

**CANNA**

The solution for growth and bloom

# PRODUCT INFORMATION



## 1.

### 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.



## 3.

### 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.

#### TIP!

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



## 4.

### AIR

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.



## 6.

### 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.

#### TIP!

1 m<sup>2</sup> of bench top, covered with leaves, will use 4-6 liters of water a day.



## 7.

### 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.

## CANNA WELCOMES YOU

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, SUBSTRA 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.

#### 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, SUBSTRA 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.

In South Africa, CANNA offers two product ranges of nutrients specially designed for two different kinds of substrates. These ranges are:

- CANNA SUBSTRA
- CANNA COCO

# WHAT'S YOUR PREFERRED WAY OF GROWING?

## GROWING IN A RUN-TO-WASTE SYSTEM

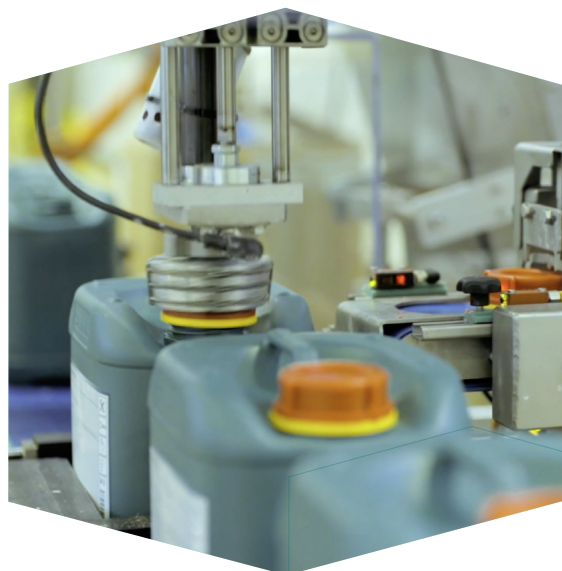
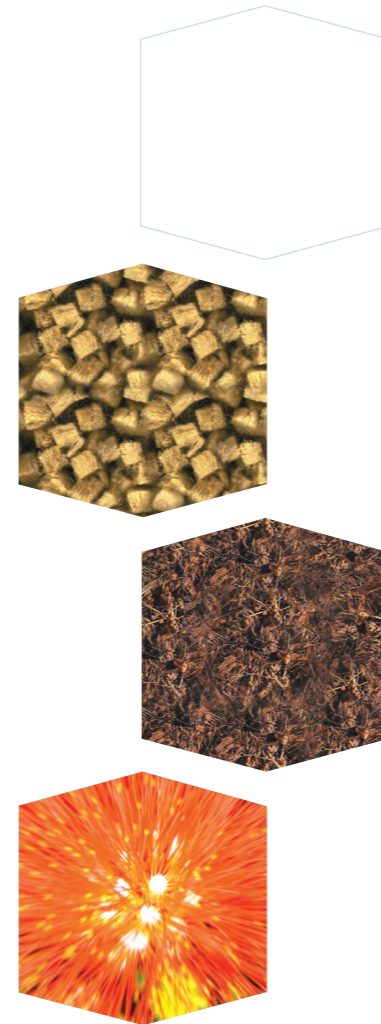
THE RUN-TO-WASTE SYSTEM IS AN HYDROPONIC METHOD FOR GROWING ON INERT SUBSTRATES (ROCKWOOL, PERLITE, CLAY PEBBLES, NON-FERTILIZED POTTING SOILS). THE DRAINAGE WATER DOES NOT RETURN TO THE NUTRIENT TANK, BUT DRAINS AWAY ●

## 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 ●

## GET THE MOST OUT OF YOUR PLANTS

THE CANNA ADDITIVES ARE PRODUCTS THAT ARE USED ALONG-SIDE THE MAIN NUTRIENTS TO OPTIMISE YOUR RESULTS. CANNA PK 13/14 IS A FLOWERING STIMULANT THAT PROVIDES THE PLANT WITH THE EXTRA ELEMENTS NEEDED DURING THE FLOWERING PHASE ●



## CANNA SUBSTRA:

# GROWING IN RUN-TO-WASTE

CANNA SUBSTRA IS THE NUTRIENT FOR CULTIVATING PLANTS IN SYSTEMS USING INERT SUBSTRATES. IN THESE SYSTEMS THE DRAINAGE WATER IS NOT RETURNED TO THE NUTRIENT TANK BUT DRAINS AWAY. AN ADVANTAGE OF THESE SYSTEMS IS THAT PLANTS GET FRESH NUTRIENTS AT EACH FEED. THIS MINIMIZES THE RISK OF DISEASES ●

An inert substrate means that the substrate does not add or take nutrient elements from the nutrient solution, so you can grow with precision. These systems are called run-to-waste or open hydroponic systems. These substrates include rockwool, clay pebbles, perlite and non-fertilized soilless mixes.

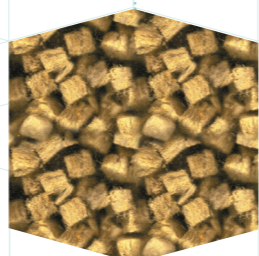
### Advantages of growing with CANNA SUBSTRA

- With CANNA SUBSTRA you can grow with precision
- For usage on inert, run to waste systems like rockwool, perlite soilless mixes and clay pebbles
- CANNA SUBSTRA comes in a hard and soft water version
- Easy to use for growers of all kinds

### Hard water or soft water?

'Hard' and 'soft' are terms used to describe the quality of many water sources. Hard water has a high mineral content, usually originating from magnesium, calcium carbonate, bicarbonate or calcium sulphate, which can cause hard, white lime scale to form on surfaces and growing equipment. Hard water may also have a high alkalinity and a high pH, meaning that considerably more acid is required to lower the pH in the hydroponic system to ideal levels.

While hard water sources do contain useful minerals (Ca and Mg), these can upset the balance of the nutrient solution and make other ions less available for plant uptake. Smaller growers can counteract this by making use of one of the many 'hard water' nutrient products on the market. Soft water, by comparison, is a low mineral water source. Often rainwater is 'soft'. Also, 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. It can also come from treated water (Reverse Osmosis), where most ions have been removed or replaced with single valance atoms such as sodium by water softening equipment.



### SUBSTRA hard water or soft water?

The fertilizers in the CANNA SUBSTRA range are available in two versions, for hard water and for soft water. If the hardness of your water is 60-80 mg/L available Calcium or more, use the hard water variant. If the hardness of your water is less than this, then the soft water variant is recommended.

# SUBSTRA

## CANNA SUBSTRA 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 THE ESSENTIAL FACTORS FOR AN OPTIMAL RESULT. FACTORS 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.

### 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.co.za](https://canna.co.za)

### 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 (strict)
- Measure the pH
- Correct the pH

### 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  
Flowers or fruit ripening process

**CANNA**  
The solution for growth and bloom

# SUBSTRA

## GROW SCHEDULE

Cultivation period In weeks	Light / Day In hours	Substra Vega		Substra Flores		RHIZOTONIC ml/10 litres	CANNAZYM ml/10 litres	CANNABOOST ml/10 litres	PK 13/14 ml/10 litres	EC + In mS/cm	EC Total In mS/cm
		ml A/10 litres	ml B/10 litres	ml A/10 litres	ml B/10 litres						
< 1	18	10 - 20	-	-	-	40	-	-	-	0.7 - 1.1	1.1 - 1.5
0 - 3 <sup>1</sup>	18	15 - 25	-	-	-	20	25	-	-	0.9 - 1.3	1.3 - 1.7
2 - 4 <sup>2</sup>	12	20 - 30	-	-	-	20	25	20 <sup>5</sup>	-	1.2 - 1.6	1.6 - 2.0
2 - 3	12	-	-	25 - 35	-	5	25	20 - 40	-	1.4 - 1.8	1.8 - 2.2
1	12	-	-	25 - 35	-	5	25	20 - 40	15	1.5 - 1.9	1.9 - 2.3
2 - 3	12	-	-	15 - 25	-	5	25	20 - 40	-	1.0 - 1.4	1.4 - 1.8
1 - 2	10 - 12 <sup>3</sup>	-	-	-	-	-	25 - 50 <sup>4</sup>	20 - 40	-	0.0	0.4



### GROWTH

**Start / rooting (3 - 5 days)** -  
Water the substrate.

**Vegetative phase I** -  
Plants develop in volume.

**Vegetative phase II** - Up to growth stagnation after fructification or appearance of the formation of flowers.

**Generative Period I** - Flowers or fruits develop in length. Growth in height achieved.

**Generative period II** -  
Development of the volume (breadth) of flowers or fruit.

**Generative Period III** -  
Development of the mass (weight) of flowers or fruit.

**Generative Period IV** -  
Flowers or fruit ripening process.

### FLOWERING

- This period varies depending on the species and number of plants per m<sup>2</sup>. Mother plants remain in this phase until the end (6 - 12 months).
- The changeover from 18 to 12 hours varies depending on the variety. The rule of thumb is to change after 2 weeks.
- Reduce hours of light if ripening goes too fast. Watch out for increasing relative humidity.
- Double CANNAZYM dosage to 50 ml/10 litres, if substrate is reused.
- 20 ml/10 litres standard, increase to a maximum of 40 ml/10 litres for extra flowering power.

EC: EC+ value is based in mS/cm when EC water = 0.0 at 25°C, pH 6.0. Add the EC of the tap water that is used to the recommended ECI. The EC total in the example is with tap water with an EC of 0.4. pH: Recommended pH is between 5.2 and 6.2. Adding pH-con increase EC.

The guidelines in the table aren't an iron law, but can help novice growers to develop a sophisticated fertilization strategy. The optimum fertilization strategy is further determined by factors such as: temperature, humidity, plant species, root volume, moisture percentage in substrate, water dosage strategy, etc.



# CANNA SUBSTRA PRODUCTS

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

The SUBSTRA range consists of CANNA Substra Vega A&B for the growing phase and Substra 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 SUBSTRA 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 SUBSTRA VEGA A+B

CANNA Substra Vega A&B is a two-part nutrient for plants during the growing phase. CANNA Substra Vega A&B Soft water is easy to use, dissolves directly and is suitable for growing with automatic "run to waste" irrigation systems. It is specially developed for growing in inert substrates. In the beginning of the growing phase, the plant lays the foundation for its eventual yield.

### Advantages of CANNA Substra Vega

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

## CANNA SUBSTRA FLORES A+B

CANNA Substra Flores A&B is a two-part nutrient for plants during the flowering phase. CANNA Substra Flores A&B is easy to use, dissolves directly and is suitable for growing with automatic "run to waste" irrigation systems. Do not mix A&B concentrate directly; Insoluble combinations will occur which the plant cannot take up.

### Advantages of CANNA Substra Flores

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



## CANNA AQUA CLAY PEBBLES 45L BAG

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.

### 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

<p><b>CANNA Substra Vega A&amp;B Soft water</b> NK Fertilizer solution NK 5-6 with Ca, Mg and micro-elements</p> <p>CANNA Substra Vega A Soft water Reg No. B 5973 Act. No. 36 of 1947   Group 2 fertilizer</p> <p>CANNA Substra Vega B Soft water Reg No. B 5975 Act. No. 36 of 1947   Group 2 fertilizer</p>
<p><b>CANNA Substra Vega A&amp;B Hard water</b> NK Fertilizer solution NK 5-6 with Ca, Mg and micro-elements</p> <p>CANNA Substra Vega A Hard water Reg No. B 5974 Act. No. 36 of 1947   Group 2 fertilizer</p> <p>CANNA Substra Vega B Hard water Reg No. B 5979 Act. No. 36 of 1947   Group 2 fertilizer</p>
<p><b>CANNA Substra Flores A&amp;B Soft water</b> NPK Fertilizer solution NPK 5-1-7 with Ca, Mg, S</p> <p>CANNA Substra Flores A Soft water Reg No. B 5977 Act. No. 36 of 1947   Group 2 fertilizer</p> <p>CANNA Substra Flores B Soft water Reg No. B 5980 Act. No. 36 of 1947   Group 2 fertilizer</p>
<p><b>CANNA Substra Flores A&amp;B Hard Water</b> NPK Fertilizer solution NPK 5-1-7 with Ca, Mg, S</p> <p>CANNA Substra Flores A Hard water Reg No. B 5976 Act. No. 36 of 1947   Group 2 fertilizer</p> <p>CANNA Substra Flores B Hard water Reg No. B 5981 Act. No. 36 of 1947   Group 2 fertilizer</p>

## CANNA COCO:

# GROWING ON COCO COIR

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 with CANNA COCO

- Two-part nutrient for growing and flowering
- Easy to use
- RHP certified quality Coco substrate
- Pre-buffered, not steam sterilized coco
- Coco available in bag or compressed Brick

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.



Did you know that CANNA played the leading role in the development of growing successfully on coco? The COCO range 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.



# COCO

## 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.

### 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.co.za](http://canna.co.za)

### 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

### The life cycle of your plants

- Start / rooting (3 –5 days)
- Growing phase I
- Growing 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  
Flowers or fruit ripening process

- Blooming phase I
- Blooming phase II
- Blooming phase III
- Blooming phase IV

CANNA  
The solution for growth and bloom

# COCCO GROW SCHEDULE



Cultivation period in weeks	Light / Day in hours	COCO A&B ml A/10 litres ml B/10 litres	RHIZOTONIC ml/10 litres	CANNAZYM ml/10 litres	CANNABOOST ml/10 litres	PK 13/14 ml/10 litres	EC + in mS/cm	EC Total in mS/cm
< 1	18	15 - 25	40	-	-	-	0.7 - 1.1	1.1 - 1.5
0 - 3 <sup>1</sup>	18	20 - 30	20	25	-	-	0.9 - 1.3	1.3 - 1.7
2 - 4 <sup>2</sup>	12	25 - 35	20	25	20 <sup>5</sup>	-	1.1 - 1.5	1.5 - 1.9
2 - 3	12	30 - 40	5	25	20 - 40	-	1.4 - 1.8	1.8 - 2.2
1	12	30 - 40	5	25	20 - 40	15	1.6 - 2.0	2.0 - 2.4
2 - 3	12	20 - 30	5	25	20 - 40	-	1.0 - 1.4	1.4 - 1.8
1 - 2	10 - 12 <sup>3</sup>	-	-	25 - 50 <sup>4</sup>	20 - 40	-	0.0	0.4

### GROWTH

**Start / rooting (3 - 5 days)** - Water the substrate.

**Vegetative phase I** - Plants develop in volume.

**Vegetative phase II** - Up to growth stagnation after fructification or appearance of the formation of flowers.

**Generative Period I** - Flowers or fruits develop in length. Growth in height achieved.

**Generative period II** - Development of the volume (breadth) of flowers or fruit.

**Generative Period III** - Development of the mass (weight) of flowers or fruit.

**Generative Period IV** - Flowers or fruit ripening process.

### FLOWERING

- This period varies depending on the species and number of plants per m<sup>2</sup>. Mother plants remain in this phase until the end (6 - 12 months).
- The changeover from 18 to 12 hours varies depending on the variety. The rule of thumb is to change after 2 weeks.
- Reduce hours of light if ripening goes too fast. Watch out for increasing relative humidity.
- Double CANNAZYM dosage to 50 ml/10 litres, if substrate is reused.
- 20 ml/10 litres standard, increase to a maximum of 40 ml/10 litres for extra flowering power.

EC: EC+ value is based in mS/cm when EC water = 0.0 at 25°C, pH 6.0. Add the EC of the tap water that is used to the recommended EC! The EC total in the example is with tap water with an EC of 0.4. pH: Recommended pH is between 5.5 and 6.2. Adding pH-con increase EC.

The guidelines in the table aren't an iron law, but can help novice growers to develop a sophisticated fertilization strategy. The optimum fertilization strategy is further determined by factors such as: temperature, humidity, plant species, root volume, moisture percentage in substrate, water dosage strategy, etc.





# 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 ●

CANNA Coco Professional Plus is the highest quality Coco that CANNA is known for worldwide; pre-buffered, not steam sterilized, RHP certified, re-useable and the perfect combination with CANNA Coco nutrients. This growing medium is perfect for growing vegetables, herbaceous, fruit bearing and flowering plants. CANNA Coco substrate is a 100% natural product having a fine, uniform structure, free from viruses, chemical additives and soil diseases.

CANNA was the first to introduce Coco substrate to the hydroponics market including it's unique Coco A&B fertilizer matching the characteristics of the Coco substrate.



## CANNA COCO A&B

CANNA Coco A&B is a two-part nutrient for plants and can be used for the growing and flowering phase. CANNA Coco A&B is easy to use and is suitable for growing in pots or with "run to waste" systems. 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.

CANNA COCO nutrients consist of two parts, an A part and a B part. We separate these because if they are mixed, the formula clogs together and the plant cannot absorb this. That's why you should first add the A component, stir well and then add the B component.

### 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 COCO PROFESSIONAL PLUS 50L BAG

This bag of CANNA Coco Professional Plus contains 50 liter of ready to use loose Coco coir. CANNA Coco Professional Plus is washed and buffered to ensure a perfect growing medium for your plants. Coir fibre pith has an excellent water / air system, which provides ideal conditions for growing and allows for a rapid development of the crop from the start of the cultivation. CANNA Coco Professional Plus is not pre-fertilized so it is important to add nutrients according to the specific plants' needs.

pH (water)zone: 5.5 - 7.0 | EC: < 0.6 mS/cm

### 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 40L BRICK

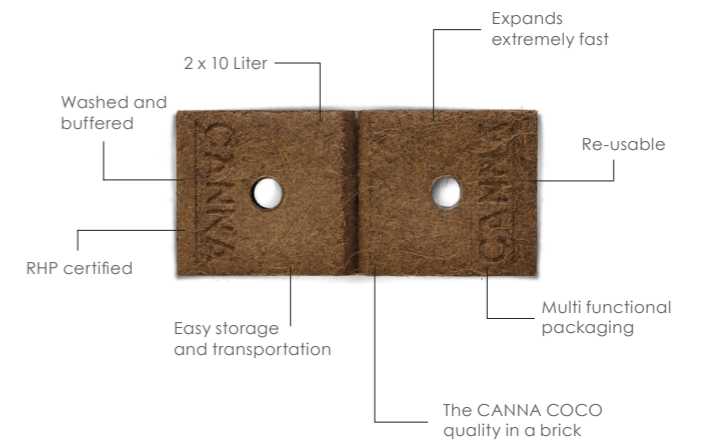
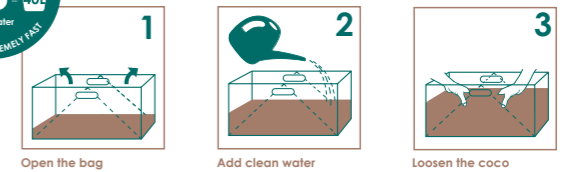
The Coco Professional Plus Brick is the CANNA quality Coco, compressed in 2 blocks of 20 liter and ready to use in no time. The result is a brick of the highest quality buffered coco that expands extremely fast and is easy to use. The holes in the CANNA Coco Brick causes the brick to expand faster and easier than you have ever seen before. No more endless stirring and waiting for the coco to finally be ready to use.

Each brick has a fracture line which gives you the option to easily prepare smaller amounts of coco if desired (4 x 10 Liter). Due to the compressed nature of the brick it takes up very little storage space which in turn, makes it very easy to transport.

pH (water)zone: 5.5 - 7.0 | EC: < 0.6 mS/cm

### Advantages of CANNA Coco Professional Plus Brick

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



NPK Fertilizer solution  
NPK 5-2-2 with Ca, Mg

**CANNA Coco A**  
N Fertilizer solution, N 4 with Ca  
Reg No. B 5972 Act. No. 36 of 1947 | Group 2 fertilizer

**CANNA Coco B**  
PK Fertilizer solution, PK 2-2 with Mg  
Reg No. B 5978 Act. No. 36 of 1947 | Group 2 fertilizer



RHP certified substrates provide an optimal start of the culture. The substrate complies with the quality requirements concerning for instance water uptake, air content, pH, EC and nutrients. It also offers more security that the substrate is pure and clean and that it can be used without risks for the culture. The RHP quality mark monitors the quality of growing media in the chain, from raw materials production until processing and delivery at the company of the user.

## CANNA PK13/14: STIMULATES FLOWERING AND FRUITING

OUR ADDITIVES ARE PRODUCTS THAT ARE USED ALONGSIDE THE MAIN NUTRIENT. ADDITIVES IMPROVE PLANT HEALTH AND YIELD. ALL CANNA ADDITIVES ARE COMPLEMENTARY TO OUR FERTILIZERS AND CAN BE USED ON ALL SUBSTRATES. THE NUTRIENTS POTASSIUM AND PHOSPHORUS ARE ESSENTIAL FOR FLOWERING AND FRUIT SETTING PLANTS. ●

CANNA PK 13/14\* is a mixture of potassium and phosphorus compounds. CANNA PK 13/14 dissolves easily in (tap) water and is therefore easily absorbable by the plant. CANNA PK13/14 can be used on all media and is designed to match with CANNA base nutrients like Coco and Substra.

There comes a moment during the plant's development when the need for Phosphorus and potassium increases greatly. If CANNA PK 13/14 is given at this moment you will satisfy the flowering plant's increased needs. Use CANNA PK 13/14 from the moment the flower bud develops or at the onset of a fruitlet for up to a week.

\* Product name is based on components measured in oxide form in mass/volume percentage.



# PK 13/14



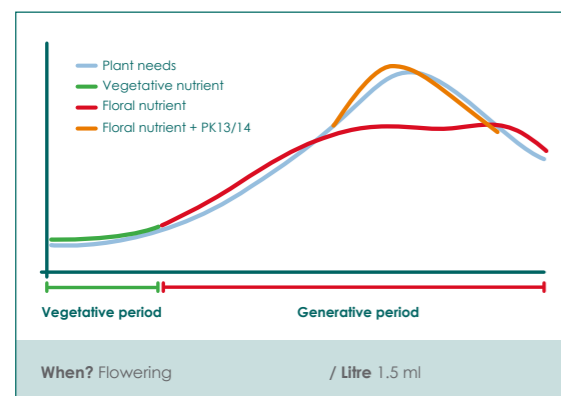


## CANNA PK 13/14

CANNA PK 13/14 is a mixture of top quality nutritional minerals that stimulate flowering. It's easy-to-use and helps improving 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.

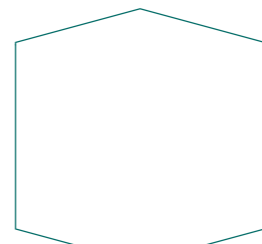
### Advantages of CANNA PK 13/14

- To be used from the moment the flower bud develops
- High grade mixture of the elements phosphorus and potassium
- Easily absorbable by the plant
- Suitable for any growing medium and to be used with CANNA fertilizer



**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.



PK Fertilizer solution, PK 5-10

CANNA PK13/14  
Reg No. B 5971 Act. No. 36 of 1947 | Fertilizer group 1

# QUALITY PROVES ITSELF



# TEN WATERING RULES OF THUMB

**1. START**  
 Roots need near 100% humidity, ideally at all times. Go below and the root tip begins to die back. The root tip is responsible for the taking up of the vast majority of minerals and water. Kill the tips and the root has to regenerate one before going forward.

**2. ROOTZONE**  
 Roots have to grow from where there is no water and nutrients to where there is. Keeping them in abundant water and nutrients slows their growth leading to a condition known as over-watering, where roots won't develop in balance with the upper part. On the opposite side, letting it dry for too long will cause Under-Watering. Both situations will cause health problems and nutrient delivery problems.

**3. KEEP ALL DRAINS OPEN**  
 Well drained medium can have water applied for a longer period because the excess drains quickly from the medium when the application ceases. Poorly drained mediums have much shorter but slower application time because it will take longer to drain the excess water away from the root surface.

**4. DETERMINING ROOT HEALTH**  
 In general, a square meter of full canopy will use 4-6 litres of water per day. No matter how many plants on the square meter. If using less water, either the roots are having a tough go or humidity could be too high, temperatures could be too low, and so on.

**5. WATER CYCLE**  
 When figuring water cycle on a crop of more than one plant, base timing on an average of all plants. We want to rewater most mediums (except aeroponics) when about 50% of the total volume of the water is used or gone. Set automatic systems to turn on when 50% of the total crop is ready. To accomplish this, keep conditions the same; medium, plant age and size, light exposure, air currents, and so on. Above all else, keep crops developing equally.



**6. WEIGHING**  
 With organic or inert medium, water when 50% of the water you applied last time is gone. The grower can weigh the container bone dry, water to drainage and weigh again. The difference is how much water the container will hold. Lifting and weighing is key. This is very precise in the early days after planting, later on the grower should take into account that the plant is gaining weight.

**7. HUMIDITY**  
 In aeroponic systems, you have to be good at judging when the root surface has just lost the free moisture on it while not falling much below 100% humidity (air). This will require constant monitoring and adjusting.

**8. KEEP ROOTS IN THE DARK**  
 Roots like the dark and really try to grow away from light. Keep them as light-less as possible in systems that are thin walled PVC, or an air chamber.

**9. NEVER TOO MUCH WATER**  
 You cannot put more water in a container with medium and drainage holes, than what it can hold. Once you stop watering, the excess water will drain out and the physical properties of the medium will determine the amount of water available. However you can keep it too wet by watering for too long and/or too often (Over watering).

**10. PREFERABLY DON'T WATER AT NIGHT**  
 During the dark periods (nights) the plant is using much less water. Mediums that hold water seldom need watering during the night as long as the grower adjusts the irrigation cycle, to water in the last or first half hour of light. Aeroponics or clay pebbles will need an infrequent application a few times during the night.

# WATERING BASED ON WEIGHT OF THE POT



Watering is a very important factor that shapes the development of the roots throughout the pot. A healthy root system has the following characteristics:

- Medium-sized and large whitish roots.
- There should be roots throughout the pot, from top to bottom.

## Watering issues



**Overwatering or watering too frequently;** will stifle the development of roots in the lower half of the pot.



**Underwatering or pots that are not watered frequently enough;** will lead to a lot of dead root matter in the upper half of the pot.

## Water cycle

Roots grow when they have enough water, but allow plants time to dry out a bit and use up all the minerals present.

Water the plant when 50% of the water you applied last time is gone.

