





# **GROWING INDOORS**

When growing indoors you need a suitable space to do so. You can design your own room or buy a growing tent.

Make sure the space is easy to monitor. The benefit of an indoor environment is that you can better control the circumstances your plant is facing. Which are many...

2. LIGHT

Light is essential to plant life. Plants turn light into sugars, which they need for growth and bloom. Indoor crops have to put up with artificial light.

The quality, colour (wavelength) and the amount of light determine the shape of a plant. A plant 'knows', based on the day length, when to produce flowering hormones and flowers. It is up to the grower to judge what his plants need at which particular moment, but your local specialist can assist with that.



TIPI TIPI

# TEMPERATURE

A plant can survive freezing cold and heat waves, but this is obviously not ideal to survive and thrive. Ideally a plant grows between 18° C and 28° C. The heat of the lights will raise the temperature very easily so make sure there are also ways to cool down your environment when needed.

There is a lot of
equipment to help you
grow your plant.
Your local specialist
can give you proper
advice



# **AIR**

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Plants need fresh moving air (CO<sub>2</sub>) in combination with water and light for the realization of photosynthesis. In order to grow indoors, your plant needs a fresh air intake, an exhaust fan and a fan to circulate air. The last one can also help preventing pests and diseases.

5. SUBSTRATE

Determine what system you will grow in, then choose a growing medium. There are different options to choose from like potting mix, coco or hydroponic growing. Every growing medium has its benefits and downsides. CANNA has designed nutrients for every growing medium which will be further explained in this booklet.



TIP!

### WATER

Water quality can vary from region to region and it influences your growth. Water can be hard or soft, contain high amounts of dissolved minerals or chloride for example. When possible it is very useful to test your water quality. There are many thoughts on watering your plants. Visit our website for some useful articles about watering.

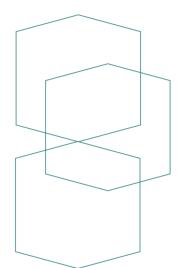


• NUTRITION

Like all living things a plant also requires fuel to grow. The CANNA range of products is designed to give your plants exactly what it needs to achieve great results.



THE ROOTS OF CANNA GO ALL THE WAY BACK TO THE 1980'S. THE TWO FOUNDERS OF CANNA STARTED SHARING THEIR KNOWLEDGE BY PROVIDING INFORMATION ON THE CULTIVATION OF FAST GROWING PLANTS. THEY STARTED SHARING THEIR OWN EXPERIENCE WITH THE 'INFO-COURIERS' WHICH WERE A HUGE SUCCESS AMONG GROWERS. BECAUSE OF THE INCREASING DEMAND FOR A NUTRIENT SOLUTION MEETING THEIR HIGH STANDARDS, THEY SOON BEGAN DEVELOPING A MIX FOR GROWING ON PEAT POTTING MIX, SOMEWHERE IN AN OLD BARN IN THE SOUTH OF THE NETHERLANDS.



Their experience taught them that the key to helping growers was optimizing convenience and making easy-to-use products. After a lot of experimentation and testing they launched their first mineral plant nutrients in 1993.

The market soon expanded to other countries and by the end of the century CANNA had acquired a solid position in the world market. From the very beginning the key to CANNA's success has always been the sharing of knowledge and experience and the quality of the products. CANNA's passionate scientists put years of extensive research in each of the plant nutrients, which are specially designed to seamlessly join the different CANNA substrates.

CANNA was a pioneer with the development of a successful coco substrate. The COCO range, CANNA's flagship, was introduced in 1995. After years of research CANNA had succeeded in creating a coco substrate with coco nutrients for fast growing plants.

Continuing to work from the perspective of the grower, and based on high quality standards and ease-of-use, CANNA finally had developed four product ranges for cultivating plants: TERRA, COCO, CLASSIC and AQUA. Since 1996 CANNA started developing a range of additives for growers who want to grow with great precision and later BIOCANNA to meet the organic and vegan standards.

For more detailed information on gardening and grow information, product information, science behind plant processes and helpful tips to achieve optimum growing techniques and results, visit our websites.

Australia: www.canna.com.au | New Zealand: www.canna.co.nz

# WHY CANNA?

- Lots of growing experience backed by in-house science and research
- Five research centers worldwide with 40 dedicated researchers
- Consistent and high standard quality with complete in-house production facilities
- Every range of nutrients joins seamlessly with the corresponding substrate



CANNA OFFERS DIFFERENT PRODUCT RANGES FOR MULTIPLE WAYS OF GROWING. EACH PRODUCT RANGE IS SPECIFICALLY DESIGNED FOR THE CHARACTERISTICS OF THE GROWING MEDIUM. THERE ARE DIFFERENT WAYS TO RAISE YOUR CROPS. YOU CAN GROW ON COCO, AQUA, CLASSIC OR ON TERRA. EVERY GROWING MEDIUM REQUIRES A DIFFERENT APPROACH •

Depending on your specific needs and circumstances you will choose your growing method. No matter the method you choose, CANNA has the right nutrients to meet your demands.

We've got your back when it comes to maximizing the yield of your crops. In this booklet we'll guide you through the different growing methods and nutrients.

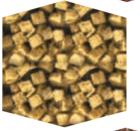
CANNA offers five product ranges of nutrients specially designed for the different kinds of substrates. These ranges are:

- CANNA TERRA
- CANNA CLASSIC
- CANNA AQUA
- CANNA COCO















# WHAT'S YOUR PREFERRED WAY OF GROWING?

### **GROWING ON PEAT AND POTTING MIXES**

GROWING ON PEAT IS EASY AND IDEAL FOR INEXPERIENCED GROWERS. THE CANNA TERRA LINE OF NUTRIENTS AND SUBSTRATES PROVIDES HIGH VALUE MINERAL NUTRIENTS FOR HEALTHY PLANTS AND GREAT YIELDS, INDOOR AND OUTDOOR

### **GROWING IN A RECIRCULATING SYSTEM**

THE CANNA AQUA RANGE IS DEVELOPED FOR GROWING ON WATER IN A RECIRCULATING HYDROPONIC SYSTEM (NFT, EAROPONICS). THE ROOTS OF THE PLANTS ARE IN DIRECT CONTACT WITH THE NUTRIENTS AND THE DRAINAGE WATER IS REUSED

# **GROWING IN A RUN-TO-WASTE SYSTEM**

THE RUN-TO-WASTE SYSTEM IS ANOTHER HYDROPONIC METHOD FOR GROWING ON INERT SUBSTRATES (ROCK WOOL, PERLITE, CLAY PEBBLES). THE DRAINAGE WATER DOES NOT RETURN TO THE NUTRIENT TANK, BUT DRAINS AWAY

# CANNA COCO: GROWING IN COCO COIR

GROWING ON COCO COIR IS A GREAT WAY TO GROW YOUR PLANTS. THE UNIQUE STRUCTURE PROVIDES AN IDEAL ENVIRONMENT FOR HEALTHY ROOT DEVELOPMENT AND IS GREAT FOR THE INEXPERIENCED AS WELL AS THE ADVANCED GROWER

# **GROWING 100% ORGANIC ON POTTING MIX**

THE BIOCANNA NUTRIENTS ARE COMPOSED OF 100% PLANT BASED ELEMENTS. THE COMPONENTS ARE MONITORED FROM THE SELECTION TO THE PRODUCTION PROCESS TO ENSURE A HIGH VEGAN QUALITY

### **GET THE MOST OUT OF YOUR PLANTS**

THE CANNA ADDITIVES ARE PRODUCTS THAT ARE USED ALONG-SIDE THE MAIN NUTRIENTS TO OPTIMISE YOUR RESULTS. EACH PRODUCT SERVES A SPECIFIC GOAL, LIKE ENHANCING ROOT DEVELOPMENT OR PLANT METABOLISM •

# **CANNA TERRA:**

# GROWING ON PEAT AND POTTING MIXES

GROWING ON POTTING MIX IS AN IDEAL SOLUTION FOR BOTH THE EXPERIENCED AND INEXPERIENCED GROWER. HOWEVER, IT CAN BE DIFFICULT TO HAVE PRECISE CONTROL OF THE DOSAGE. BY USING SPECIALLY DEVELOPED POTTING MIXES YOU ELIMINATE THESE DIFFICULTIES. THE BASIS OF ANY GOOD POTTING MIX IS PEAT. PEAT MAINLY COMES FROM AREAS IN WHICH THE RAINWATER HAS A LOW MINERAL CONTENT AND THEREFORE CONTAINS FEW NUTRIENTS. BECAUSE OF THIS IT IS NECESSARY TO ADD ALL THE NUTRIENTS THAT ARE NEEDED FOR GROWTH TO THE POTTING MIX. THIS CAN BE ACHIEVED BY USING SPECIALLY PREPARED NUTRIENTS

CANNA TERRA offers a range of well balanced nutrients that contain all the elements needed in a form that can be absorbed directly ensuring that an optimal intake is guaranteed right from the start of cultivation.

CANNA TERRA nutrients have been developed to give good results with every type of potting mix but to achieve even better results we offer our own CANNA Terra Professional Plus potting mix. This potting mix was developed to fulfil the desire of creating the purest peat based mix possible and to obtain the best effects with CANNA TERRA nutrients.

# Advantages of growing on TERRA

- User friendly, also for inexperienced growers
- For growing indoor and outdoor
- Good for potting mix enrichment
- Pre-fertilised with high grade potting mix fertilisers

Not all potting mixes are suitable for fast growing crops. The three most important factors are structure, pre-fertilization and pH value.

The structure of a potting mix is responsible for the available water and air in the mix. Air is important for a healthy root environment and necessary for an active absorption of water and nutrients.

CANNA TERRA substrates have a very homogeneous structure and are composed of high quality to ensure a healthy root zone.



FLOWERING

**GROWTH** 

8

15

35

30

50

**VECETATIVE PHASE** 

Terra Vega ml/10 litres

**PK 13/14** ml/10 litres

EC +

12

12

35

12

1 - 2

10 - 12

0.4

**GENERATIVE PHASE** 

12

50 50 40 60 70 70 20 20 40 CT CT C 25 25 25 25 25 25 - 50 20 20 20 20 40 40 6 6 15 0.4 - 0.8 1.2 1.0 - 1.4 .5 0.0 - 1.6 -1.3 -1.9 0.8 - 1.2 1.3 - 1.7 1.9 1.6 1.4 - 1.8

# **CANNA TERRA GROW SCHEDULE**

THE GROW SCHEDULE ON THE LEFT PAGE WILL SERVE AS A GUIDE TO HELP YOU GROW YOUR PLANTS AND ACHIEVE A BIG HARVEST. THE SCHEDULE WILL GUIDE YOU THROUGH THE IMPORTANT FACTORS FOR THE OPTIMAL YIELD, LIKE WATER TYPE, NUTRIENTS, ADDITIVES, AND ELECTRIC CONDUCTIVITY (EC) OF THE WATER

Other important factors for growing are light, temperature, humidity and airflow in the growing area. For more information, please check the FAQ page on our website or contact your reseller.



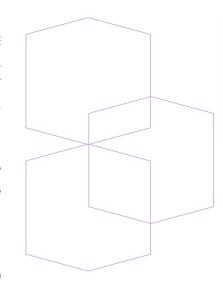
Do you grow your crops in less common circumstances? Or do you have specific wishes? A personalised Grow Guide gives you more advanced insights in how to grow your plants. Make your own personalised Grow Guide at canna.com.au

# Mixing nutrients

**GROW SCHEDULE** 

(see order & dosage in the Grow Schedule)

- Measure the water temperature (18-22 °C)
- · Measure the EC of the water
- Add 80% of the desired dosage of nutrients to the water in the nutrient tank, stir well
- Add additives
- Measure the EC in total
- Correct the EC with nutrients, the other 20%, to the ideal EC value (strict)
- · Measure the pH
- · Correct the pH



### EC of water

EC stands for Electrical Conductivity. It is the potential of water to conduct electricity. This value is used as a guide to measure the mineral salts in the water and is used as an indication of nutrient content.

# The life cycle of your plants

• Start / rooting (3 –5 days)

 Growing phase I Growing phase II

• Blooming phase I Blooming phase II Prepare your substrate Your plant develops in volume

Your plants slow down growing in height after the appearance of the formation of flowers

The flowers or fruits develop in length, growth in

height achieved

Development of the volume of flowers or fruit Development of the mass of flowers or fruit

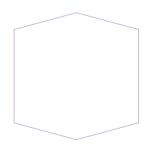
 Blooming phase III • Blooming phase IV Flowers or fruit ripening process

# CANNA TERRA PRODUCTS

CANNA TERRA IS AN EASY-TO
-USE RANGE FOR GROWERS
WHO WANT TO CULTIVATE
THEIR CROPS ON PEAT OR
ON POTTING MIXES

The TERRA range consists of the substrate CANNA Terra Professional and specially developed mineral nutrients.

These TERRA mineral nutrients are divided into Terra Vega for the growing phase and Terra Flores for the flowering phase of the plant. By using the complete range of TERRA products you'll achieve the best results.





# CANNA TERRA PROFESSIONAL

CANNA Terra Professional is a nitrogen-rich potting mix for plant cultivation. It contains a blend of upgraded black peat, granulated peat moss and perlite. CANNA Terra Professional is homogeneous in structure, natural and free of harmful viruses and soil diseases. CANNA Terra Professional has a complex water/air system that creates conditions ideal for virtually every form of cultivation. After use, CANNA Terra Professional makes an excellent potting mix improver.

# Advantages of

# **CANNA Terra Professional**

- Exclusive, high value organic ingredients
- Promotes exceptional root development
- Faster metabolism combined with low sickness rates ensure an increased production resulting in higher yields

# Different kinds of peat

One of the ingredients of the TERRA substrate is peat. Peat originates in an environment where climatological circumstances break down dead plant material.

Over the years the plant rests accumulate in a layer of organic dust a couple of metres deep.



# CANNA TERRA VEGA

The growing phase of the plant is very important. In this period the plant lays the foundation for the flowering phase and a high yield. The nutrients in CANNA Terra Vega contain all the essential elements for optimal growth during this phase.

# Advantages of CANNA Terra Vega

- All-in-one fertiliser
- All ingredients in the right ratio for the growing phase
- Easy-to-use

# CANNA TERRA FLORES

During the flowering phase
the plant has different
nutrient needs. During this
period there is an increased
need for phosphorous and
potassium. Terra Flores is rich in
dissolved and readily available
phosphorous and potassium
allowing the plant to absorb
what it needs for optimal
flowering/fruit formation.

# Advantages of

# • All-in-one fertiliser

- High quality easily available elements
- Long, stable shelf life

# **CANNA AQUA:**

# **HYDROPONICS MADE EASY**

CANNA AQUA IS USED FOR GROWING PLANTS IN A RECIRCULATING SYSTEM. IF YOU WORK WITH THIS KIND OF SYSTEM YOU GROW IN NFT, DWC, AEROPONICS OR CLAY PEBBLES. THE NUTRIENTS FLOW FROM THE NUTRIENT TANK TO THE PLANT'S ROOTS AND BACK. THE ROOTS ARE IN DIRECT CONTACT WITH THE DISSOLVED NUTRIENTS. THIS WAY THE PLANT DOESN'T NEED TO SPEND MUCH ENERGY TO LOOK FOR NUTRIENTS.

The big advantages of growing hydroponically are that the grower can control the nutrient flow very accurately. The grower saves water and nutrients and knows exactly what's going on in the root zone. This makes it easier to adjust the nutrient flow in case the plants need this and the grower can decide to make nutrient corrections with direct effect.

Compared with cultivating on substrates with high nutrient and water buffers, such as potting mix or coco, recirculating systems require closer monitoring of the nutrient and the plants. Since these cultivation systems contain little to no nutrient buffer, changes to the nutrient solution have a direct impact. CANNA AQUA offers a well balanced nutrient that creates a stable pH throughout the whole growth cycle ensuring that all nutrients are available. CANNA AQUA is best used with soft water.

### Advantages of growing on AQUA

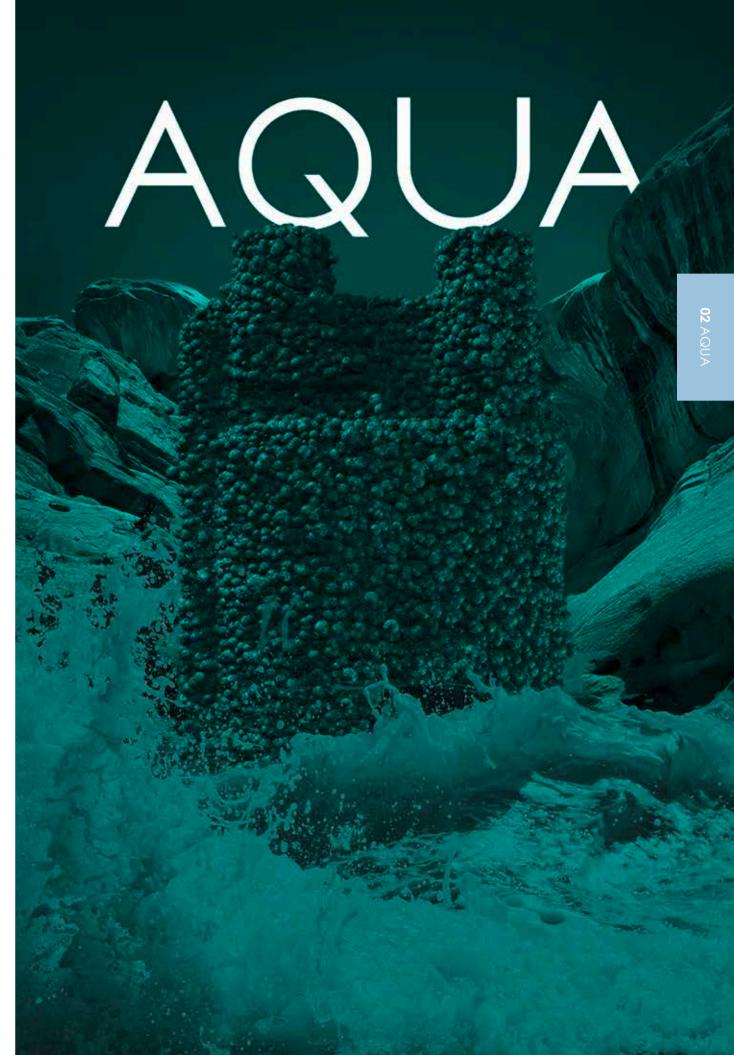
- Precise nutrient control
- User friendly, no need to adjust the pH after the initial pH setting
- Directly absorbable compounds
- Tested thoroughly
- Water saving so environmental friendly

# What is the difference between a recirculating system and a run-to-waste system?

**Closed/recirculating system:** In a recirculating system the water flows in a closed loop and is reused: it flows from the nutrient reservoir, to the roots and back to the reservoir.

**Run-to-waste system:** In a run-to-waste system the growing medium is continuously supplied with a fresh nutrient solution while the old is removed from the substrate by a drainage system.





**GROW SCHEDULE** 

		Vegetative phase I -	Water the substrate.	Start / rooting (3 - 5 days) -
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FLOWERING

1 - 2 10 - 12 12 12 12 8 Aqua Vega ml/10 litres 25 15 - 25 20 30 30 - 30 40 40 20 20 40 Cī G Cī 25 25 25 25 25 25 - 504 20 20 20 20 - 40 6 6 6 **PK 13/14** ml/10 litres 15 0.7 - 1.1 EC + in mS/cm 1.4 - 1.8 1.2 1.0 - 1.4 6 0.0 - 1.6 2.0 2.0 1.3 - 1.7 1.4 - 1.8 1.6 . % 0.4 **GENERATIVE PHASE VECETATIVE PHASE** 

# CANNA AQUA GROW SCHEDULE

THE GROW SCHEDULE ON THE LEFT PAGE WILL SERVE AS A GUIDE TO HELP YOU GROW YOUR PLANTS AND ACHIEVE A BIG HAR-VEST. THE SCHEDULE WILL GUIDE YOU THROUGH THE IMPORTANT FACTORS FOR THE OPTIMAL YIELD, LIKE WATER TYPE, NUTRIENTS, ADDITIVES, AND ELECTRIC CONDUCTIVITY (EC) OF THE WATER •

Other important factors for growing are light, temperature, humidity and airflow in the growing area. For more information, please check the FAQ page on our website or contact your reseller.

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### Mixing nutrients

(see order & dosage in the Grow Schedule)

- Measure the water temperature (18 22 °C)
- · Measure the EC of the water
- Add 80% of the desired dosage of nutrients to the water in the nutrient tank (A&B in equal dosage), stir well.
- Add additives
- Measure the EC in total
- Correct the EC with nutrients, the other 20%, to the ideal EC value (strict)
- Measure the pH
- Correct the pH

# EC of water

EC stands for Electrical Conductivity. It is the potential of water to conduct electricity. This value is used as a guide to measure the mineral salts in the water and is used as an indication of nutrient content.

### The life cycle of your plants

• Start / rooting (3 –5 days) • Growing phase I

• Growing phase II

• Blooming phase I

• Blooming phase II • Blooming phase III • Blooming phase IV Prepare your substrate

Your plant develops in volume

Your plants slow down growing in height after the appearance of the formation of flowers The flowers or fruits develop in length, growth in

height achieved

Development of the volume of flowers or fruit Development of the mass of flowers or fruit





# CANNA AQUA PRODUCTS

CANNA AQUA IS A USER FRIENDLY RANGE FOR GROWERS WHO WANT TO GROW THEIR CROPS HYDROPONICALLY

The AQUA range consists of CANNA Aqua Vega for the growing phase and Aqua Flores for the flowering phase.
The CANNA AQUA nutrients are unique compared to other nutrition formulas because of the optimal natural pH balance.
There is no need to adjust the pH after the initial setting.



# CANNA AQUA CLAY PEBBLES

AQUA Clay Pebbles are baked clay pellets with a low soluble salt content. Because of this, they are particularly suited for use in closed hydroponic cultivation systems.

CANNA Aqua Clay Pebbles form a great base for optimum growth and flowering. They give the highest yield when used in combination with CANNA Aqua Vega and CANNA Aqua Flores.

# Advantages of CANNA Aqua Clay Pebbles

- High porosity and high air content for development of strong roots
- Neutral pH value
- Reusable
- Clean pebbles, low dust
- Homogeneous in size

# CANNA AQUA VEGA A+B

The growing phase of the plant is very important. In this period the plant lays the foundation for the flowering phase and a high yield. The nutrients in CANNA Aqua Vega contain all the essential elements for optimal growing during this phase.

# Advantages of CANNA Aqua Vega

- Easy-to-use and specifically developed for the growing phase
- No need to adjust the pH after initial setting
- Directly absorbable compounds



# CANNA AQUA FLORES A+B

During the flowering phase
the plant has different
nutrient needs. During this
period there is an increased
need for phosphorous and
potassium. Aqua Flores is rich in
dissolved and readily available
phosphorous and potassium
allowing the plant to absorb
what it needs for optimal
flowering/fruit formation.

# Advantages of CANNA Aqua Flores

- Contains all the essential ingredients for lush flowering and yield
- Aqua Flores helps fruit formation and can enhance flavour and smell
- No need to adjust the pH after initial setting



# **CANNA CLASSIC:**

# **GROWING IN RUN-TO-WASTE**

CANNA CLASSIC IS THE RANGE OF PLANT NUTRIENTS FOR GROWING ON A RUN-TO-WASTE SYSTEM. IN THESE SYSTEMS THE DRAINAGE WATER IS NOT RETURNED TO THE NUTRIENT TANK BUT DRAINS AWAY. ONE OF THE BIG ADVANTAGES IS THAT THE PLANT'S ROOTS ARE IN DIRECT CONTACT WITH THE NUTRIENT WATER AND GET FRESH NUTRIENTS AT EACH FEED. THIS MINIMISES THE RISK OF DISEASES AND THE PLANTS GET EXACTLY THE NUTRIENTS THEY NEED.

In a run-to-waste system you grow the plant without a medium or on an inert medium like rock wool, mapito, clay pebbles, perlite and soilless mixes. This means that the substrate doesn't absorb any nutrients so the grower can grow with great precision. The nutrient water passes the roots only one time. A big advantage is that when the grower uses a wrong dosage of nutrients, it is easy to drain the excess water.

Growing with CANNA CLASSIC requires some knowledge and experience. It is necessary to follow EC and pH values. You must be able to read your plant and know which nutrients it needs. The plant responds directly to what you do and the error margins are small. If you know what you are doing, you can achieve a substantial return with this cultivation method.

When you don't have a suitable drain, a recirculating or closed system like CANNA AQUA is a better choice.

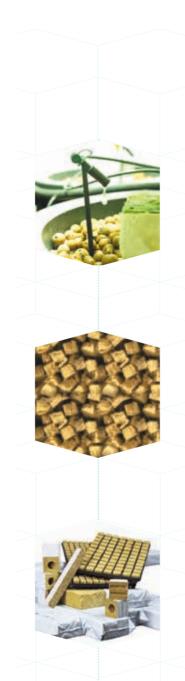
# Advantages of growing on CLASSIC

- Grow with precision
- No damaging ballast substances
- Directly absorbable compounds
- Thoroughly tested

# Hard water and soft water?

Hard water, soft water, bad water... what's the difference? Hard water is an issue for cleaning and equipment, and it increases the chemical reactiveness of the water especially as far as pH is concerned; it is often considered healthier. Typically, hard water comes from ground water that has been exposed for longer periods to mineral-bearing rocks.

Soft water on the other hand allows soap to foam up and work better. It affects equipment less, and provides more of a 'blank slate' for chemical reactions. Studies have shown a correlation between soft water and health issues including cardiac disease. Soft water is typically sourced from surface water - rivers, streams, and lakes - and has not been exposed for long periods to mineral bearing rock formations.





**GROW SCHEDULE** 

# ting (3 - 5 days)

<b>:nerative Period I</b> - Flowers or fruits develop	<b>getative phase II</b> - Up to growth stagnation ctification or appearance of the formation	ints develop in volume.
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pment of the

FLOWERING

1 - 2

10-12 12 12 12 15 0 - 20 25 15 - 25 - 35 35 20 20 40 Cī Cī Cī 25 25 25 25 25 25 - 504 20 20 20 20 40 6 6 6 **PK 13/14** ml/10 litres 15 0.7 - 1.1 in mS/cm 1.4 - 1.8 1.2 1.0 - 1.4 .5 0.0 - 1.6 -1.9 1.9 1.6 1.3 - 1.7 1.4 - 1.8 ... 0.4

**GENERATIVE PHASE** 

# CANNA CLASSIC GROW SCHEDULE

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Blooming phase I

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height achieved

Development of the volume of flowers or fruit Development of the mass of flowers or fruit

# CANNA CLASSIC PRODUCTS

CANNA CLASSIC IS A USER
FRIENDLY RANGE FOR
GROWERS WHO WANT TO
GROW THEIR CROPS ON
INERT SUBSTRATES

The CLASSIC range consists of CANNA Classic Vega A&B for the growing phase and Classic Flores A&B for the flowering phase. The CANNA nutrients are unique compared to other nutrition formulas for run-to-waste systems. Because of the natural pH balancing components there is no need to adjust the pH.

Both CANNA CLASSIC nutrients consist of two parts, an A part and a B part. They both contain high concentrates of nutrients and natural excipients that support the absorption.

When these are mixed in concentrated form at the same time they clog together. That's why you should always first dissolve the A component in the nutrient water and then add the B component.



# CANNA CLASSIC VEGA A+B

The growing phase of the plant is most important. In this period the plant lays the basis for the flowering phase and a high yield. The nutrients in CANNA Classic Vega contain all the essential elements for optimal growing during this phase.

# Advantages of CANNA Classic Vega

- Directly absorbable nitrogen compounds and trace elements
- Suitable for all inert substrates
- Dissolves directly
- Vital side shoots and luxuriant root development

# CANNA CLASSIC FLORES A+B

In the blooming phase the plant has different nutrient needs.

During this period less nitrogen is required and there is an increased need for phosphorous and potassium. Classic Flores is rich in these elements and the special chelated trace elements allow direct absorption resulting in a perfect bloom.

### Advantages of

# **CANNA Classic Flores**

- Contains all the essential ingredients for lush flowering and yield
- Classic Flores stimulates fructification and provides characteristic flavour
- · Dissolves directly



# WATER CONDITIONER

# CANNA CALMAG AGENT

With varying water quality throughout Australia and New Zealand and more and more people using Reversed Osmosis water on COCO substrates, we have created thé solution to your soft water problems: CANNA CALMAG AGENT.

There is a complex chemistry in your water going on when using soft water or Reverse Osmosis (R.O.) water in combination with a Coco substrate within the divalent ions such as Calcium and Magnesium. By controlling this issue, carefully and by addressing the need correctly, control of the problems this brings is achieved without the over application of Calcium and the resulting decrease in certain nutrient ions availability to the plant, such as Potassium. Because of the different quality of tap water in Australia and New Zealand, we have designed a water conditioner and pH stabilizer for your COCO substrate in form of CANNA CALMAG AGENT.

Our agent ensures a balanced amount of calcium and magnesium specially designed to add to your nutrients.

This product will increase the EC value of the water you use, stabilizing the water for your plant to feed on. It makes water harder and will create the best base water for your plant to be able to take in all the nutrients it needs, to grow healthy and strong on a coco substrate.

# Benefits of

# CANNA CALMAG AGENT:

- Perfected for use on CANNA COCO substrate.
- Stabilizing the pH of your water.
- Fewer deficiencies in calcium and magnesium.
- Enhanced nutrient uptake.
- Stronger plants.
- Stimulates better quality flowers.
- Increases the EC of your water.

# Directions of use (on soft or r.o. water):

- Mix your desired nutrients in the tank first.
- Mix in the additives to be used such as CANNABOOST, RHIZOTONIC, CANNAZYM and, or PK13/14.
- Add CANNA CALMAG to the nutrient mix as last following these guidelines:
- Dosage: Depending on water quality, softness and target plant, use 5 - 10 ml / 10 litres.
- Keep in mind that a stable pH is also temperature dependent
- 6. The nutrient solution can be applied directly after mixing but wait 24-48 hours before doing any pH adjustment to allow correct buffering of your solution.

### Caution:

Be careful when using a pH Up (+) as CANNA CALMAG AGENT will first drop in pH and rise over the course of the next 24–48 hours.



# CANNA COCO:

# GROWING ON COCO COIR/FLAKES

CANNA COCO IS CANNA'S COMPLETE RANGE OF PRODUCTS FOR GROWING ON COCO. THE RANGE CONSISTS OF HIGH-QUALITY PLANT NUTRIENTS AND SUBSTRATES FOR THE GROWING PHASE AS WELL AS THE BLOOMING PHASE

Coco is very suitable for the cultivation of fast growing crops. Coco substrate has unique buffering qualities and a complex air/water system for optimal root development. Even the inexperienced grower can grow successfully on coco. CANNA COCO substrate is more airy than for example potting mix. This means there is more room for the roots to develop and plants get much more oxygen. This stimulates growth and bloom and produces bigger yields.

Thanks to the special characteristics of coco substrate CANNA COCO doesn't have a Vega and Flores variant, but one unique composition for both the growing and blooming phase.

# Advantages of growing on COCO

- Unique buffering quality
- Specifically tailored natural fertiliser
- Open structure stimulates root development

The CANNA COCO substrates are buffered and free of harmful pests and diseases. The open structure is a great advantage and has an excellent air/water balance. The plants can develop strong roots and the buffering ability makes coco easy to grow with, even for inexperienced growers.





**GROW SCHEDULE** 

COCO A&B ml A/10 litres ml B/10 litres

CANNAZYM ml/10 litres

ml/10 litres

**PK 13/14** ml/10 litres

in mS/cm

**EC Total** in mS/cm

# / **rooting (3 - 5 days)** er the substrate.

GROWTH

FLOWERING

2 - 3

0.4

.5

1.9

**VECETATIVE PHASE** 

2.2

**CENERATIVE PHASE** 

# CANNA COCO GROW SCHEDULE

THE GROW SCHEDULE WILL HELP YOU TO GROW YOUR PLANTS AND ACHIEVE A BIG HARVEST. THE SCHEDULE WILL GUIDE YOU THROUGH THE ESSENTIAL FACTORS FOR THE OPTIMAL YIELD, LIKE WATER TYPE, NUTRIENTS, ADDITIVES, AND ELECTRIC CONDUCTIVITY (EC) OF THE WATER •

Other important factors for growing are temperature, humidity and airflow in the growing area. If you have any issues concerning these factors, please check the FAQ page on our website or contact your reseller.

### Personalised Grow Guide

Do you grow your crops in less common circumstances? Or do you have specific wishes? A personalised Grow Guide gives you more advanced insights in how to grow your plants. Make your own personalised Grow Guide at canna.com.au

# Mixing nutrients

(see order & dosage in the Grow Schedule)

- Measure the water temperature (18 22 °C)
- · Measure the EC of the water
- Add 80% of the desired dosage of nutrients to the water in the nutrient tank (A&B in equal dosage)
- Add additives
- Measure the EC in total
- Correct the EC with nutrients, the other 20%, to the ideal EC value (not strict because there is a buffering in the substrate)
- Measure the pH
- · Correct the pH

## EC of water

EC stands for Electrical Conductivity. It is the potential of water to conduct electricity. This value is used as a guide to measure the mineral salts in the water and is used as an indication of nutrient content.

# The life cycle of your plants

• Start / rooting (3 –5 days)

Prepare your substrate Growing phase I Your plant develops in volume

Growing phase II

Your plants slow down growing in height after the appearance of the formation of flowers The flowers or fruits develop in length, growth in

• Blooming phase I

height achieved Development of the volume of flowers or fruit Development of the mass of flowers or fruit

 Blooming phase II Blooming phase III • Blooming phase IV

# CANNA COCO PRODUCTS

CANNA COCO IS A USER
FRIENDLY RANGE FOR BOTH
PROFESSIONAL GROWERS
AND HOBBYISTS. THE COCO
SUBSTRATES HAVE A GREAT
BUFFERING CAPACITY
AND THE FINE, UNIFORM
STRUCTURE MAKES IT REALLY
EASY TO GROW YOUR
CROPS

Due to the special coco characteristics in combination with the unique pre-buffering process, it is possible to combine vegetative and flowering nutrients in one nutrient mix. The medium and the plant itself control which nutrients are released to the plant at just the right times. This means the grower doesn't have to worry about the proper point to convert from grow to bloom nutrients!



# CANNA COCO PROFESSIONAL

The Coco Professional 50L substrate is completely organic. The fine structure and ideal air/water system offers your plant a perfect starting point for lush growth and flowering. We have pre-buffered the coconut substrate however the buffering of CANNA Coco Professional is not as heavy as CANNA Coco Professional Plus. Meaning that you have more control over the buffering process and have more influence on the growth and bloom of the plant.

All in all, this is a CANNA worthy product. Just not as easy to use as CANNA Coco Professional Plus.

# Advantages of CANNA Coco Professional

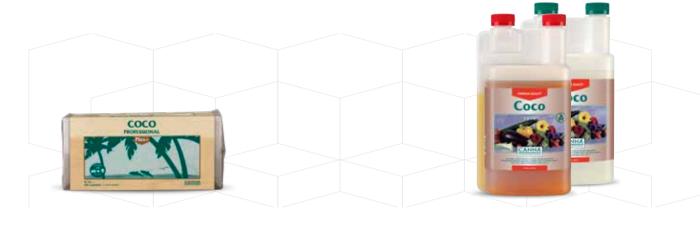
- Free of harmful viruses and soil diseases
- Homogeneous structure
- Can be reused a number of times.

# CANNA COCO PROFESSIONAL PLUS

CANNA Coco Professional Plus is a pure, organic product with a homogeneous structure and has had a full buffering, eliminating the side effects of growing on coir, as coir could consume some of the nutrients. Due to CANNA's unique production process CANNA Coco Professional Plus is free of harmful viruses and soil diseases. CANNA's buffering process allows us to 'pre-program' the medium to a certain age. This ensures you get the same consistent, high quality material time after time. Because we're using only first class raw materials you'll achieve ideal growing conditions in the substrate.

# Advantages of CANNA Coco Professional Plus

- Pure, organic product with a homogeneous structure
- Free of harmful viruses and soil diseases, due to CANNA's unique production process.
- The same consistent, high quality each time



# CANNA COCO PROFESSIONAL PLUS CUBE

The CANNA Coco Professional Plus Cube is the exact same high quality as the much desired loose fill CANNA COCO but in a compressed form. This means it is made from the highest quality ingredients. It is washed and buffered, not steam sterilised and RHP certified for horticulture. CANNA has developed a specially designed hole which causes the cube to expand faster than you have ever seen before. Especially when used in combination with the packaging of the cube. The packaging is in fact a bag in which the cube is designed to be soaked. No more endless stirring and waiting for the coco to finally be ready for use.

# Advantages of CANNA Coco Professional Plus Cube

- Compressed form but same high quality
- Extra capacity to absorb water
- Expands very fast and ready to use right away

### CANNA COCO A&B

Coco A&B is a complete professional nutrient for plants containing all the essential elements for optimal growing and flowering. The unique formulation is suitable for both the growth and blooming phase and consist of two parts, an A part and a B part. The highly concentrated compounds conflict with each other when mixed together resulting in an unusable solution. The compounds must be added to the nutrient water separately to avoid this reaction.

# Advantages of CANNA Coco A&B

- One nutrient for both the vegetative phase and blooming phase
- Dissolves directly
- Specifically tailored to the characteristics of coco substrates

CANNA was the pioneer with the development of a successful coco substrate. The COCO range, CANNA's flagship, was introduced in 1995. CANNA was the first company in the market who successfully developed buffered coco substrates that meet the Dutch RHP Quality Mark for substrates. The CANNA COCO substrates are not steamed, in contrast to most competitive coco products. This makes them unique and one of the best substrates available.

# **BIOCANNA:**

# 100% ORGANIC AND VEGAN SOLUTION FOR GROWING ON POTTING MIX

THE BIOCANNA PRODUCTS ARE A TOP OF THE LINE NUTRIENT AND SUBSTRATE RANGE FOR ORGANIC GROWING AND ESPECIALLY DEVELOPED FOR CULTIVATION IN POTTING MIX. THE PRODUCTS MEET THE HIGHEST INTERNATIONAL ORGANIC STANDARDS. CANNA PROTECTS THE PRODUCTION PROCESS FROM THE RAW PRODUCE TO THE FINAL PRODUCT SO THAT YOU ARE GUARANTEED THE BEST RESULT.

The BIOCANNA products are composed of solely natural ingredients and do not contain any animal residual product. More and more people are aware of the importance of organic farming and don't want products with synthetic fertilisers and pesticides. The main advantage of this is that the product's composition is much better tuned to the plant's needs. An additional advantage is that the product cannot contain any animal pathogenic organism, such as influenza viruses (avian flu, for example) that can be harmful to human health.

### Advantages of BIOCANNA

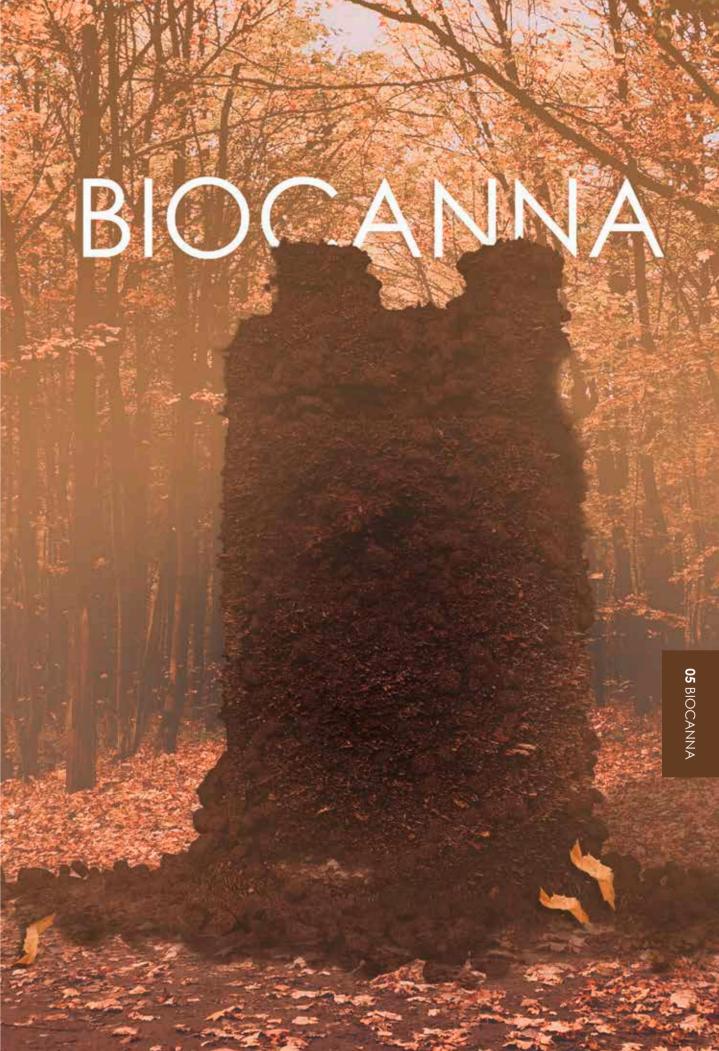
- Meets the highest international organic standards
- Composed of 100% natural ingredients
- No material of animal origin, suitable for a vegan lifestyle
- Harvest grown with the complete BIOCANNA product line may be called EKO
- 100% Vegan

### CU Int. and OMRI Certifications

The Control Union Certifications (part of the Control Union World Group) monitors worldwide the quality of products intended for organic farming. To guarantee the quality, the foundation issues the CU Certificate. All certified products are free from artificial fertilisers, chemical pesticides, chemical or synthetic fragrances, dyes or preservatives. The products must also be free of genetically manipulated organisms (GMO).

OMRI lists input products such as fertilisers, pest controls, and livestock care products that are compliant with organic standards. Allowed products are "OMRI Listed®" and may display the OMRI seal. OMRI verifies input products intended for use in organic production. OMRI's mission is to support the growth and trust of the global organic community.





8

15

**GROWTH** 

12

25

30

20

12 12

**GENERATIVE PHASE** 

40

40

40

**VECETATIVE PHASE** 

# **GROW SCHEDULE**

# **BIOCANNA GROW SCHEDULE**

THE GROW SCHEDULE ON THE LEFT PAGE WILL HELP YOU TO GROW YOUR PLANTS AND ACHIEVE A BIG HARVEST. THE SCHEDULE WILL GUIDE YOU THROUGH ALL THE ESSENTIAL FACTORS FOR THE OPTIMAL YIELD, LIKE WATER TYPE, NUTRIENTS, ADDITIVES, AND ELECTRIC CONDUCTIVITY (EC) OF THE WATER •

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- Add additives
- Measure the EC in total
- Correct the EC with nutrients, the other 20%, to the ideal EC value
- · Measure the pH (in general the pH doesn't have to be corrected, only with extreme hard water > pH 7.5)

## EC of water

EC stands for Electrical Conductivity. It is the potential of water to conduct electricity. This value is used as a guide to measure the mineral salts in the water and is used as an indication of nutrient content.

# The life cycle of your plants

• Start / rooting (3 –5 days)

Prepare your substrate

 Growing phase I Growing phase II

Your plant develops in volume Your plants slow down growing in height after the appearance of the formation of flowers

Blooming phase I

The flowers or fruits develop in length, growth in height achieved

 Blooming phase II Blooming phase III

Development of the volume of flowers or fruit Development of the mass of flowers or fruit

• Blooming phase IV

# BIOCANNA PRODUCTS





By carrying out consistent checks – before, during and after the production process – and by doing as much as possible in-house, CANNA has always been able to deliver reliable and high-quality products for retailers. This is how CANNA has managed to distinguish itself in the market.

It is all about a total experience: honesty is the best policy, and the final harvest is the standard by which we will be judged.



# BIOCANNA BIO VEGA

BIOCANNA Bio Vega contains betaine and 17 detectable amino acids. The bioactive substances in Bio Vega stimulate the root development and the formation of strong growth shoots. This allows plants to optimally start their blooming period.

# Advantages of BIOCANNA Bio Vega

- Contains easy absorbable betaine nitrogen
- Composed of plant materials
- Nutrients released according to the plant's needs
- 100% vegan

# BIOCANNA BIO FLORES

BIOCANNA Bio Flores is a complete 100% natural fertiliser for flowering plants in potting mix or in the open ground.

The product is composed of fermented plant material and contains betaine and many amino acids that give the plant extra flowering power.

# Advantages of BIOCANNA Bio Flores

- Composed of fermented plant material
- Rich in directly absorbable nutrients, proteins, fruit acids and vitamins
- High concentration



# BIOCANNA BIO BOOST

BIOCANNA Bio BOOST is a yield increasing agent for all cultivation systems and can be applied in combination with all CANNA's nutritional lines and additives. Bio BOOST is not a nutrient but a natural fermented plant extract with bloom stimulating characteristics that are also responsible for a fuller flavour.

# Advantages of BIOCANNA Bio BOOST

- The bioactive substances result in an extra metabolism that is exactly what the plant needs during the blooming period
- The plants produce more fructose and become healthier and stronger
- The plants are less vulnerable to diseases and plagues
- A higher yield with a strong, exuberant and vital fructification
- free of PGR's



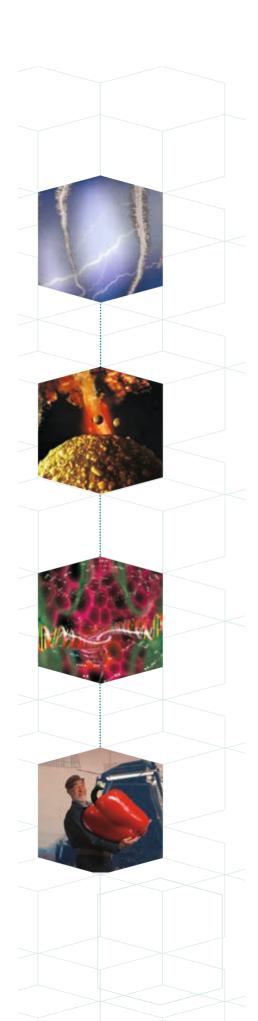
# CANNA Thé solution for growth and bloom

# **CANNA ADDITIVES:**

# GET THE MOST OUT OF YOUR PLANTS

CANNA ADDITIVES ARE PRODUCTS THAT CAN BE USED ALONG-SIDE THE MAIN NUTRIENTS. IN SOME CIRCUMSTANCES PLANTS NEED SPECIFIC NUTRIENTS. DO YOU WANT TO STIMULATE A SPE-CIFIC PROCESS DURING THE GROWING PHASE OF THE PLANT? OR DELIVER AN INJECTION OF SPECIFIC ELEMENTS, FOR EXAMPLE TO STIMULATE BETTER DEVELOPING ROOTS OR BIGGER FRUITS? THE CANNA ADDITIVES ARE CREATED TO IMPROVE YOUR PLANT'S HEALTH AND YIELD

CANNA Additives can be used on every medium and is used for cultivation on potting mixes, in recirculating systems, when cultivating on coco and in run-to-waste systems. They are easy-to-use and by using CANNA's Grow Guide you'll know exactly the right moment when to add these products. They can be found in the characteristic CANNA double-neck bottle. All CANNA additives are free of PGR's.



# ADDITIVES



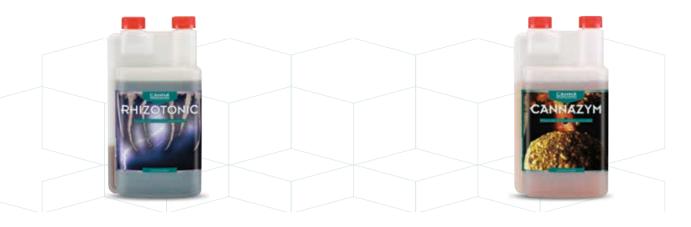












# **CANNA RHIZOTONIC**

CANNA RHIZOTONIC is a powerful, algae based, vegetative stimulator for plant roots. It contains multiple vitamins and is 100% natural. The more than 60 microbiological substances enhance the plant's hormone production and overall plant growth.

Besides stimulating root growth on plants that are already rooted, RHIZOTONIC also stimulates new root growth on cuttings and transplants. The various trace elements and vitamins such as B1&B2 stimulate the production of hormones and root growth, thus providing beautiful, strong white roots.

RHIZOTONIC also speeds up the germination process. Soak the seeds in a dilution (40ml/10 litre) and it will soften up the seed skin, making it easier to burst and germinate.

# Advantages of CANNA RHIZOTONIC

- Stimulates new root growth
- Speeds up the germination process
- Enhances the chemical process
- Improved recovery from stress after transport and re-potting

# **CANNAZYM**

CANNAZYM is a high-quality enzyme product that speeds up the process of breaking down dead root material and activates beneficial microorganisms. The dead roots are turned into sugars, which make up a valuable source of nutrients for the plant.

CANNAZYM consists of different enzymes to which vitamins and extracts are added. This improves the plant's defence system and also stimulates the plant to form new roots.

# Advantages of CANNAZYM

- Turns dead roots into minerals and sugars
- Helps to form new roots
- Prevents from rotting roots
- Creates a balanced hydrological regime and good aeration in root environment





# CANNABOOST ACCELERATOR

CANNABOOST Accelerator boosts the metabolism of your plants. This is an important factor, because the uptake of nutrients depends greatly on the plant's health and metabolism rate.

This additive stimulates the development of new flowers.

CANNABOOST isn't a nutrient but an additive that increases the plant's photosynthesis. This ensures that the fruits form faster and give them a better taste.

# Advantages of CANNABOOST Accelerator

- Better yield
- Suitable for all mediums
- Even higher yield when combined with CANNA PK 13/14

# **CANNA PK 13/14**

CANNA PK 13/14 is a mixture of top quality nutritional minerals that stimulate flowering. It's easy- to-use and makes high yields. PK 13/14 is suitable for any growing medium. Furthermore, it only needs to be applied for one week to the nutrient reservoir. If you do this at the right moment, you will get astonishing results in the bloom phase. Make sure to read the directions of use for the best benefits.

### Advantages of CANNA PK 13/14

- High grade mixture of the elements phosphorus and potassium
- Lavish flowering
- Suitable for any medium

Phosphorous (P) is a macro nutritional element for every plant. It plays a key role in metabolism and energy transfer. In the flowering phase, extra phosphorous is needed. Phosphorous strengthens cell formation in flowers, among other things.

Potassium (K) is also a macro nutritional element. It is found throughout the plant and is necessary for a lot of its activities. It is essential for transporting water and nutrition and it is responsible for the plant's quality and rigidity. In addition to this, it controls countless other processes such as sugar production. Potassium ensures that the plant can produce enough sugars during flowering, which are essential for the development of the flowers.

