



Coir Rehydration

Optimising turnout and quality

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A major advantage of coir is the possibility to dry and compress the material and return it to its original volume at a later stage by rehydration. This enables the transport volume and weight to be reduced, making transport efficient. The way of rehydration, the volume of the compressed material and the quality of the rehydration water ultimately determine the price per m³ and the quality of the material.

Drying

During drying, approximately 75% of the material's weight is removed in the form of water. This water is added back during rehydration. The quality of the rehydrated water has an influence on the quality of the ready-to-use material.

Time

Drying is a time consuming process. Forced drying damages the structure of the coir and leads to more fine particles. These fine particles reduce the water holding capacity and the air content of the coir. Sun drying is slow but has the best effect. Where drying is a time consuming process, the reverse process of rehydration needs time as well. Coir needs time to absorb water and fully expand again. Fast or forced rehydration will damage the structure of coir to the same extent as forced drying.

Rehydration

Coir is an organic, elastic product. During rehydration, the material expands. Limiting the ability to expand as well as the transport and processing of the material during rehydration may have a negative effect on the physical structure. The cells are then squashed and destroyed and do not return to their original shape. One option for rehydration is to roughly make an even pile of max. 0,5 - 1 metres high. Ensure that the material can rehydrate freely and is not obstructed by partitions, water or other obstacles.

Spray water from above by means of sprinklers or spray nozzles. 3 - 3.8 m³ water is absorbed per metric tonne of dry material. Make sure that excess water can drain off easily. To avoid wasting water, spray with intervals so that the water has time to be absorbed.

Rehydration time depends on the quantity of material and the capacity of the water sprayer.

Allow the water to rehydrate gently so that the added water can be fully absorbed. Adding too much water or adding it too quickly will also wash the material. This has an influence on the chemical quality and consumes extra water. The effect can be negative, especially when rehydrating our innovative Shakti Amla[®] coir. To obtain the benefits of Shakti Amla[®], water with an adjusted pH-level needs to be used. The water pH should be approx. 5 or at least the same as the required substrate pH after rehydration. For rehydration, also machines are available in the market.





Quality

The quality of the added water has an influence on the quality of the final product.

Water with a high pH and/or a lot of bicarbonate should be acidified to the required pH of the final product, especially for our innovative Shakti Amla® coir.

A high E.C. and high concentrations of (nutritional) elements will end up in the material. These may be main and trace elements but also sodium and chloride, for example.

Harmful organisms, heavy metals, diseases etc. that are in the rehydration water also enter the material. Thus, start with clean water and avoid the use of surface water.

During spraying, iron that is present in the rehydrated water will oxidise and precipitate. This not only gives a discoloration of the spraying unit but also on the top of the material. This may be avoided by removing iron from the rehydration water beforehand. As far as it is known, the discoloration of the top layer has no effect on the quality of the coir.

By rehydrating correctly, the output per metric ton is maximised, no water is lost and the chemical and physical properties remain intact. More output means more volume per Metric Tonne dry material and consequently a lower cost price per m³ with better physical properties.

During cultivation, the fertilisation and irrigation policy must be tuned to the chemical and physical properties of the type of coir used in order to optimally exploit the substrate's positive properties.



DISCLAIMER

The information in this brochure is based on our current knowledge and does not claim to be complete or correct. We reserve the right to make changes. We do not assume any guarantee or liability for successful cultivation, as the use of our products must be adapted to the individual site, storage and cultivation conditions of the respective nursery, which is beyond our knowledge and influence. The information in this brochure cannot replace individual advice. They are neither binding nor part of a consulting or information contract.



Find out more
about our premium
coir raw materials

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we make it grow