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Growing media and quality – why peat?

Poor, inferior, good, suitable or outstanding are frequently used adjectives which go hand-in-glove with a subjective designation of the "quality". These attributes mean little, however, if the substrate quality cannot be measured against certain product requirements. For any grower the quality is the condition and suitability of a growing medium with regard to its use. Modern horticulture with computer-controlled irrigation and fertilising programs, potting machines, pricking robots, climate-controlled greenhouses and just-in-time production requires dependable, quality-assured growing media. For the development of a formulation and the production of growing media a large number of chemical, physical, biological and economic characteristics of the constituents must be taken into account.

Producers of growing media and growers run a high risk if constituents with inadequate characteristics are used. In particular, if excessively high percentages of these materials are used in the substrate there is a growth risk. The above mentioned circumstances call for a growing medium constituent or mixture combining as many positive characteristics as possible. Therefore *Sphagnum* peat has been the most important growing medium constituent for decades since it provides the best overall characteristics of any constituent. Nonetheless, the use of other organic and mineral-organic materials is being forced ahead by research and development. For years now considerably more funds and effort have been invested in the testing of alternatives to peat than in peat itself. The usability of a large number of other constituents has already been checked. Most of these materials have no or only slight importance. Some have, however, become established as reliable substrate constituents.

Compost, wood-fibre materials, bark/composted bark and coir pith and coir fibres are the growing medium constituents which have, seen against the background of peat replacement, become established more than others. Besides them, there are also a number of other materials without any notable significance.

Growing media-producing companies will, in the medium and long terms, import more peat than is already the case today. The reason for this is the constantly high demand for peat for use in growing media. The main peat exporting countries are the Baltic States. The demand for growing media in countries with intensive commercial horticulture without their own or with inadequate peat raw material deposits or without commercial production of growing media must be primarily met by means of growing media imports.

For the grower what is absolutely decisive is that the growing medium functions well under his growing conditions. The price plays the second most important role in his decision to purchase. Although they are repeatedly placed in the foreground, other growing media constituents overall play and will continue to play a subordinate role as compared with peat.

Brief info about the interest in, and involvement with the addressed topic for the author

Our company is involved in the production of growing media. I've worked in the area of horticultural peat research and the use of alternatives for many years. As chairman of IPS Commission II, I offer the submission of a paper on "Growing media and quality – why peat? This topic would fit into your topics on "definitions, technical characteristics and usefulness of peat and growing media" and "alternatives to peat use". It would also certainly touch the topic "prospects for the future of growing media...."

It seems as though this congress will be attended mainly by environmentalists (?). I see this platform as a very good one to exchange knowledge on the need for and (wise) use of various growing medium constituents in both the professional and hobby markets.