

## Growing media as an alternative to peat.

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For some decades, soilless cultures have been strongly raising in Europe in horticulture and market gardening, thanks to a perfect mastery of crop management and the use of appropriate substrates. So, rock wools gradually emerged in horticulture and market gardening, and peat – pure or blended with other materials – in pot cultures and crop nurseries.

The expansion of these materials is related to their undeniable qualities. Without being exhaustive, we could mention harmlessness for plants and users, outstanding agronomical properties (especially important porosity), reliable supply and acceptable costs.

But the social evolution, in strongly industrialized and urban countries, is disturbing the balance. In fact, if the customer still requires an abundance of quality products, other issues, including environment preservation, are emerging. Public authorities, especially on European level, had to take it into account, by developing a more “environmentalist” policy.

The growing media field has been concerned by this « ecological » wave. As a raw material extracted in weak environments, which have strongly decreased in our western countries, peat is directly concerned by laws related to water resources and areas of ecological interest. Many laws and regulations now strictly limit peat extraction in EU countries.

At this time, however, these measures aren't impacting the use of peat as a growing medium, because most of the volumes used come from two big regions covered with peatlands, Ireland and Baltic States. The estimated annual world consumption reaches 158 million m<sup>3</sup>, that is to say 5.2 % of the annual biomass produced by peatlands; but only 30 million m<sup>3</sup> (1% of annual biomass) is used in horticulture. That's why we can't talk about a proper exhaustion of the resource. In fact, issues are mainly dealing with the management of the exploitation in these peatlands, far too intensive, and the main use of the peat (as fuel to produce electricity).

If a total substitution of peat in growing media for horticulture doesn't appear as justified, decreasing used quantities is a recommendable purpose, all the more so since different solutions appeared for substrates producers, firstly including waste valorization.

Often with an organic origin, these materials are getting more and more present on the market, because of public policies of recycling. Without limiting their potential interest, it shall be reminded that agronomical and sanitary requirements must be favoured, because these materials are often very heterogeneous and sometimes from unknown origin.

If they do respect these requirements, plant waste-based composts are a good example of materials recoverable in agriculture, but they are always blended with “noble” materials, for example moss peat. Other interesting ways are currently investigated by producers, as materials with a high percentage of ligneous fibers (stemming from wood, coconut or various fiber plants); but many experiments are still required to accurately define their agronomical characteristics, and improve them.