



# Millenniumsoils Coir™

Naturally the best organic substrate

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## Growing Cannabis in Millenniumsoils Coir

With Millenniumsoils Coir products, it is important to remember that this is true hydroponics, and as such should not be treated as potted / container culture. Constant watering is required to maintain constant growth/nourishment of the plant.

The frequency of watering is not controlled by the potted (substrate) moisture content, but by the exchange of nutrients and very importantly, Oxygen. At each watering the nutrient solution is renewed and at the stop of the watering the saturation level rapidly returns back to the substrates water holding capacity (basically, excess water drains rapidly from the bag and only the amount of water the substrate can hold is left). In this process fresh Oxygen is pulled into the root zone.

Each exchange gives you ideal growing conditions for 90 – 120 minutes, and waterings should therefore be at 90 – 120 minute intervals during the light period. Each watering should be just long enough to produce leachate.

After 3 - 4 days adjust the watering to give 30% leachate over a 24-hour period (This is a general number and can be more or less depending on your growing style). DO NOT DECREASE WATERING FREQUENCY, ONLY DURATION OF WATERINGS

With the frequent nutrient / O<sub>2</sub> exchange, if your water has an EC <0.5 (most common), your feeding should be at 1.5 – 1.8 EC (suggested) for adequate nutrient availability.

*\*\* If EC is higher than 0.5, contact us to discuss options*

When you expand the Growbags (Millenniumsoils Coir substrate) insure they have been in a warm environment for at least 48 hours. Ideally expand the bags with a weak solution of Cal-Mag at an EC of .3 - .5 above your source water's EC. This is not necessary but will give you a faster start. Apply water / solution to the compressed bag until full and let sit at least 2 hours (over night is better) then drain the bags. (cut drain holes). If the bags are precut for drains, apply water in frequent bursts until the coco is fully expanded and leachate is running freely. The same rule can be used with the Grow Cubes, but generally only water is sufficient.

TIP: For an even quicker start water at least 2 or 3 times with your nutrient solution immediately before planting. This applies to both Millenniumsoils Coir Growbags and Grow Cubes

Cuttings may be started bare root or plugs and then transplanted into Grow Cubes, or started directly in the Grow Cubes. When established, the Grow Cube is placed on the Grow Bag (making sure to cut a 10x10cm hole for Grow Cube if not already existing) or directly on the media of an Open Top Bag. Place 1 emitter in the Grow Cube and one in the Grow Bag / Open Top Bag beside the Grow Cube. In about 5



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days you will see a substantial number of roots going into the Grow Bag / Open Top Bag. At that time move the emitter from the Grow Cube and place into the Grow Bag / Open Top Bag on either side of the cube. Again after 3-4 days adjust the duration of your watering to give you "30%" leachate.

If you are using an ebb and flow system, it is important to insure that you have complete contact of the cube and the growing media. This will insure rapid and complete movement of the roots into the Grow Bag. The best way to achieve this is to place the Millenniumsoils Coir Grow Cube 2 – 3cm below the level of the Coco substrate.

As you transition from Veg to Flowering continue the watering frequency, but decrease the number of 90 – 120 minute cycles to correspond with the light duration. Do this for any change in day length, decreasing or increasing the number of waterings to correspond.

Do not water at any time during the dark period. Coco has a very large water holding capacity and will have adequate water available to the plant until the next watering.

*This is also a benefit if you have an equipment failure as your crop will easily survive an extended period without water with very little damage.*

During all stages of growth, please feel free to contact us at any time for more assistance.

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## Cannabis Production Guideline

### Week 1

All energy goes into germination, root development and seedling growth, or rooting of cuttings.

Light = 18 hours

Temp = 24 C day, 18 C

RH = 80 %

PH = 6.0 – 6.2

EC = 0.3 - 0.5 above source water

CO<sub>2</sub> = 1200 ppm

Fans = Low to Medium

Leachate = 30 % +

Seed should be sprouted and establishing roots. Many seedlings will be producing their 3<sup>rd</sup> set of leaves.

### Week 2

All energy goes to root development and leaf expansion.

Light = 18 hours

Temp = 24 C day, 18 C

RH = 80 %

PH = 6.0 – 6.2

EC = 1.3 – 1.5

CO<sub>2</sub> = 1200 ppm

Fans = Medium



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Leachate – 30 %

Adjust light height to avoid leaf burn. By the end of week 2 many plants will be at the 4-6 node stage and growth will begin to become rapid. Monitor plants for stress or discoloration as this may indicate nutrient imbalance.

### **Week 3**

Light – 12 hours. Insure 12 hours of darkness with no light leakage from any source.

Temp – 25 C day, 18 C

RH = 70 %

PH = 6.0 – 6.2

EC = 1.8 – 2.0

CO2 = 1200 ppm

Fans = Medium - High

Leachate = Minimum of 20 %

Growth is now very rapid. Each set of new expanded leaves should be larger than the set before, if not this may be an indication of nutrient/PH imbalance. Leaves should be dark green with no brown tips. Ensure good air flow through the plants. This week and week 14 are fastest growth, plants will quadruple in size. Continue to adjust light height.

At the end of week 3 flush the media with 1 or 2 waterings of clear water.

### **Week 4**

Light = 12 hours, 12 hours complete darkness

Temp = 26 C day, 18 C

RH = 70 %

PH = 6.0-6.2



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EC = 1.8 – 2.0

CO<sub>2</sub> = 1200 ppm

Fans = High

Leachate – Minimum 20 %

As the canopy will now be getting very heavy ensure good air flow through the plants. Watch for male plants in the crop and remove and destroy any immediately. By the end of week 4 some plants may display white hairs at the axis of new stems. You can now take vegetative cuttings for clones from the lower branches that are not getting good light.

## Week 5

Light = 12 hours, 12 hours complete darkness

Temp = 26 C day, 18 C

RH = 60 %

PH = 6.0 – 6.2

EC = 1.8 – 2.0

CO<sub>2</sub> = 1200 ppm

Fans = High

Leachate = Minimum 20 %

Water usage will be at its highest so adjust watering to maintain a minimum of 20 % leachate. Stem thickness should be at least 1.5 cm. Buds should be rapidly forming and white hairs abundant. All foliage should be pure green with minor color variations for varieties.



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## **Week 6**

Light = 12 hours, 12 hours complete darkness

Temp = 27 C day, 18 C

RH = 50 %

PH = 6.0 – 6.2

EC = 1.8 – 2.0

CO2 = 1200 ppm

Fans = High

Leachate = Minimum 20 %

Lower leaves may be discoloring and may be removed.

Leach again with 1 or 2 waterings of clear water

## **Week 7**

Light = 12 hours, 12 hours complete darkness

Temp = 27 C day, 18 C

RH = 50 %

PH = 6.0 – 6.2

EC = 1.8 – 2.0

CO2 = 1200 ppm

Leachate = 20 %

By the end of week 7 crystals should be appearing on plants (trichrome), and odour should be increasing.

About ¾ of the large leaves will now be yellowing.



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## Week 8

Light = 12 hours, 12 hours complete darkness

Temp = 27 C day, 18 C

RH = 50 %

PH = 6.0 – 6.2

EC = 1.7 – 1.9

CO2 = 1200 ppm

Leachate = 20 %

Take care to monitor EC and PH of the leachate and adjust as necessary. Remove yellow leaves to improve light penetration. White hairs (pistols) may be starting to turn reddish brown.

## Week 9

Light = 12 hours, 12 hours complete darkness

Temp = 28 C day, 18 C

RH = 40 %

PH = 6.0 - 6.2

EC = 1.6 – 1.8

CO2 = 1200 ppm

Leachate = 20 %

Carefully monitor temps as they will rise. Do not allow them higher than 30 . Most of the white hairs will be turning reddish brown. Continue removing discolored leaves to improve light and air flow.



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## Week 10

Light = 12 hours, 12 hours complete darkness

Temp = 28 C day, 18 C

RH = 40 %

PH = 6.0 – 6.2

EC = 1.5 – 1.6

CO2 = 1000 – 1300 ppm

Leachate = 20 %

Nutrient deficiencies cannot be corrected now.

## Week 11

Light = 12 hours, 12 hours complete darkness

Temp = 28 C day, 18 C

RH = 40 %

PH = 6.0 – 6.2

EC = \*\*\*\*\*Clear water\*\*\*\*\*

CO2 = \*\*\*\*\* off\*\*\*\*\*

Leachate = Minimum 20%

Most of the white hairs will have changed colour. Trichomes are filled with resin and changing from clear to milky (under magnification). When these changes are almost complete harvesting may commence.

Harvesting may vary slightly with different strains.

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