator
- Self Defence
- Boost & Fungicide
- Nano Power Powder

**www.growproactive.com**

# RUN TO WASTE & RECIRCULATING ACTIVE SOIL SYSTEMS

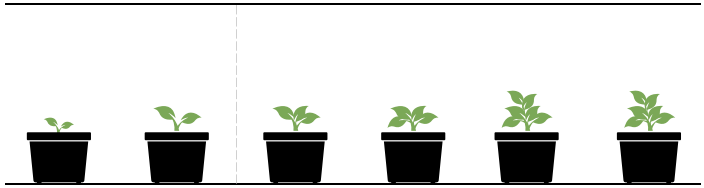
**This chart, like all nutrient charts, should be treated as a guide, not an exact plan. We are confident this chart is accurate however tap water from area to area differs.**

With run to waste and recirculating soil systems, to get it right, you must learn to read your tank and your plants. Firstly, do NOT grow blindly, you MUST have an EC meter and a pH meter no matter what if you wish to be successful! We recommend adding the pH Water Conditioner to your water first. Mix it in well and leave for 10 minutes, then you can dose in your additives according to the chart depending on which WEEK you are dosing for. You then add our All-in-One nutrient. Although we have given you the dosage on our chart, it is strongly recommended to add the base nutrient gradually and check the EC with a calibrated EC meter until you reach the desired EC level. Once you have got to this stage and allowed everything to mix in for another 10 minutes or so, check the pH value of the solution again, you will find you may need to add pH down at the end. Do not exceed 0.75ml per litre of the water conditioner, as primarily, this is not a pH down. If the desired pH is not met, use pH down to achieve desired pH level. Do not keep adding water conditioner to lower the pH. A pH level of 6.0 - 6.5 is the ideal range to be in. Before every application, the bottles should be shaken vigorously, and the same principle employed in the tank, ie. a decent recirculating pump or circulation pump should be employed.

Due to the predominantly stagnant nature of these systems, and the fact that these are industrial strength commercial grade nutrients, it is imperative that a circulation pump is employed in your tank. Bubbling air, although it will benefit the tank re the oxygenation, it will not cut it re the mixing the tanks contents as the heavy elements within the proactive range will tend to settle to the bottom of the tank. The secret of recirculating systems, during growth, as your plants drink and absorb nutrition from your nutrient reservoir, the volume of water will go down. When this level has gone down by approximately 50% check your EC level and pH value. If your EC level is the same as when you dosed your tank, this means your plants are absorbing water and nutrients at the same pace, which means you are spot on. If the EC level has dropped, this means your plants are absorbing nutrients fast and are actually underfed. If the EC level has raised, you guessed it, your plants are overfed. So as you fill up your half full nutrient reservoir with fresh water, diluting the solution down, you are now armed with the knowledge you need to pro rata and adjust the solution accordingly with pH Water Conditioner at half the previous strength, then additives, followed by your All-in-One Nutrient to achieve the desired EC level. Finally adjust the pH value with a little more pH down if necessary.

We only recommend a reservoir dump or drain away if your plants show signs of deficiencies or severe overfeeding or some other anomaly you are unable to figure out. In this case, just to be safe, drain down the reservoir and fill it with fresh water and flush the plants for 24 hours, then drain down the reservoir and refill with fresh water and redo nutrients and start again! Simple and easy and far less wasteful!!! Regarding run to waste systems, from time to time it would be good practice to top feed and collect the run off so as to compare what was fed. With this knowledge you can make said alterations. i.e if you are feeding the plants an ec of 1 and a ph of 6 and the run off comes out at ec of 1.2 and ph of 6.5 then adjust the tank to ec of 0.8 and ph of 5.5. Do this until the run off matches the feed. Obviously the same applies in reverse if the opposite happens. This will stop the potential of any type of nutrient build-up or lock out, and will ensure the correct application of this range. The chart includes a starting background tap water EC reading of 0.4

## WATER TANK



| PROPAGATION | | VEGETATION / GROW PERIOD | | | |
|---|---|---|---|---|---|
| LIGHT: 20 HOURS | | LIGHT: 18 HOURS | | | |
| E.C. 0.8 | | E.C. 0.8 | | | |
| WEEK 1 | WEEK 2 | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 |
| 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE |
| 0.5ml PER LITRE | 0.5ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE |
| | | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE | 0.125ml PER LITRE |

## FOLIAR FEEDING

Nutrients to add to your sprayer

(Can be mixed in one spray bottle or as three separate bottles)

**REGULAR FOLIAR**

Spray **ONCE** per WEEK

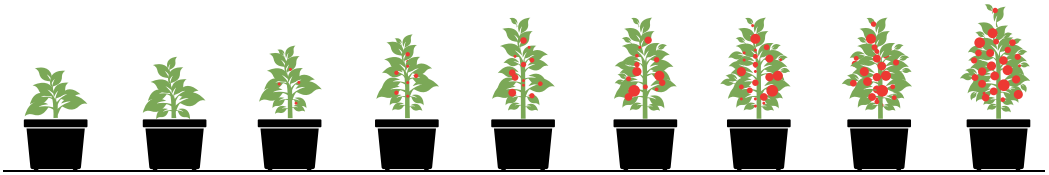
**INTENSIVE FOLIAR**

Spray **3 TIMES** per WEEK

***Shake vigorously before each use.***

- WHEN DO I SPRAY MY LEAVES?
  For use in low light or no light levels, ideally 1 hour before the lights go on. Not to be used at night as the plants' fruits will stay wet.
- HOW MUCH DO I SPRAY?
  Leaves should have a nice even covering from the stem to the the leaf tips. Spray until just before drippage.
- WHAT HAPPENS IF I SPRAY TOO MUCH?
  If you spray too much, a residue will build up on the leaves, which may look unsightly. Do not overspray.

# proactive BY Jeff Winterborne



**4**

## FLOWERING / BLOOM PERIOD

### LIGHT: 12 HOURS

| E.C. 0.9 | E.C. 1.0 | | E.C. 1.1 | | | E.C. 1.3 | | |
|---|---|---|---|---|---|---|---|---|
| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 | WEEK 7 | WEEK 8 | WEEK 9 |
| 0.5ml PER LITRE | 0.75ml PER LITRE | 0.75ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1.5ml PER LITRE | 1.5ml PER LITRE | FLUSH |
| 0.25ml PER LITRE | 0.25ml PER LITRE | | | | | | | |
| 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | |
| 0.25ml PER LITRE | 0.25ml PER LITRE | 0.25ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | 0.5ml PER LITRE | |

## FLOWERING / BLOOM PERIOD

| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 | WEEK 7 | WEEK 8 | WEEK 9 |
|---|---|---|---|---|---|---|---|---|
| 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | 1 SPOON PER LITRE | | |
| 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | | |
| 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | 1ml PER LITRE | | |

**Key:**

- All-In-One Nutrient
- Root Stimulator
- Self Defence
- Boost & Fungicide
- Nano Power Powder

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PROFESSIONAL HYDROPONIC NUTRITION

# HOW TO USE
## pH Water Conditioner

**pH Water Conditioner can be added to your watering can or reservoir either before or after you have added base nutrients or additives.**

We have provided a rough guide to how much water conditioner you should have in your tank, according to popular tank sizes in the UK.

The example given on this page, shows how the pH is affected when pH Water Conditioner is added in 2 ml increments to a 20ltr tank of tap water, when the starting pH is 7.0.

The resulting pH after adding pH Water Conditioner should be between 6.0 and 6.5, depending on what type of system you are using, and at what stage you are in the plants' life cycle.

Recommended maximum dose in a recirculating system is 0.75 ml per litre, as primarily this is a water conditioner and not a pH down. If the desired pH is not met use pH down to achieve desired pH level. Do not keep adding water conditioner to lower the pH.

## Slowly does it...

**Don't add the specified amount of pH Water Conditioner in one go... we suggest you try and get a feel for how water conditioner is affecting your tap water, by adding a little at a time.**


## HOW pH WATER CONDITIONER AFFECTS YOUR TANKS pH LEVEL

For every 2ml of pH Water Conditioner added to 20 litres of water, the pH will be lowered by roughly 0.4

### EXAMPLE: STARTING PH OF 7.0

| TANK SIZE | AMOUNT ADDED | pH SOLUTION AFTER | TANK SIZE | AMOUNT ADDED | pH SOLUTION AFTER |
|---|---|---|---|---|---|
| 20ltr | 2ml | 6.6 | 40ltr | 4ml | 6.6 |
| 20ltr | 4ml | 6.5 | 40ltr | 8ml | 6.5 |
| 20ltr | 6ml | 6.4 | 40ltr | 12ml | 6.4 |
| 20ltr | 8ml | 6.3 | 40ltr | 16ml | 6.3 |
| 20ltr | 10ml | 6.2 | 40ltr | 20ml | 6.2 |
| 20ltr | 12ml | 6.1 | 40ltr | 24ml | 6.1 |
| 20ltr | 14ml | 6.0 | 40ltr | 28ml | 6.0 |

**The above charts** are only meant to be used as a rough guide.

***Recommended Maximum dose in a recirculating system is 0.75 ml per litre.**

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# HOW pH WATER CONDITIONER AFFECTS YOUR TANKS pH LEVEL

For every 2ml of pH Water Conditioner added to
20 litres of water, the pH will be lowered by roughly 0.4

## EXAMPLE: STARTING PH OF 7.0

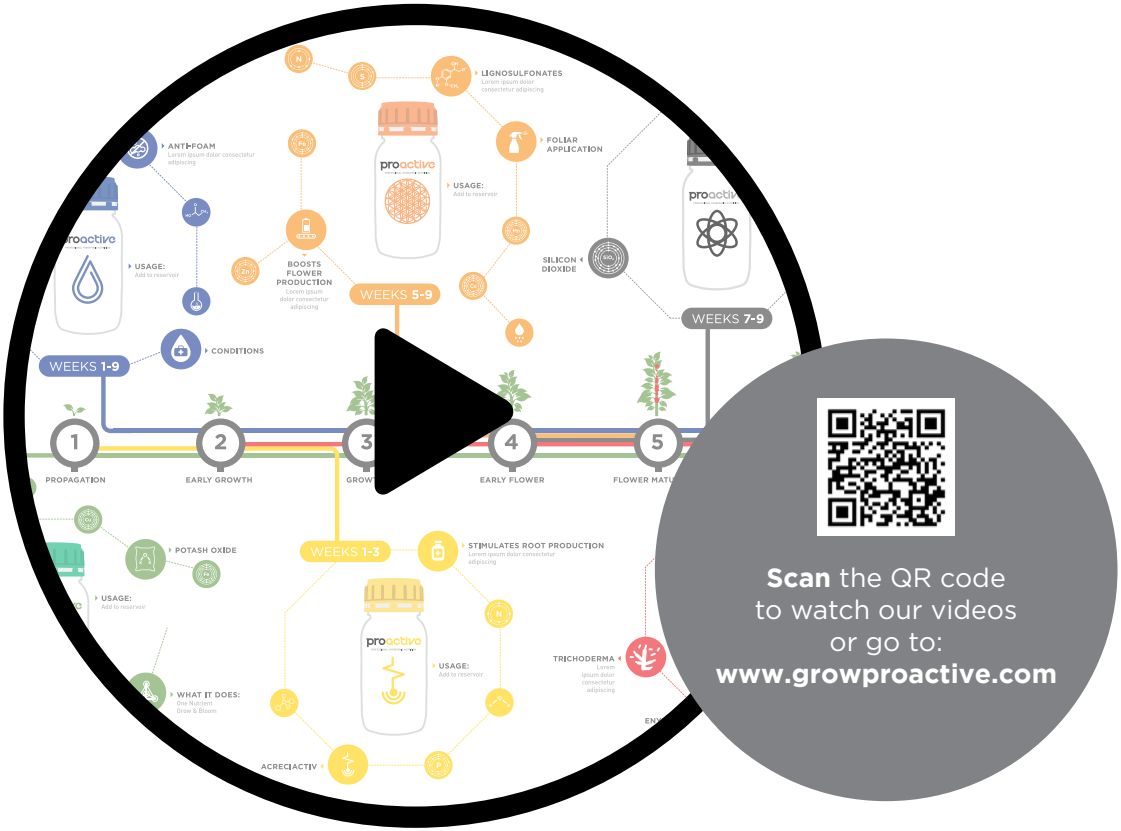
| TANK SIZE | AMOUNT ADDED | pH SOLUTION AFTER | TANK SIZE | AMOUNT ADDED | pH SOLUTION AFTER | TANK SIZE | AMOUNT ADDED | pH SOLUTION AFTER |
|---|---|---|---|---|---|---|---|---|
| 80ltr | 8ml | 6.6 | 100ltr | 10ml | 6.6 | 200ltr | 20ml | 6.6 |
| 80ltr | 16ml | 6.5 | 100ltr | 20ml | 6.5 | 200ltr | 40ml | 6.5 |
| 80ltr | 24ml | 6.4 | 100ltr | 30ml | 6.4 | 200ltr | 60ml | 6.4 |
| 80ltr | 32ml | 6.3 | 100ltr | 40ml | 6.3 | 200ltr | 80ml | 6.3 |
| 80ltr | 40ml | 6.2 | 100ltr | 50ml | 6.2 | 200ltr | 100ml | 6.2 |
| 80ltr | 48ml | 6.1 | 100ltr | 60ml | 6.1 | 200ltr | 120ml | 6.1 |
| 80ltr | 56ml | 6.0 | 100ltr | 70ml | 6.0 | 200ltr | 140ml | 6.0 |

**The proactive pH Water Conditioner Methodology...**
Contains two sequestering agents that will neutralize the cations of hard waters and reduce their impact on your plants. Hard water cations can lock out and prevent the uptake of nutritional elements from your reservoir while disabling active ingredients. Using proactive pH Water Conditioner will greatly reduce the negative effects of hard water - preventing the lock out of nutrients and stopping the degradation of active ingredients in your reservoir or sprayer!

proactive pH Water Conditioner will balance the water used in your nutrient reservoir while acidifying and buffering its pH value – greatly limiting the effects of alkaline hydrolysis.

proactive

PROFESSIONAL HYDROPONIC NUTRITION

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*PACBRO* Proactive Brochure

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