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What is Coir?

Substrates produced utilising the mesocarp or the husk of the coconut is commonly referred to as Coir. Coir is an organic, environmentally friendly, sustainable raw material and a renewable resource of natural origin which can be recycled as well as reused as a soil improver.

During the manufacturing process, the raw materials go through to a stringent quality assurance process ensuring that our substrates meet the right quality requirements for characteristics such as Water holding Capacity, Air-filled Porosity, pH and EC. Our environmentally sustainable production process ensures homogeneous clean and safe products whilst minimising our ecological footprint.

Examples of Crops successfully grown in Coir or Coir Mixtures

- Nursery Crops: Potted plants, Cut flowers,
- Soft fruits: Blueberry, Strawberry, Raspberry crops,
- Vegetable crops, Tomatoes, Cucumbers, Capsicum
- Bulbs
- Orchids
- Medicinal Cannabis

Why Tropicoir?

The unique characteristics of our Coir allows it to be used as a 100% substrate or mixed with other raw materials for a wide range of crops in different production systems.

Tropicoir provides a uniform open structure and high air volume of between 17.5 – 30 %, a unique attribute that allows it to maintain its structure and not shrink or undergo settling. The Air-filled porosity is 9 to 13% (at container capacity) with the water holding capacity between 4.75-8.25 L/Kg (depending on the choice of products).

Our Coir water and air holding characteristics allow it to absorb water easily and release it gradually to the plant. The excessive water drains out fast to provide a favorable air/water ratio resulting in less root rot and efficient irrigation & fertilization. It could be easily rewetted after drying.

In terms of Chemical characteristics, raw Coir contains relatively low levels of micro nutrients, but significant levels of Sodium (Na), potassium (K) and chlorine (Cl) with an EC of about 2mS/cm (1:1.5).

The chemical & physical properties of Coir are variable depending largely on the manufacturing process which regulates washing and physical structure of the raw material making it imperative for Coir to be sourced from a reputable supplier with good manufacturing capabilities and expertise.

P.S Our coir growbags are fully customisable to suit your growing system & crops. Please reach out to the GCP office for customized orders with specific size requirements and quantities.

Visit the GCP substrate catalogue to view the full range.

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GENERAL GUIDE ON COIR SUBSTRATES

Preparation of Tropicoir Growbags

Step 1:

- Water amount of approximately 75% of the growbag volume is needed for expansion.
- Expansion with buffering solution.
- Start with small shots of water (50 ml/dripper).
- Repeat every 15 minutes until all the bags are fully expanded.
- Keep temperature around 20°C.
- Keep the growbags for 48 hours filled with buffer solution

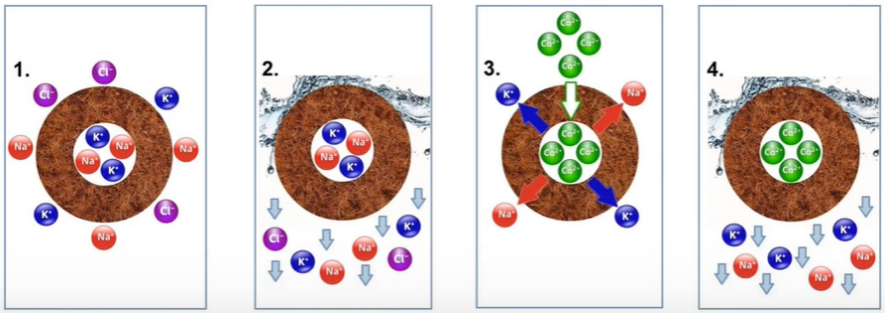
Step 2:

- Flush the growbags with clean water until drain reaches the required EC.
- Use the buffer recipe as the start recipe which must have increased Ca and Mg number (and lower K).
- Keep this for 2 weeks, then change to “normal start recipe”.

Tropicoir recommendation:

We advise using a full recipe of fertiliser with high Ca and Mg levels to carry out the buffering. This would bring the EC down to about 0.3mS/cm (1:1.5).

- Place growbags in the right position with at least two fingers between two bags for optimum expansion and insert the drippers into the growbags.
- Commence irrigation with a buffer recipe. (A full fertiliser recipe with high Mg and Ca is recommended).
- Flush the Coir with clean water until the required EC is reached.
- Start recipe must have increased Ca and Mg extends (and lower K level).
- Keep this for 2 weeks, then change to “normal start recipe”
  [img. Buffering & treating Coir].



[img. Buffering & treating Coir]

Using Tropicoir Growbags for Hydroponic Production Systems

GENERALLY, THERE ARE THREE (3) STATES OF COIR

1. Unwashed Coir:

This is the raw state of the coir which has a higher EC level.

Naturally or unwashed Coir contains high Chloride (Cl^{-1}), Potassium (K^{+}) and Sodium (Na^{+}) levels. Being an organic substrate, it has a negative adsorption complex which is a magnet for positive ions such as Calcium ($Ca2^{+}$) & Magnesium ($Mg2^{+}$).

2. Washed Coir:

Coir is washed using clean water to lower the EC level. Our washing facilities are equipped with state-of-the-art Effluent treatment plants as we are fully committed to sustainability and ethical practices. Washing process leach out the excess Chloride (Cl^{-1}), Sodium (Na^{+}) and Potassium (K^{+}) ions surrounding the coir complex.

3. Buffered Coir:

It is also known as treated Coir as well. The washing process does not completely displace all the Cations present within the Coir complex. The buffering process will remove the K^{+} & Na^{+} present within the complex by displacing or exchanging the positively charged K & Na ions with Calcium or Magnesium.

Buffering is best done by the grower on the farm site. In this way, growers achieve consistent results.

PLEASE NOTE | Buffered coir available in the market is not always consistent in quality due to several reasons. Buffering in GH allows grower to have full control of the process and consistent treatment.

Moreover, Grower’s site buffering helps to reduce ecological footprint in production.

Substrate forms of Tropicoir

Coir Growbags

Choose the grade | customise the bag or choose from our range in stock

Coir Bales

Bricks & Bales available in carton and bulk quantity

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