

Dear Prof. Isermeyer,

The Thünen Institute has recently published a Working Paper titled *“Peat replacement in horticultural growing media: Availability of bio-based alternative materials”*. While it is specified that the evaluations are not final, the paper draws the overall conclusion that sufficient non-peat components would be available to fully replace peat in European growing media production.

Representing the industry that this paper is assessing, Growing Media Europe hereby declares that this assumption is wrong, based on outdated, incomplete data sets and ignores the realities of both the market situation of respective raw materials and the (legally) required quality and safety standards of growing media. These profoundly flawed findings must not serve as a reference to catalyse political decisions if considerable damage to society, economy and the environment is to be avoided. The Working Paper shows substantial shortcomings in several areas:

1. Strong misjudgment of economic and legal availability of non-peat raw materials

The assumptions on the availability of non-peat raw materials are based on data from 2013 (G. Schmilewski, 2017) which are outdated. The market situation for coir, wood and green compost have substantially changed in the last decade, with demands and prices strongly increasing. While competition for these materials with other industry sectors is mentioned as a “potential” limitation, the actual calculations are ignoring the market realities of 2022. The impact of competition for non-peat components is hugely underestimated. On European level, the growing media sector is competing against the paper, furniture and energy sector for wood, while facing fierce competition for coir on global level from the energy sector as well as from the textile, real estate and automotive industry. Future outlooks see these trends to continue.

With regards to green compost, legal restrictions in several European Member States are preventing the installation of new composting plants, often preventing compost from entering growing media production. In Germany the requirements governing the operation of compost and digestion facilities are governed by the regulation known as TA Luft, whose section 5.4.8.5 stipulates minimum distances and to operate in enclosed structures for composting installations that produce more than 3,000 tons of compost annually. TA Luft also defines odor and dust emission limits for composting facilities. Due to legal restrictions, as given in this example, it is clear that availability of bio-based input materials does not always result in their usage.

2. Quality standards for raw bio-based materials in growing media production are almost fully ignored

The authors seem to ignore that – like in other industries - raw materials need to meet certain quality criteria to be suitable and (legally) eligible for the manufacturing of an end-product. Growing media need to fulfill not only agronomic efficiency criteria but are subject to safety controls that prevent the spreading of plant diseases, food scandals, food waste and poor yields. Only a safe, fit-for-purpose growing media can be sustainable. Exemplary for wood and coir we would like to highlight this.

Manufacturers of wood fibers have to adhere to specifications for the wood chips they use. Such specifications would cover the wood type, age, form, percentage of over- and undersized chips, moisture content, chemical additives and the bark portion contained on the chips. N-immobilization generally limits the use of wood chips from silver fir, Scots pine and common spruce. Furthermore, wood raw material must be FSC or PEFC certified.

Coir from freshly harvested coconuts contains phytotoxic substances. This requires a storage (aging) process which takes several months. The aging process also narrows the wide C/N ratio. Due to the location where the palm trees grew or due to washing of the coconuts in salty water, many coir origins have a high content in potassium, sodium and chloride. This usually requires a buffering process of the coir with e. g. calcium nitrate to avoid yield losses.

Please note that all processes from harvest and transport to treatments for improved raw material quality and processing have a strong impact on the environmental footprint of any bulky component! We question why there is no reference to the relevant QUANTIS publication of 2012.

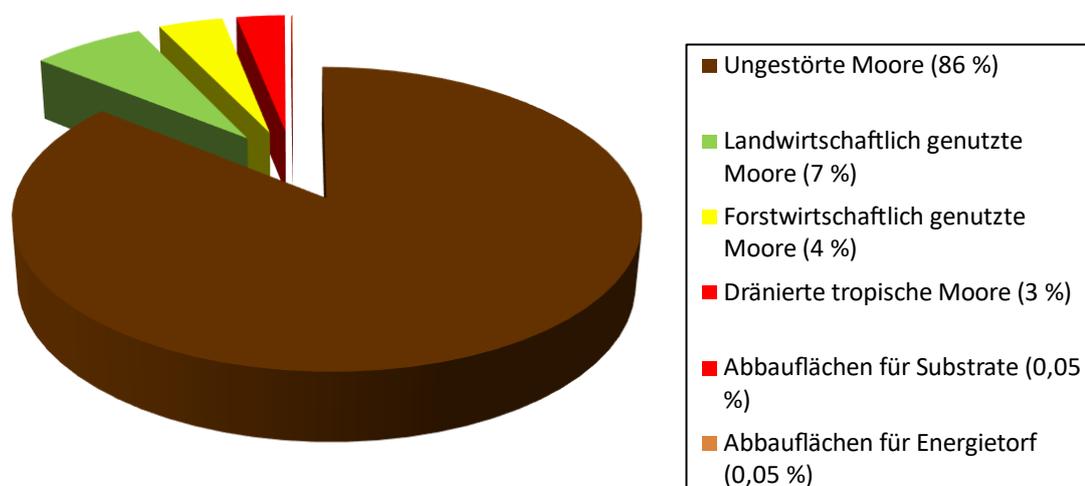
3. Wrong data on global peatland area

Quoting Parish 2008 (first published by Maltby and Proctor in 1996!), the authors state that 3 % of the land surface of the world is covered by peat, equaling about 4 million km². More recent findings by Wu et al. (2017) show that global peatland distribution extends over 4.42 million km², which is about 10 % more than the older figure, quoted in the working paper.

According to a publication of Altman from 2008 (“Socio-economic impact of the peat and growing media industry on horticulture in the EU”), only 2.000 km² of these 4 million km² are used for the production of horticultural peat. This translates into a share of 0.05 % of global peatlands being under extraction for horticultural peat.

Out of these 2.000 km² of peatlands globally used for horticultural peat production, approximately 1.200 km² are used by the peat industry of the European Union (0.03 % of global peatlands). This equals 0.4 % of the peatlands found in the European Union (EPAGMA Communication 2007). After the peat extraction, the cutover bogs are restored in a way that enables them to sequester carbon and hence turn into a net carbon sink again.

Abb. 55: Moornutzung weltweit - alle Moortypen (IPS 2010)



4. “Wassermaß” is not “EN 12580”

“Wassermaß” does not equal “EN 12580” and they result in different bulk densities, leading to different figures. However, these terms are used without differentiation in the Working Paper. Here an example: By loading a truck to its water level capacity (Wassermaß), a certain densification is exerted by the weight of the material. The resulting bulk density does not correspond to the bulk density and quantity (volume) obtained in accordance with EN 12580 determined to use a standardized 20-liter cylinder. The bulk density acc. to “Wassermaß” would be higher and the calculated volume lower.

5. Peat is not fossil

Repeating a common misinformation, the paper defines peat as fossil (leading to fossil emissions). Peat is certainly not a fossil because it has not gone through the processes of fossilisation, namely, heat, pressure, change of state to become rock or stone. Peat *“isn't technically labelled as a fossil fuel in the eyes of the IPCC”* (www.greenmatters.com/p/what-is-peat). A fossil material is any preserved remains, or trace of any once-living thing from a prior geological age. The Pleistocene was the most recent past geological age which ended about 11,000 years ago. First existing peatlands started to develop after that time and are postglacial, meaning they developed during the current Holocene. In periods of millions of years and in the course of the carbonization process, dead plant material (e. g. peat) can form into lignite, hard coal, anthracite and graphite (Römpp Lexikon Chemie 1997) – which are fossil.

As the Thünen Institute stated that the Working Paper is not a final version, we hereby invite the authors to discuss the possibilities of drafting a report that reflects the actual situation of the European growing media market. If feasible, such a report could include the data we are currently collecting from our members.

Growing Media Europe and Gerald Schmilewski have been in exchange with Olivier Hirschler regarding the working paper on several occasions, the last being a video call held on 5 May 2022.

Growing Media Europe and the International Peatland Society (IPS) are ready and willing to become involved in future discussions on and improvements to the Thünen Institute working paper. We are eager to reveal true facts about peat extraction and growing media production looking towards net zero emissions by 2050.

We hope to hear from you soon.

Best regards,



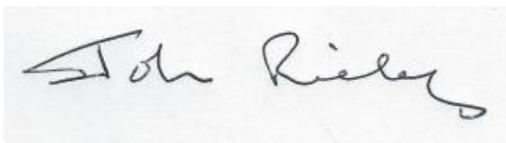
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