

Keynote Norbert Siebels (Extended abstracts)

CHALLENGES AND PROSPECTS FOR THE PEAT AND GROWING MEDIA
INDUSTRY – LEADING THE WAY TO RESPONSIBLE RESOURCE MANAGEMENT

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SUMMARY

Peatlands are resources for land use and peat use. Formerly they were considered to be wastelands that governments wanted developed for settlements and agriculture. Today the values and functions of peatlands are manifold and therefore in the focus of many stakeholders. One-sided, maybe even prejudiced approaches belong to the past. Only multilateral discussions and holistic approaches can lead the way to the balanced and wise use of natural resources which people depend on. Sustainable business development for our sector can only be achieved by ‘promoting wise use of peatlands by safeguarding their environmental, social and economic functions and respecting their local, regional and global values’. This is the vision of the International Peat Society and all organizations involved in developing the Strategy for Responsible Peatland Management. The peat and growing media industry clearly supports this strategy.

KEYWORDS: sustainable development, industry peat resources, EU regulations, peat certification

INTRODUCTION

In AD 77 Pliny the Elder wrote in *Naturalis historia* XVI 1, 2-4 the following about the Chauks, a tribe of northern Germany “And after grasping the mud with their hands and drying it more in the wind than by the sun, they warmed their food and their limbs which had gone numb by the north wind.” Mud must be translated with peat, documenting that peat was already used for cooking and heating 2000 years ago in areas that lacked other fuels. Today peatlands and peat are used as a raw material for various purposes. In Europe the main use of peat is for fuel and heating (50 %), followed by usage as a constituent of growing media (42 %), soil improvers (5 %), and other uses (3 %) i.e. for animal bedding, balneological and medical uses, the production of activated carbon and even Scotch Whiskey (Altmann, 2008). On the other hand *in situ*-uses of peat (peatlands) include agriculture and forestry; these uses outweigh industrial peat extraction twentyfold by area in some countries (e.g. Germany) and up to a thousandfold on a worldwide scale. Nevertheless, peat and peat extraction is in the crossfire of criticism in a number of countries. As surprisingly it might be to some, the need for horticultural peat is not significantly decreasing and governmental strategies in some countries support the extraction of indigenous peat in their national energy mix.

Two thousand years ago no one worried about habitat destruction or CO₂- sequestration. Today climate change is everyone’s matter, being conscious of it or not. The peat industry

and all other stakeholders in the peat arena are well aware of their economic, environmental and social responsibilities. Interest groups with whatever attitude have their priorities, but it must be in the interest of all to reasonably balance these.

INDUSTRY CHALLENGES AND PROSPECTS

Every day, our industry is challenged by environmental, economic and societal issues and it is our obligation to address these issues. The European Peat and Growing Media Association (EPAGMA), its members as well as other industry stakeholders fully acknowledge their responsibilities. We strive to take the lead in evaluating and continuously improving responsible peatland management in order to sustain peat production for growing media, energy generation and other purposes, resulting in higher environmental standards and sustainable industrial policies. In this regard, EPAGMA is committed to promoting the unique properties of peat as the key growing medium constituent in horticultural production and the responsible use of peat as a local energy source. Against this background, the industry as a whole supports the implementation of the “Strategy for Responsible Peatland Management” (IPS, 2010).

ACCOMPLISHMENTS PUT INTO PERSPECTIVE

Since its founding in 2004 EPAGMA has accomplished a number of very significant goals some of which have resulted in the publication of industry relevant documents:

- Development and implementation of international labelling criteria based on EN standards to improve product transparency
- Study on ‘Legislation and permit policies regulating the use of horticultural and energy peat resources and peat-based products in the EU (Gallagher, 2008)
- Study on the ‘Socio-economic impact of the peat and growing media industry on horticulture in the EU (Altmann, 2008)
- Implementation of a ‘Code of Practice for responsible peatland management’ (EPAGMA, 2009)
- Report ‘Comparative life cycle assessment of horticultural growing media based on peat and other growing media constituents’ (Quantis, 2012)

Peat energy generation

The peat industry is a key actor in the efforts to secure the supply of energy in some regions in Europe. Finland, Ireland, Sweden and the Baltic States are the main peat energy generating countries in the EU. Peat plays an important role in a diversified energy system in these countries. Lithuania, for example, is increasing energy supply through peat combustion. On the other hand, for 2012 the Lithuanian Government has implemented a threefold increase of the base fee for peat extraction from 0.24 € to 0.76 € per m³ peat, causing reduction in peat production, company investments partly to cease and staff to be reduced (Morkunaite and Veitas, 2011):. This decision was virtually taken overnight. Such drastic measures hinder long term company planning and endanger social welfare in the rural areas of peat extraction.

THE PEAT DEBATE AND RESULTING CHALLENGES CONTINUE

The European peat and growing media industry is an important contributor to the sustainability of modern horticulture. It represents an industry with €1.3 billion annual turnover, accounting for 11.000 jobs across the EU (Altmann, 2008).

The debate on reducing the amount of peat use for horticultural purposes has been going on in Germany for more than 30 years. The same debate has long reached other countries as well, with similar reasoning. Two very intensive current initiatives have resulted in two absolutely different governmental objectives in the UK on the one hand and the Netherlands on the other.

The UK initiative – wanting to phase out peat

Although representatives of the UK Department for Environment, Food and Rural Affairs (Defra) state that they have introduced a voluntary phase out of peat use in all markets in England, the governmental so-called ‘Environment White Paper’ (HM Government, 2011) clearly states that the UK Government has adopted a policy to stop peat harvesting in England and to cease the use of peat in the amateur market by 2020 and in professional horticulture by 2030. Phasing out peat in England already has somewhat of a tradition, considering an earlier UK attempt to ‘peater-out’ peat by 90 % by 2010 which did not happen. The new phase-out approach bears the same one-sided and uncomprehending reasoning as the earlier one: habitat destruction and loss of biodiversity and, in addition the CO₂-flux due to peat extraction. It is most reasonable that the “Vice-president of the EU Commission, Antonio Tajani, has delivered a blow to campaigners against peat use by formally admitting that legally enforcing the proposed peat ban in England is incompatible with EU law” (Appleby, 2011).

Non-interconnecting the environmental, economic and social aspects is the mistake Defra has made. Such an approach is bound to fail, not only because of legal aspects, but also because stakeholders other than environmentalists have not really been included in the decision-making. I think this mistake has now been recognized by the Defra Task Force, a group of experts asked to explore how to overcome barriers to further reducing peat use in horticulture. The barriers are manifold and can be summarized by referring to the outstanding physical, chemical and biological properties of peat as well as its availability. The Defra approach cannot be supported by the growing media industry as it will not secure its sustainable development. Furthermore, if implemented, it will jeopardize most segments of the horticulture industry in England and also related industries.

The Dutch Biodiversity Policy Plan – securing the peat supply chain

Within its Biodiversity Plan 2008-2011 the Dutch Government has worked on agreements with selected Dutch trade sectors on enhancing sustainability in supply chains. Peat supply is one of these sectors. The involved stakeholders including NGOs and the growing media producing industry acknowledge the need for peat to sustain Dutch horticulture (Bos et al., 2011). Following the IPS vision for responsible peatland management (IPS, 2010) by ‘promoting the wise use of peatlands through safeguarding their environmental, social and economic functions and respecting their local, regional and global values’ is also a wise way to secure the sustainable development of the peat and growing media industry; it is a challenge but also a prospect for industry. Together all involved stakeholders are formulating principles, criteria and indicators that shall constitute the requirements for being granted a certificate for responsibly produced peat within a new certification system. Test certification

runs are scheduled for this year and the final certification system shall be finalized in 2013. EPAGMA and the industry in general support this initiative not just idealistically but pro-actively by assisting in the development of certification standards based on the IPS ‘Strategy for Responsible Peatland Management’ and the EPAGMA ‘Code of Practice for Responsible Peatland Management’ (EPAGMA, 2009).

All growing media constituents have an environmental impact

Growing media producers primarily consider the characteristics and availability of constituents when formulating mixes. Peat-based growing media are valued for their excellent performance. Nevertheless, they are being attacked because of their environmental footprint. Many environmental stakeholders demand the replacement of peat by using other materials not knowing how other materials perform and without knowledge of the environmental footprint of these other materials. But what are the environmental impacts of constituents other than peat?

EPAGMA commissioned Quantis – an environmental consultancy – to undertake a cradle-to-grave Life Cycle Assessment (LCA) on growing media and constituents thereof. The purpose of the study is to provide a better understanding of the environmental impact of the growing media industry. Product performance, commercial and social impacts are not taken into account in this study. The constituents studied are strongly decomposed peat, weakly to moderately decomposed peat, bark, coir pith, green compost, mineral wool, perlite, rice hulls and wood fibres. In order to meet ISO 14040 and ISO 14044 requirements for comparative assertion defined growing media for 5 different applications were chosen. The impact categories used in the study to measure the outcomes are: ‘climate change’, ‘ecosystem quality’, ‘resources’ and ‘human health’. The key results are:

- All growing media constituents and, therefore, all mixes have an environmental impact.
- No one constituent is best on all LCA impact categories.
- Transport plays a dominating role during the distribution phase and for many constituents during the production/mixing phase.
- Harvesting (black peat, white peat, coir pith), processing (mineral wool, perlite) and decomposition (black peat, white peat, green compost) also contribute significantly to some impact categories.
- Media with a high percentage of peat show a higher impact in relation to ‘climate change’ and ‘resources’.
- Mineral wool and media with a high percentage of green compost have the highest impact on ‘human health’.
- Media containing a large share of coir pith have the highest impact on ‘ecosystem quality’.

As an example Fig. 1 shows the results for defined growing media for the hobby market, representing multi-purpose mixes. The industry appreciates the study results and asks other stakeholders to consider them as well. Stakeholders must also consider the performance and availability of materials when demanding the reduction or even the ban of peat.

EU Regulation on growing media – challenging national regulations

Horticulture throughout the Community is heavily dependent on the availability of supplies of growing media for the propagation and production of edible and ornamental plants. Every year, the production value of cut flowers, nurseries and vegetables totals more than 60 billion

euro. There is extensive trade within the Community to supply those Member States lacking indigenous sources of growing media constituents and/or growing media production.

The European market is however characterized by varying rules in all EU Member States. In each Member State, growing media must comply with certain technical characteristics laid down by mandatory national provisions. These provisions usually concern the composition and definition of growing media types, the designation of these types, their identification and packaging. Growing media producers have also to comply with laws of other EU Member States into which they export. As different information on the label is required in each Member State, different packages have to be created, increasing costs and administration. Alternatively, packages would have to contain a very high amount of information which could confuse the consumer.

An additional challenge creating non-transparency is the continuous changing of national laws across the European Union. This requires the producers to regularly review and change their packages, which also leads to extra costs and continuous legislative monitoring in different countries.

Following the results of an impact assessment commissioned by the EU (Spaey et al., 2011) and the strong support by national governments and various associations (i.e. EPAGMA) to drive this issue forward and to promote the adoption of a common European legislation on growing media which would facilitate access to the whole European market for growing media producers, the EU Fertilisers Working Group is currently engaged in creating harmonized EU legislation on fertilisers and fertiliser related product groups. The tentative title of an EU Regulation is 'EU regulation on Fertilisers, Liming Materials, Soil Improvers, Growing Media and Biostimulants'. This engagement by the industry and its allies can result in common definitions and requirements. As the norm we require product labelling to be based on European Standards developed by CEN TC 223 to ensure transparency.

CONCLUSIONS: SUSTAINABLE MANAGEMENT OF PEATLANDS, SUSTAINABLE DEVELOPMENT OF THE INDUSTRY

In their often quoted book Joosten and Clarke (2002) state that "Wise use of peatlands can be described as the uses of peatlands for which reasonable people now and in the future will not attribute blame". Can the peat industry be blamed for providing a raw material to the growing media sector, knowing that peat is unmatched by other materials in quality and availability? Can the peat energy sector be blamed for using peat to improve its energy mix and energy efficacy when governments set such goals? Can the peat industry be blamed for extracting peat knowing that it is *only* a slowly renewable resource and not a renewable resource as defined by regulators? I don't think so if we accept the words of Prof. Jean-Pierre Revéret (Quebec symposium, 2011) who argued: "The resource does not have to be sustainable for the activity to be qualified as sustainable, the key lies in good management practices" which to my understanding would include 1) balanced consideration of the environment before, during and after extraction, 2) deciding the most appropriate after-use option, 3) relating with local people and society and 4) wise use of the end product.

In principle the key environmental extraction issues are fixed in the most relevant EU Directives for the peat industry which include the:

- Environment Impact Assessment (EIA) Directive (Council Directive 85/337/EEC, 1985, incl. its 1997 amendment)
- Habitats Directive (Council Directive 92/43/EC, 1992)
- Birds Directive (Council Directive 79/409/EEC, 1979)
- Integrated Pollution Prevention and Control (IPPC) Directive (Council Directive 96/61/EC, 1996)
- Water Framework Directive (Directive 2000/60/EC of the European Parliament and of the Council, 2000)

Peat is a renewable natural resource, but on a time scale that is not in harmony with the duration of its extraction. Wood and other renewables are useful sources to replace fossil fuels but their efficacy is improved when using peat. This is part of the strategy of a number of European companies generating energy from peat.

The peat and growing media industry is still striving to find *the* alternative material – without success. Nonetheless, numerous organic and inorganic constituents are being used sometimes as the sole ingredient but mostly in combination with peat as the carrier material to dilute disadvantageous properties of other materials. Often they are admixed to peat to improve the properties of the peat-mix or to reduce the amounts of liming materials or fertilizers that would otherwise be needed. This too contributes to sustainability of the industry. In many countries these developments have been ongoing for years, however with drawbacks in recent years, as materials i.e. bark and the coarse organic fraction of green waste are being diverted to use in energy generation where they have a higher monetary value.

In the foreseeable future there will be no constituent that could replace horticultural peat as such. The industry therefore depends on peat resources. These are not available in all countries with a growing media industry e.g. the Netherlands and Italy, the second and third largest growing media producing countries in Europe next to Germany. Even Germany with a strong tradition in peat extraction is becoming more and more dependent on resources in the Baltic States and elsewhere. But how can this comparatively small industry and the large horticulture industry survive if peat-based products are not accepted? This is the key challenge to the peat industry and is likely to become the same for the horticulture industry. I am sure that those peat enterprises engaged in sustaining their businesses will thrive and prosper; those not willing to face the challenges here outlined are destined to fail. The phrase quoted below I see as a stimulus to the industry to take concerted action in a balanced manner:

“Come gather round people wherever you roam
And admit that the waters around you have grown
And accept it that soon you'll be drenched to the bone
If your time to you is worth saving
Then you'd better start swimming or you'll sink like a stone
For the times, they are a changing”

(Bob Dylan)

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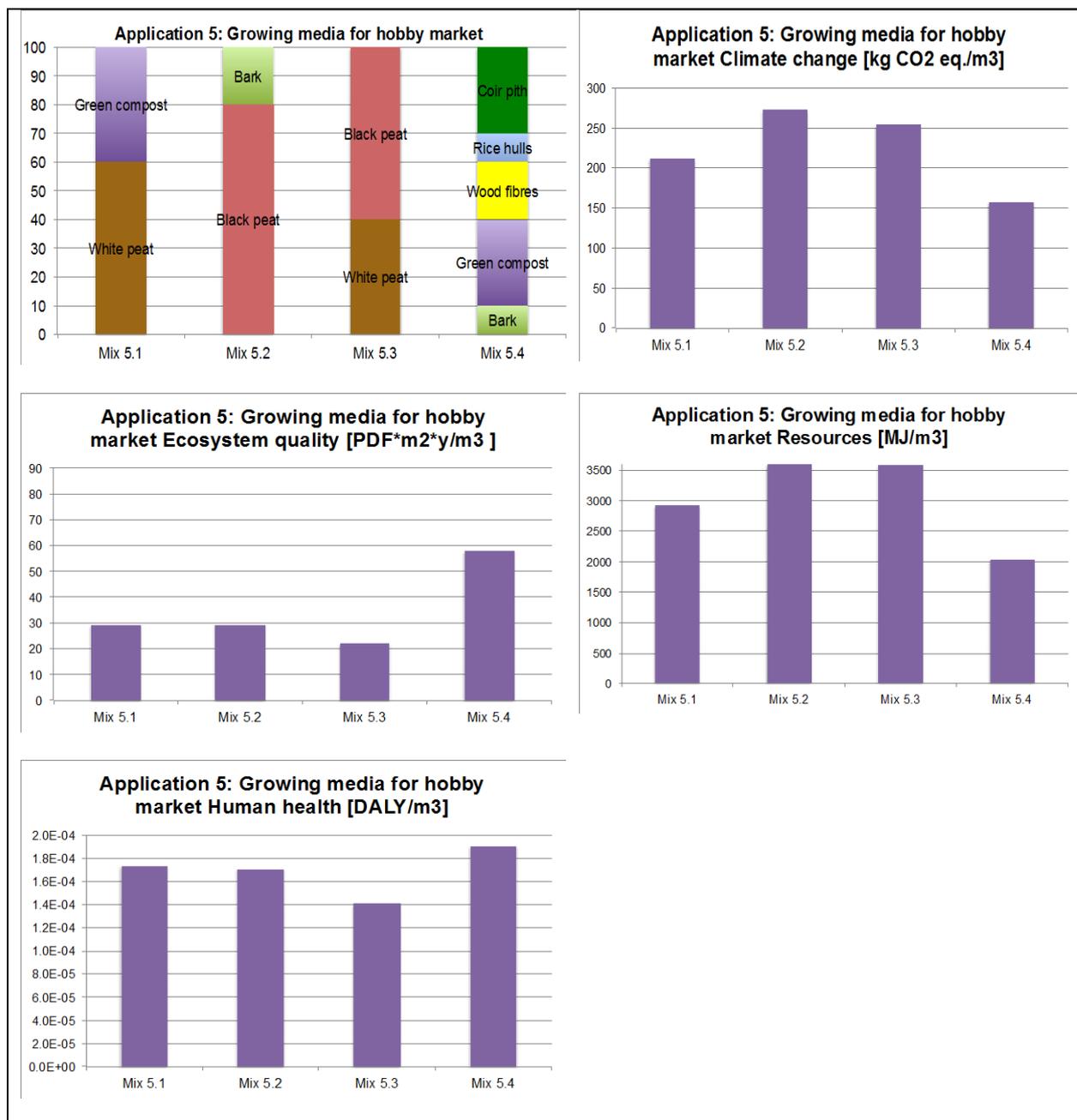


Figure 1: Results for growing media for the hobby market, representing a multi-purpose mixes – application 5 in the LCA study (Quantis, 2012). PDF = Potentially Disappeared Fraction of species; DALY = Disability Adjusted Life Years.