Growing media monitor

Trends in the composition of UK growing media supplied 2011 to 2019

GROWING MEDIA association

Department for Environment Food & Rural Affairs

AHDB

HTA

Introduction

This report provides the results of the 2020 joint Defra, AHDB, GMA and HTA growing media monitoring study. It takes the available data in the time series up to 2019 from 2011.

The study reviews the make up of growing media sold by manufacturers to the UK's retail, professional use and export sectors. The study measures and tracks the proportion and volume of ingredients used in growing media over time.

The study, funded by the Growing Media Association (GMA), Horticultural Trades Association (HTA), the Department for Environment, Food and Rural Affairs (Defra), and the Agriculture and Horticulture Development Board (AHDB), forms part of the work undertaken in the UK to maximise the sustainability of growing media. This includes support for research and development into peat-free and reduced-peat mixes funded by the AHDB within CP 138 'Transition towards responsibly sourced growing media in UK horticulture' which culminated in a model to predict the performance of raw materials and blends.

Growing Media manufacturers have also developed and are in the process of launching a Responsible Sourcing Calculator with the support of Defra. The calculator assesses the sustainability of different ingredients in growing media on a range of criteria, helping the industry assess the overall footprint of its product on the environment as opposed to taking a narrow focus on any particular ingredient.

UK growing media manufacturers may appear small in the context of the UK's economy; each year UK consumers spend between £400m and £450m on growing media – around 0.1% or one pound in every thousand of UK retail spending. In spite of this the growing media industry has a major impact on the UK's GDP, employment and natural capital.

Research published by Oxford Economics highlights that the UK's horticulture and landscaping industry contributes £24 billion to the UK's GDP and supports (directly or indirectly) around 1 in 62 jobs in the UK economy.

Much of this economic benefit is 'pulled through' the economy by plants. The £1.5 billion or so of retail sales of plants (plus the billions more spent on plant care products, containers, and other ranges to support plants) rely at source on the growing media used by commercial plant growers to produce their crops. The plants and displays in our parks and gardens which contribute £2.9 billion to the UK's GDP through tourism rely on high performing growing media.

Access for UK growers to good quality growing media is essential in maintaining competitiveness against overseas suppliers to the UK horticulture market. This report paints a picture of the changing use of raw materials on which the industry relies to deliver these benefits to the UK's economy and environment, and provides a brief discussion of some of the trends and market forces affecting the reported numbers.

Approach

The sample, method and approach have been designed to provide a robust assessment of the composition of growing media sold to UK markets since 2011.

Research objectives

The objectives of the research study are:

> To measure and track over time the volume of growing media supplied by growing media manufacturers for retail and to professional customers, and for export

> To measure and track over time the composition of this growing media in terms of the ingredients used

> To provide a short explanatory commentary on the data and trends that affect the data

To validate the volume data supplied, HTA compares and reconciles the volume data with estimates of consumer spending on growing media. This allows a notional retail price for a 'statistically typical' 50 litre bag of compost to be calculated. In 2018 and 2019 respectively the results of this analysis were £7.22 and £7.14 (inc. VAT) subject to margins of error typical for sample consumer surveys. Taking into account that such a 'statistically typical' 50 litre bag of growing media would be made up of around 70% multipurpose product and 30% premium/specialist ranges with far higher prices per litre, this is a credible value given typical retail prices and suggests the sample for the study is likely to provide a good picture of the market.

Method and sample

For around twenty years the growing media industry has collated data on the use of ingredients in its product. In 2012 a new project and method was developed with funding from the industry, Defra and the AHDB. This project ran to 2016, and provided data from 2011 to 2015. The project was re-commissioned in 2018 providing comparable data from 2011 to 2015, and 2018 to 2019

To identify an appropriate sample for the research, the GMA conducted an audit of supply to the UK market based on their collective market knowledge and competitive intelligence. All companies so identified were approached to take part in the research, with most taking part. Over nearly a decade the market landscape has changed through acquisitions and mergers, but on the whole there have been few drop-outs or refusals to participate. Appendix 1 details businesses which submitted data for the 2018 and 2019 waves of this research and sampling considerations.

The data is collected by an independent consultant Paul Waller Consulting (PWC), and is provided on a confidential and anonymous basis. Participating companies provide a completed spreadsheet template to PWC detailing the volume of different growing media components that they used in their UK sales.

On receipt of the data, PWC checks submissions for anomalies and clarifies these with participating companies, and PWC's work is then audited to check for errors or anomalies. Company level data is not shared with either Defra, the AHDB, HTA or the GMA. Each participating company in the study is provided with an output which shows their own business' performance relative to the average position for the industry.

Findings

The study provides detail separately on growing media for use by professional customers (e.g. commercial growers) and for retail (e.g. that sold to the general public). Full data for this report is on www.growingmedia.co.uk or email media.office@hta.org.uk

The retail sector

This study highlights three notable trends in the market; a continuing shift towards multi-purpose products, a substantial fall in the proportion of overall volume accounted for by peat-free products (although the overall effect of this on peat use is offset by a fall in peat use in products that use peat), and an increase in the volume accounted for by soil improvers. Charts one and two (overleaf) show the trends in volume (expressed in cubic metres) and proportions accounted for different products. The fall in volume and percentage of peat-free products is highlighted on the charts.

We can see the general trend towards multi-purpose mixes at the expense of specific mixes, and between 2015 and 2019 at the expense of peat-free products specifically. Industry consolidation in 2016 (and a subsequent rationalisation of peat-free brands) is the likely cause of the fall in peat-free product since 2015. There has also been an increase in the proportion of soil improvers accounted for in the study since 2015. As soil improvers are only included in the study where they include peat, this has implications for tracking any underlying like-for-like trends in peat and other components in other growing media. Which are discussed later in this report.

Chart 1 Overall volume (cubic metres) of growing media for the UK retail sector 2011 to 2019

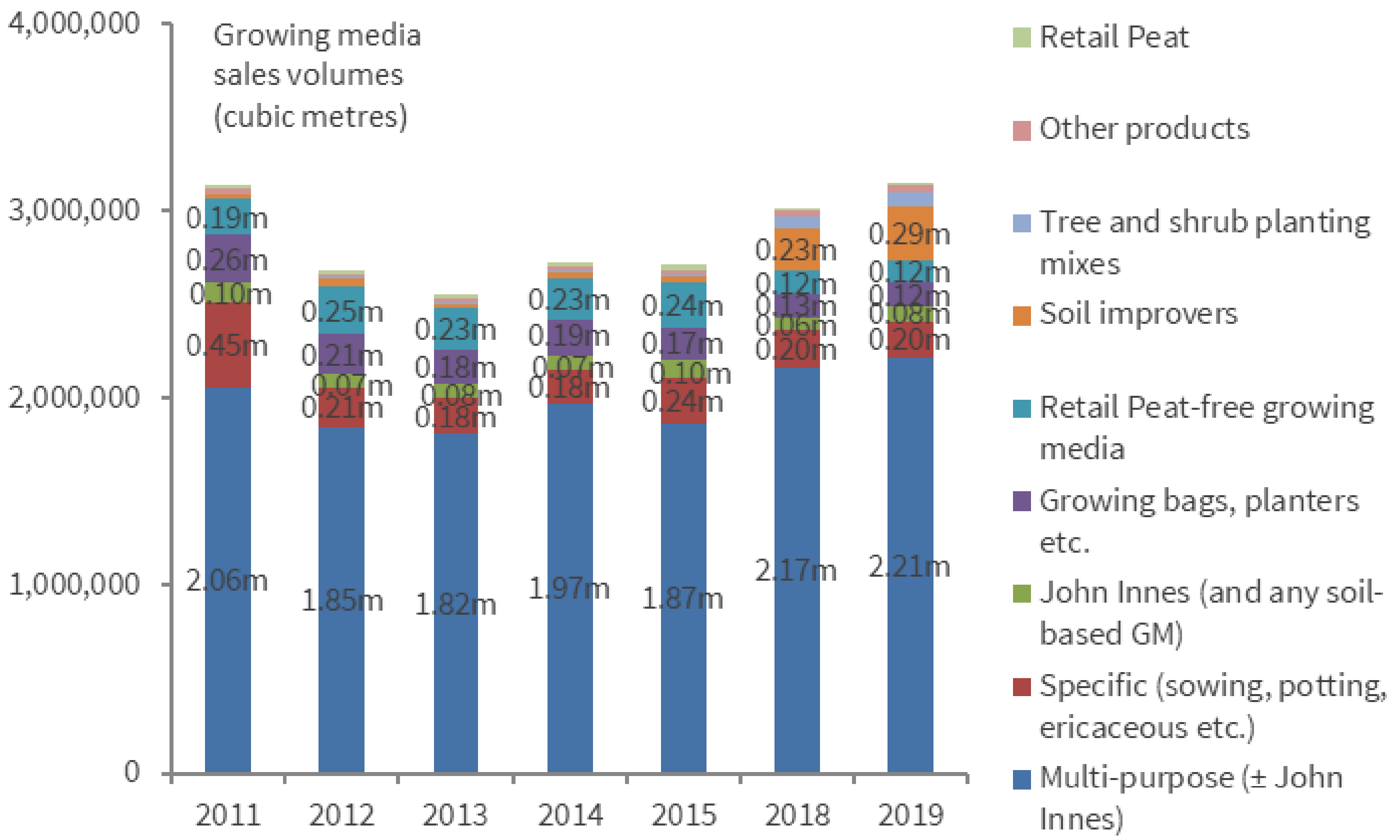
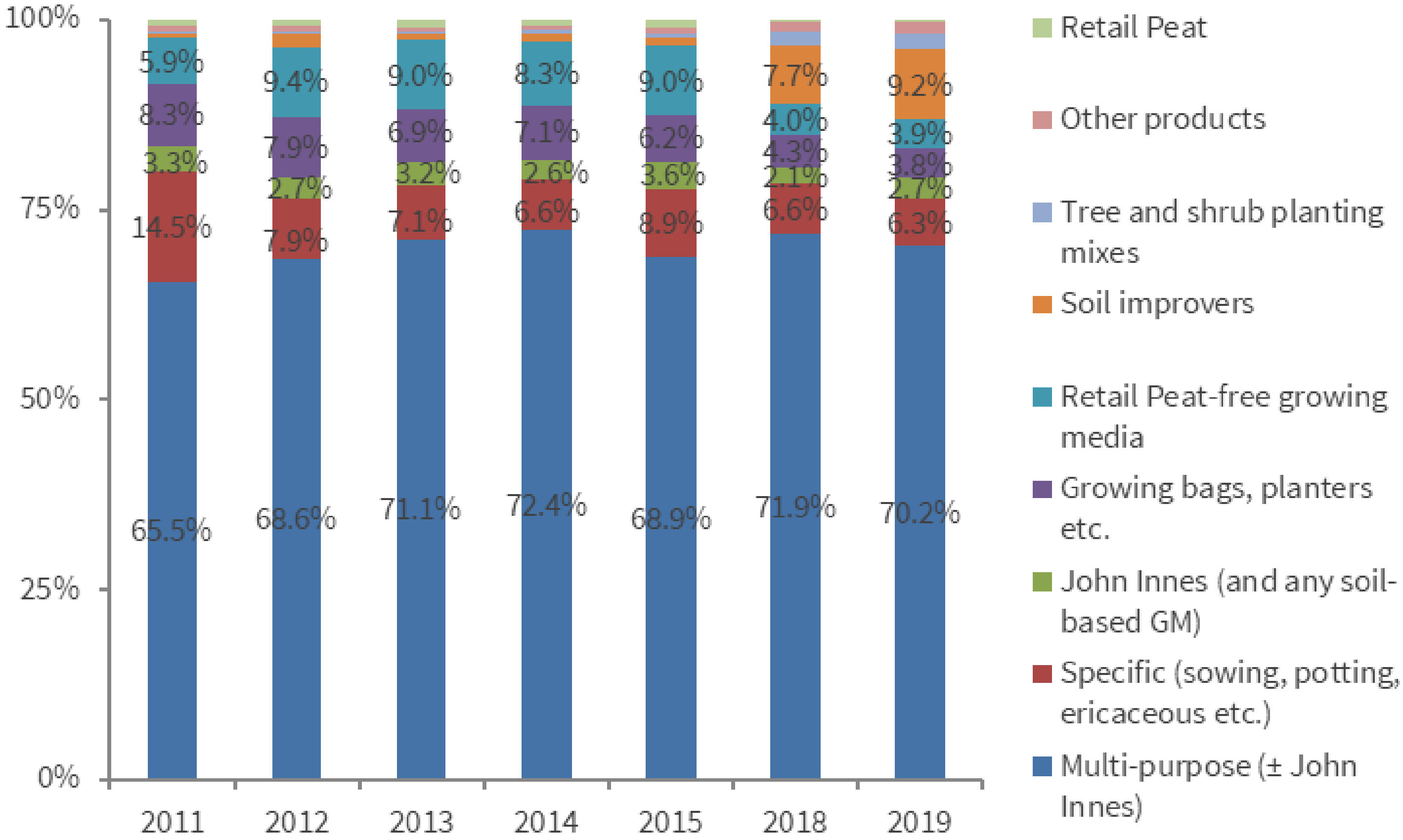


Chart 2 Overall volume (%) of growing media for the UK retail sector 2011 to 2019



The data on the composition of growing media supplied for retail (chart 3) shows that the proportion of volume accounted for by peat has fallen since 2015, with 41.5% of volume comprised of peat in 2019 (chart 4). Peat use appears to have been replaced predominantly by wood fibre and bark materials, whereas the proportion of volume accounted for by composted green waste (green compost) has fallen consistently since 2011 (chart 3).

The data since 2015 shows a pronounced increase in the volume and proportion of 'other' materials used in growing media (charts 3 & 4). Further investigation shows that this correlates closely with an increase in the volume of soil improver captured in the study (chart 2). This raises the question of whether the falling proportion of peat in the study is a function of a changing product mix rather than reflecting industry moves away from the use of peat.

To determine whether or not this was the case, further analysis on trends in component use was conducted based on volume excluding soil improvers.

Chart 5 (overleaf) shows that even with soil improver product excluded from the analysis there is still a pattern of movement away from peat and towards bark and wood-based components. It is still notable that in 2018 and 2019 the proportion of volume accounted for by 'other' components was far higher than between 2011 and 2015. PWC was asked to recontact the participating companies who accounted for this volume to check its accuracy. The reporting companies confirmed to PWC that the data submitted is accurate, but did not want to specify the material due to concerns over commercial sensitivity.

Chart 3 Volume (cubic metres) of ingredients used in growing media for UK retail

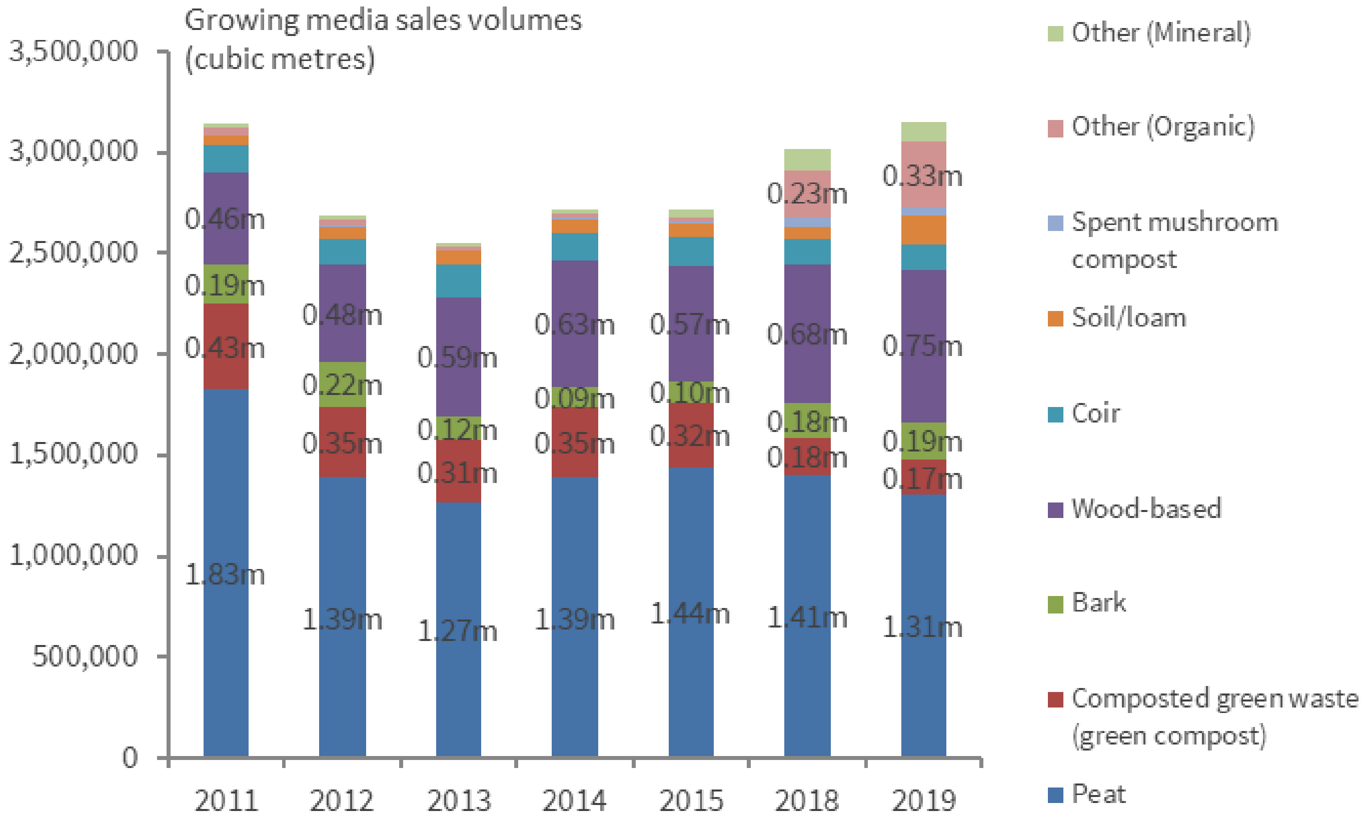


Chart 4 Proportion of volume of growing media for retail accounted for by different ingredients

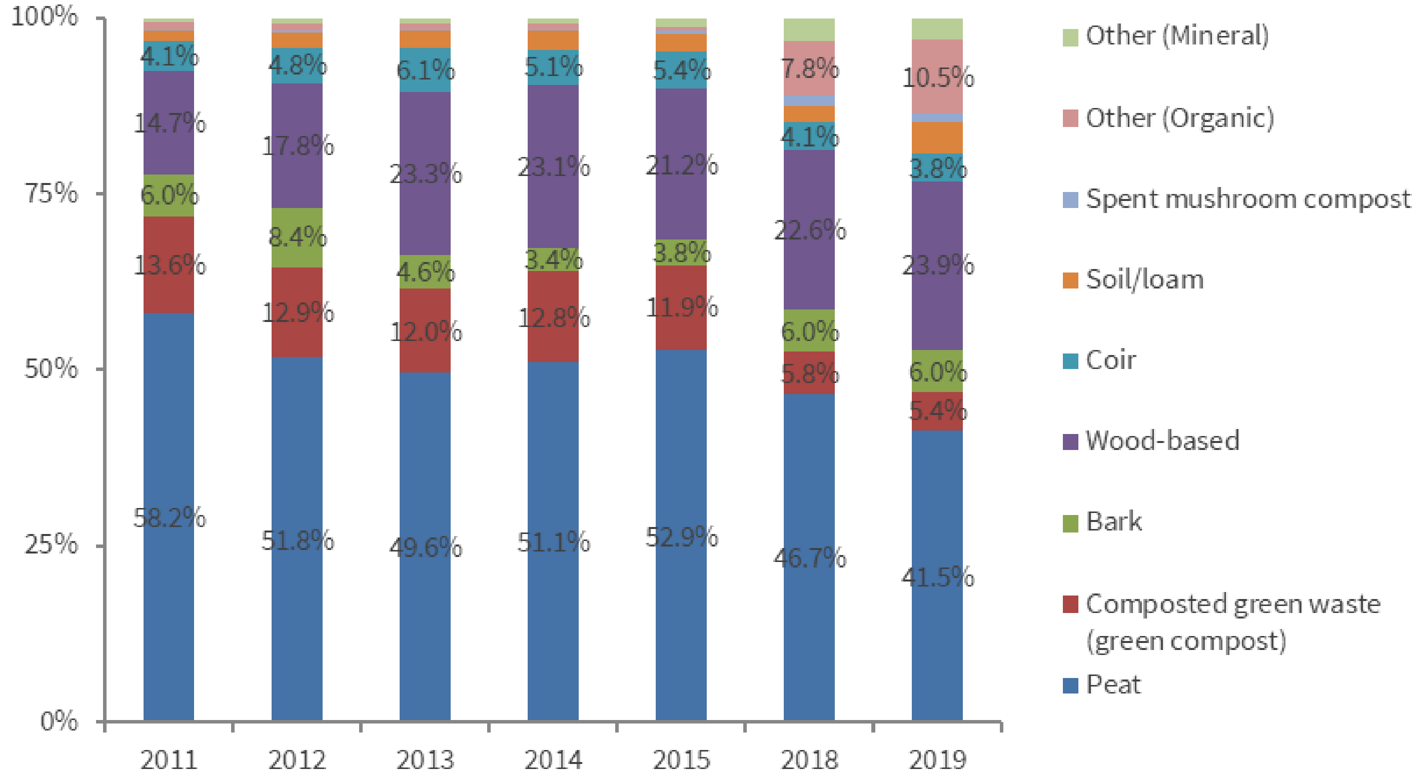
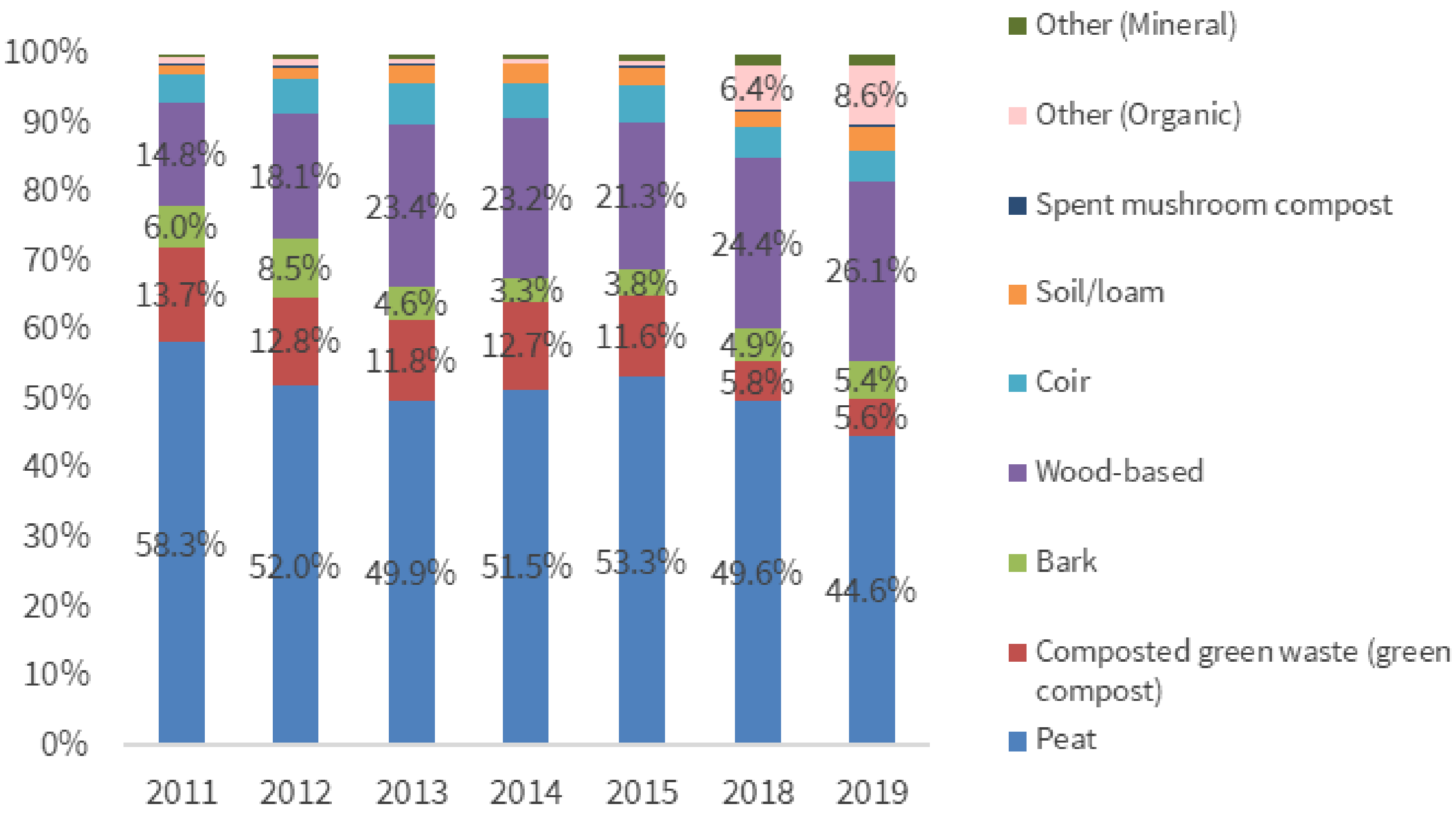


Chart 5: proportion of retail growing media excluding soil improvers made up of different components 2011 to 2019



The professional sector

The most noticeable trend in professional growing media in recent years has been the increase in volumes supplied since 2013. This is in line with the reported increase in the value of production of UK ornamentals over this period[1]. Volumes of peat have remained more or less similar since 2014, whilst the volume of coir and to a lesser extent wood-based materials have increased.

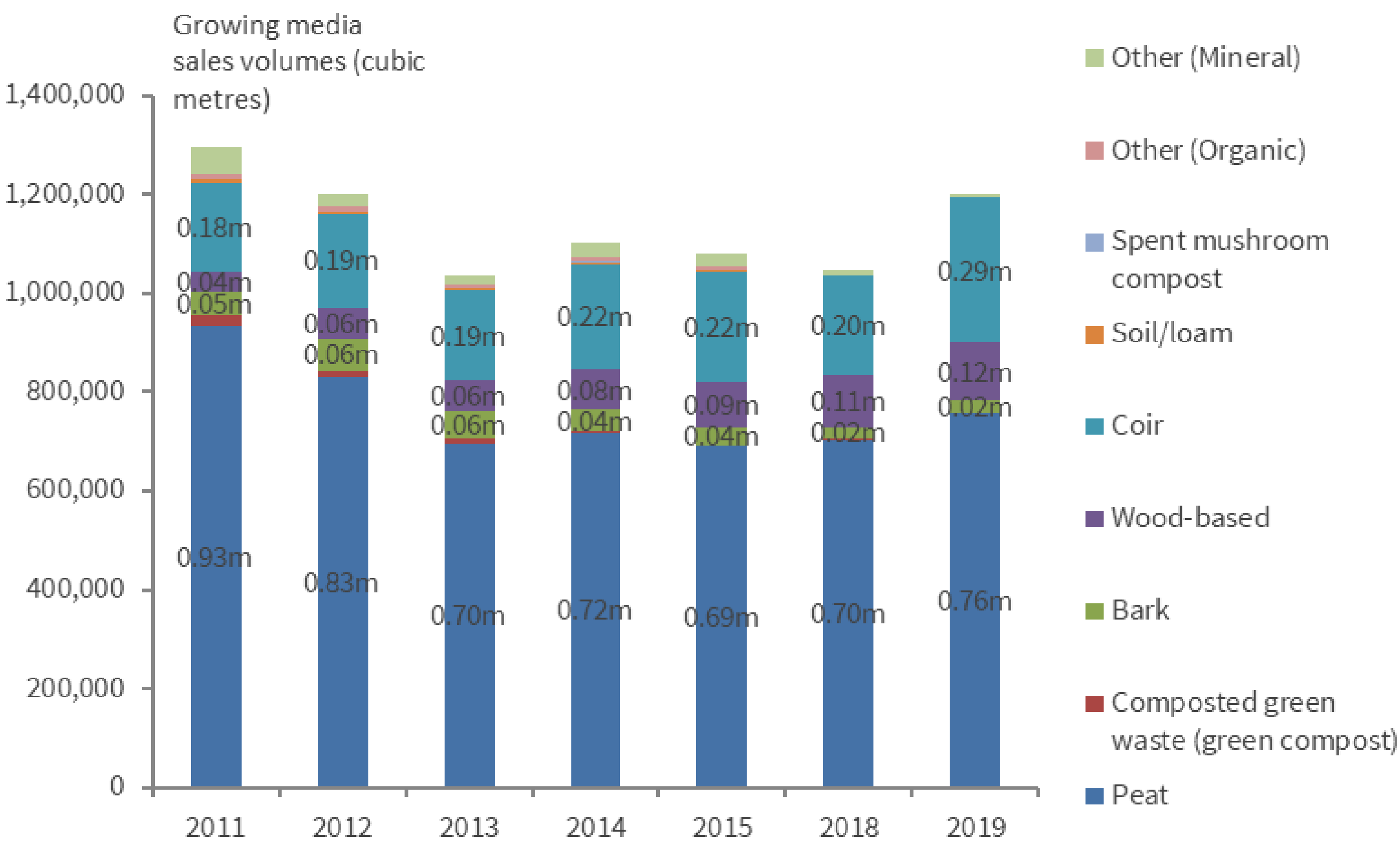
In terms of components used in professional product, peat has (with the exception of a blip in 2018) been on a downward trend since 2011 and now accounts for 62.9% of volume (chart 7 overleaf). As noted earlier, coir and wood-based materials have displaced this volume, with these two components now accounting for 24.3% and 9.8% of volume respectively.

The volume of different product supplied to the sector has shown a gradual increase in product designed for bedding, pot and nursery stock crops (chart 8 overleaf).

Since 2011 the supply of peat bales has fallen gradually (chart 8). In 2019 there was a jump in the volume of peat-free product supplied for professional use (chart 8), suggesting response to demand from retailers for crops grown in peat-free media.

When viewed in terms of percentages we can see that as of 2019 peat-free product accounted for 23% of volume whereas peat bulk/bales had fallen to 2.5% of total volume (chart 9).

Chart 6: Volume of professional growing media supplied by component parts 2011 to 2019



1. Source: Horticulture Statistics 2019, Defra

Chart 7 Proportion of professional growing media volume accounted for by different components

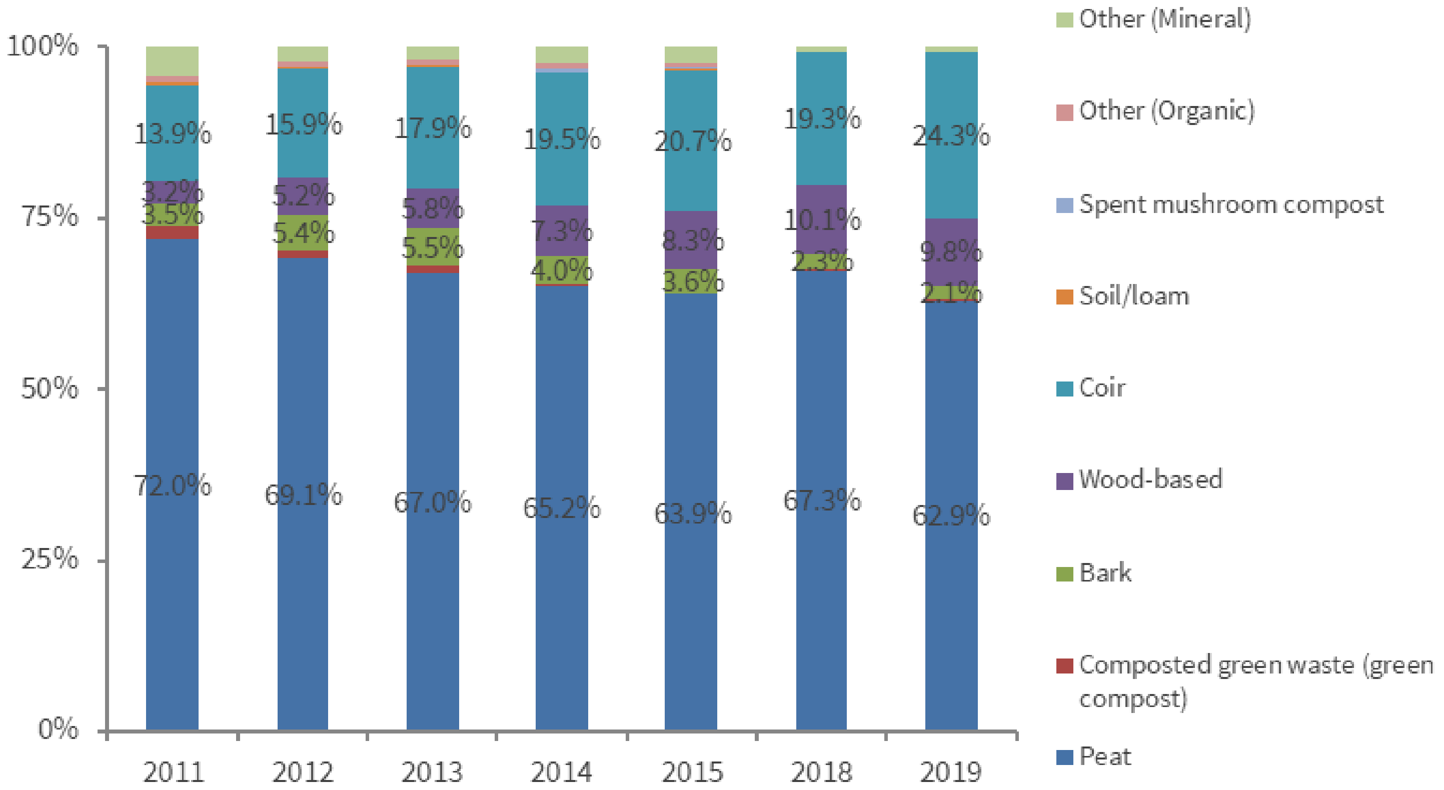


Chart 8 Volume supplied (cubic metres) of different professional growing media products

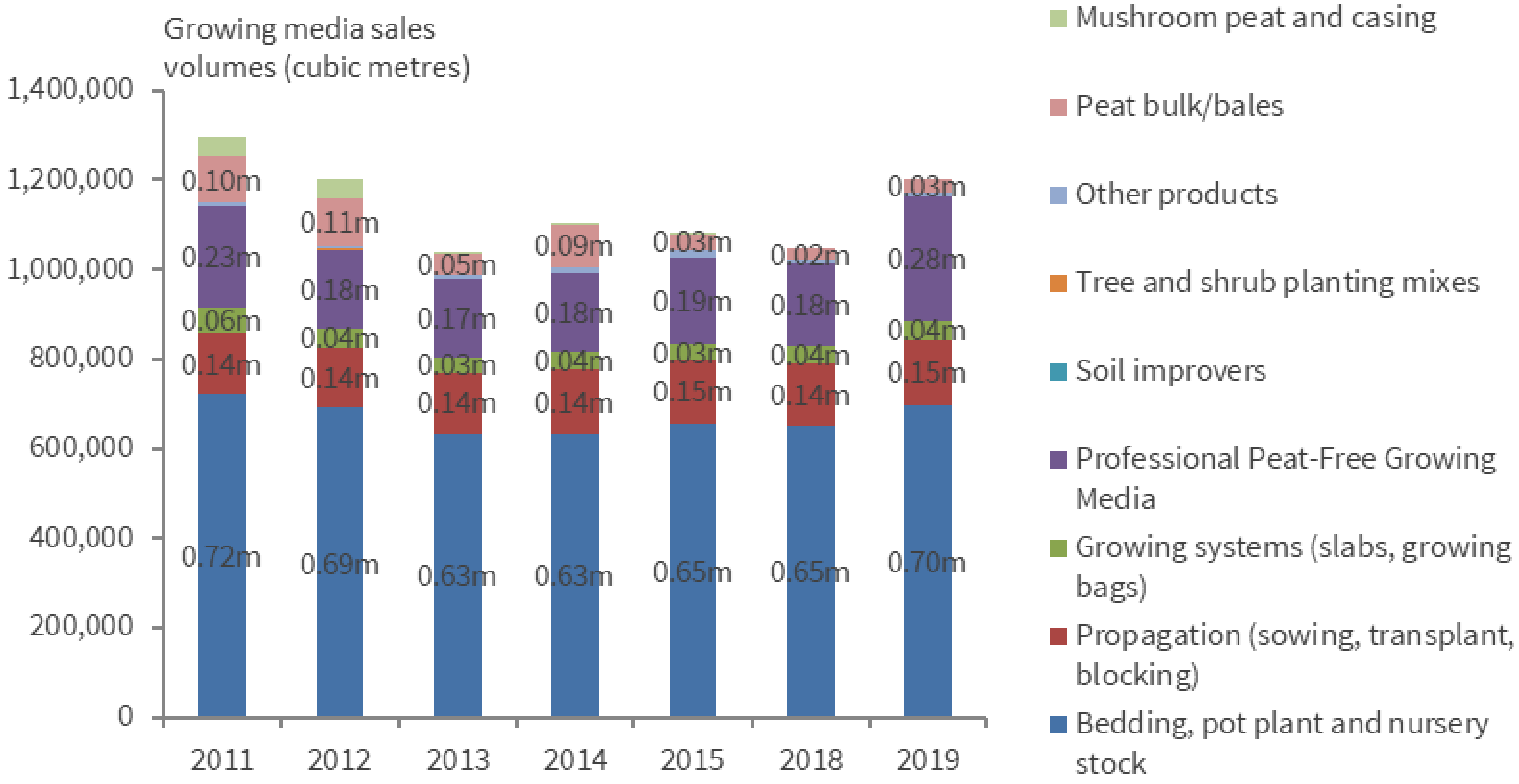
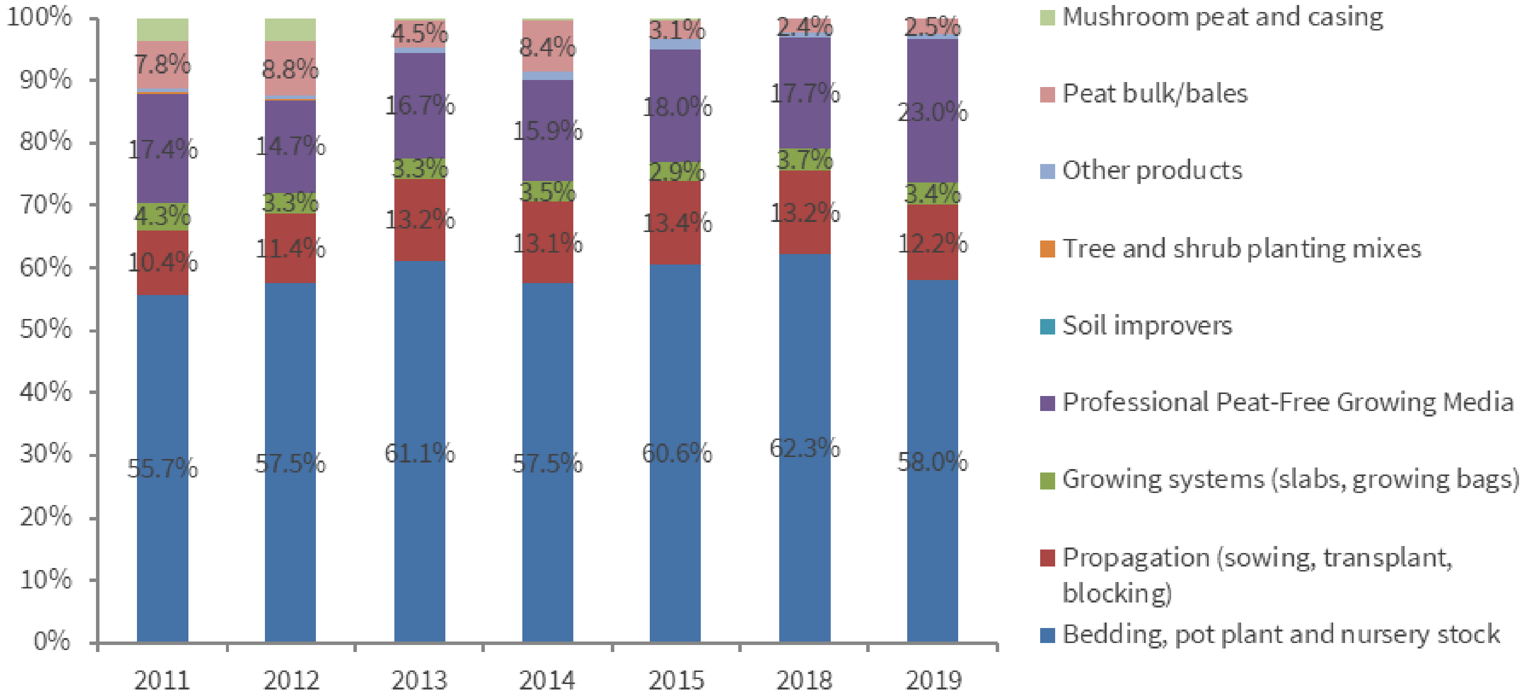


Chart 9 Proportion of total volume of professional growing media accounted for by different products

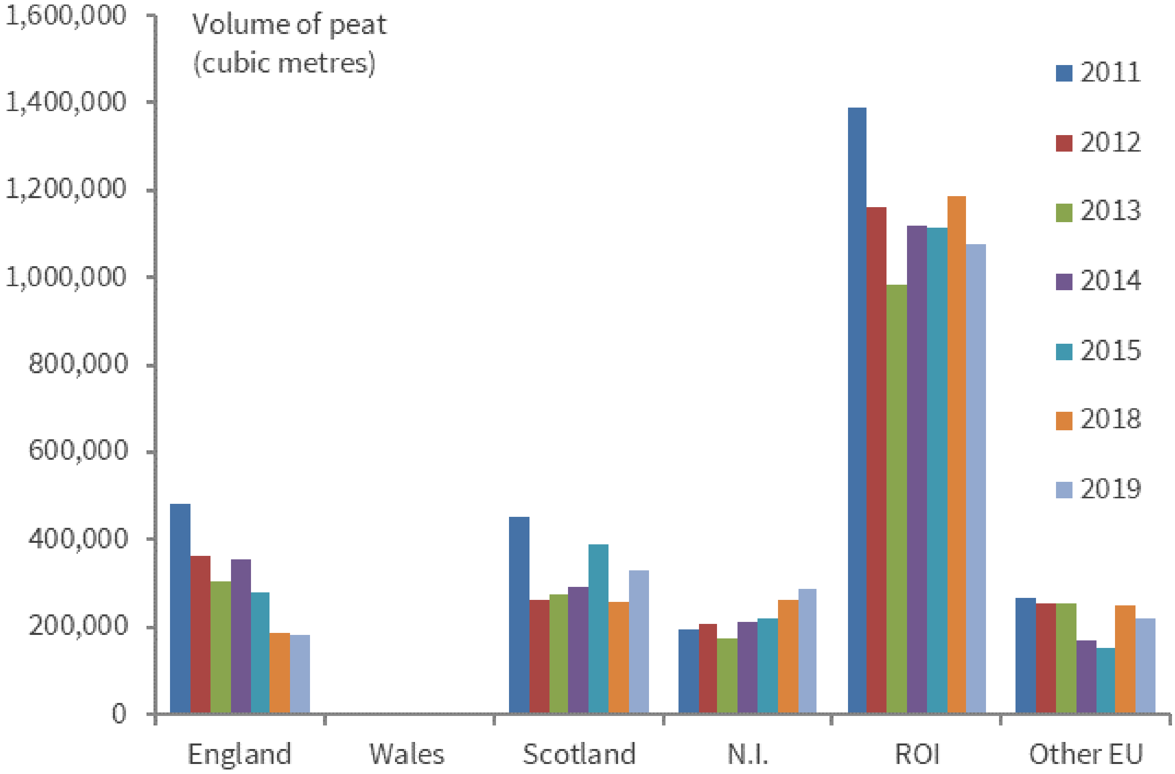


Origins of UK growing media's peat

As part of the study, the origin of the peat that is used in the UK's growing media is reported by participating companies. Chart 10 shows that most of the peat used in growing media is sourced from the Republic of Ireland; this has been the case for the lifetime of this study.

Since 2011 we have seen a gradual and consistent fall in the volume of peat that is sourced from England, and a slight increase in the volume sourced from Northern Ireland.

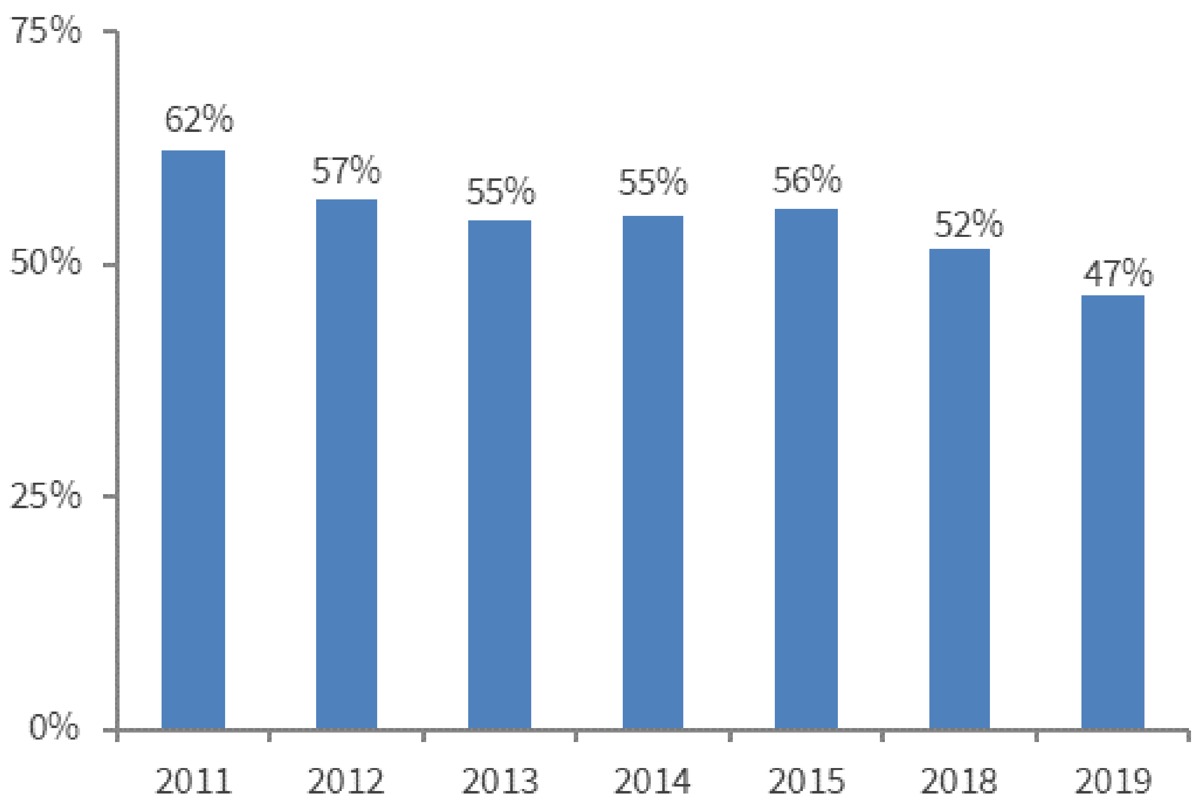
Chart 10 Volume of peat used in growing media supplied to the UK by country of origin



Overall peat use in growing media

Overall in 2019 less peat has been used in both volume and percentage terms than in 2011 across the retail, professional and export sectors. In 2011 2.8 million cubic metres of peat was used in growing media supplied to UK horticulture and by 2019 this had fallen to 2.1m cubic metres. Chart 11 shows that in percentage terms across all sectors of UK horticulture peat use fell below 50% for the first time in 2019.

Chart 11 Proportion of total growing media (all sectors) volume accounted for by peat



Discussion

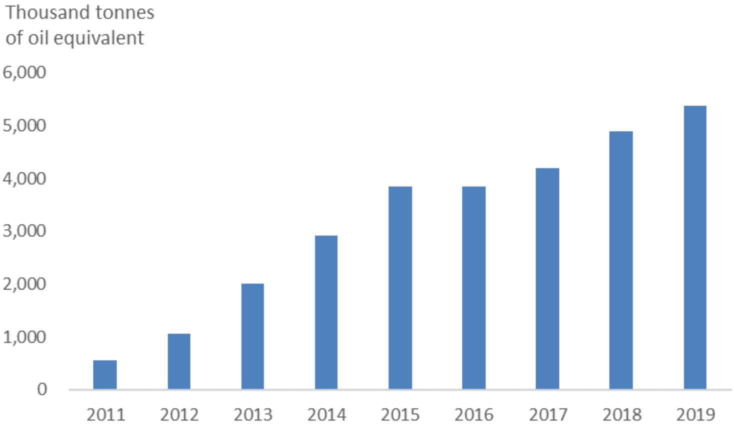
The fall in the volumes and proportion of peat in growing media for the UK has accelerated between 2015 and 2019 compared with the 2012 to 2015 period.

The changes in the mix of growing media product are a function of significant work across the sector to identify and adopt peat alternatives. Reliance on a single component of growing media (whether peat or any other) leaves the industry vulnerable to disruption in the supply chain. Investigation and uptake of alternatives to peat in growing media therefore makes commercial as well as environmental sense.

The data has identified that since 2011 substantial displacement of peat has been achieved by the incorporation of wood-based components into product. However there are several barriers to further uptake of this component related to its availability and affordability.

As the European economy transitions away from energy generation from fossil fuels, demand has increased for use of biomass in energy generation. Use of biomass for energy is incentivised by the UK government, making supplies of wood-based materials for growing media difficult to obtain in greater volume. Chart 12 provides an illustration of the scale of the issue, and shows the increase in the use of biomass in the energy sector since 2011. Competition across the economy for access to peat alternatives such as wood-based materials presents a significant economic and logistical challenge for UK growing media manufacturers.

Chart 12: Electricity generated by plant biomass 2011 to 2019. Digest of UK Energy Statistics July 2020, table 6.1.1



Access to coir is similarly facing challenges around availability. Covid-19 has limited the supply of labour available in Sri Lanka and south east India for coir production and processing over 2020, which is placing pressure on availability of materials for growing media production in 2021 and potentially beyond.

In the data there has been a notable fall in the proportion of volume accounted for by composted green waste (green compost). Whilst there is availability of this material, its suitability for growing media can be affected by contamination with persistent herbicides which can enter the waste stream in the form of treated lawn trimmings added to household food waste.

There are also potential constraints on the availability of peat from 2021. In the Republic of Ireland conservation groups called for a judicial review of the ROI Government policy in 2019. The High court ruled in favour of the conservation group challenges, so from September 2019 peat harvesting in the Republic of Ireland on sites larger than 30 hectares had to cease extraction pending a change in planning laws.

According to sources in the GMA this left harvested stocks of between 18 to 24 months of peat supply as of autumn 2019 . At the time of publication the Irish government has said peat can be used for gardens and vegetable production but has not announced a licence scheme for extraction. This could mean that extraction in the Republic of Ireland either does not restart until 2023 or may cease.

The data in this report shows that this would either require substantial increases in sourcing from UK licenced sites and/or on imports from Europe (most likely the Baltic). This would carry significant costs due to increased transport costs.

Based on the data in this report and on this brief discussion of the availability and affordability of the main components of growing media it is clear that the industry is set to face challenges in meeting increasing demand. The increasing emphasis on UK production to meet urban greening and tree planting targets is likely to drive an increased demand for professional growing media among ornamentals growers at a time where supply of components is under pressure.

In terms of consumer demand, 2020 and the Covid-19 pandemic has seen a huge switch to consumer spending on in-home leisure pursuits like gardening and away from out-of-home spending on dining and holidays. Over the latter part of 2020 this has led to increased consumer spending on growing media, and pressure on the availability of supplies of components.

Manufacturers had planned to focus significant consumer brand and advertising campaigns for the 2020 gardening season on new peat-free and peat-reduced ranges. These were trailed in autumn 2019 at the main industry trade shows and were set to air as the pandemic took hold in the UK.

Significant effort continues across the horticulture supply chain to ensure the responsible sourcing of components for UK growing media. In 2021 growing media product for the retail sector will start to show labelling and scoring for product based on the Responsible Sourcing for Growing Media scheme and calculator. This will begin to inform consumers and shoppers of the issues of sustainability pertaining to growing media.

In conclusion, since 2011 there has been a significant movement away from peat and towards a system of supply that is less reliant on this single component. However the industry (and by extension the ‘upstream’ horticulture supply chain that relies on it) faces significant financial and structural barriers toward moving further toward a more resilient and sustainable supply model that is less reliant on peat.

Appendix - sampling

The sampling approach is designed to give as comprehensive a view as possible of growing media supplied to the UK market.

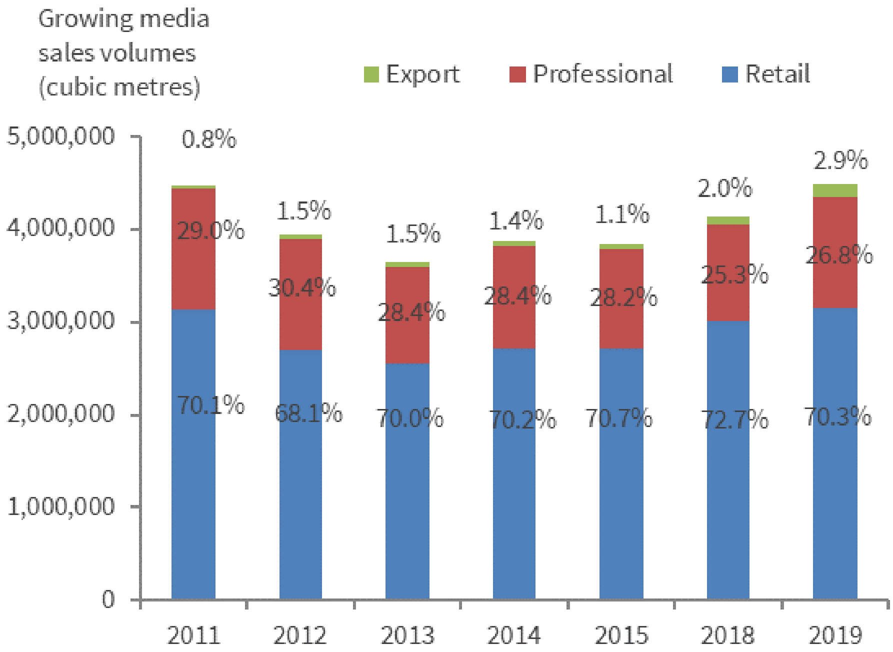
Approach to sampling

Businesses to be approached were identified by the GMA in 2011 as being likely to account for a substantial proportion of materials supplied to the UK growing media market. This included businesses inside the GMA and those outside it. This list is reviewed regularly, with businesses approached to take part on a voluntary basis. Data is provided to PWC on a commercial and in-confidence basis. Other members of the GMA and the HTA do not have access to participating businesses' individual data. Overall the bulk of volume supplied is to retail markets, with most of the rest accounted for by the professional market. The proportion supplied for export has remained negligible over the nine year life of the study.

In the 2018 and 2019 waves of the study data was provided by the companies listed in the table opposite. Somerset peat producers were unable to provide a completed return in 2019, mainly due to the Covid-19 pandemic. However they provided a narrative reply to PWC indicating that their use of components had not changed substantially since 2015 and that re-using this data would provide an accurate view of their current position.

As noted earlier in this report, the data is provided by manufacturers and taken in good faith. Although checks on the validity and any exceptions are performed in the course of producing this report, neither PWC nor the HTA is in a position to audit, inspect nor verify the actual components of shipped product against the returns provided for this report.

Chart 13 Split in volume of growing media by sector



The table below lists businesses whose figures have been included in the time series data in this report.

Supplier/Brand	2015 Cohort Data	2018 Cohort Data	2019 Cohort Data
Bord na Mona (Greener Gardener)	Yes	Yes	Yes
Bulrush Horticulture Ltd.	Yes	Yes	Yes
Erin Horticulture	Yes	Yes	Yes
Evergreen Garden Care	Yes	Yes	Yes
Horticultural Coir Ltd.	Yes	Yes	Yes
ICL (was Everris Ltd)	Yes	Yes	Yes
Jiffy Products UK	Yes	Yes	Yes
Klasmann-Deilmann Ireland Ltd.	Yes	Yes	Yes
Melcourt Industries Ltd.	Yes	Yes	Yes
Roffey Ltd.	Yes	Yes	Yes
Somerset Peat Producers	Yes	Yes	Yes
Tref B.V.	Yes	Yes	Yes
Westland Horticulture	Yes	Yes	Yes
Whitemoss Horticulture Ltd.	Yes	Yes	Yes
William Sinclair Horticulture	Yes	Yes	Yes
Botanicoir Ltd.	Yes	Yes	Yes
BVB Substrates	Yes	No	No
Kekkila (Vapo Oy)	Yes	No	No
Clover Peat	Yes	Yes	Yes
Dutch Plantin	Yes	Yes	Yes
Legro	Yes	No	No
Petersfield Growing Mediums	Yes	No	No
Premium Horticulture	Yes	Yes	Yes
Vital Earth	Yes	No	No
Evergreen Peat	No	Yes	Yes
Fertile Fibre	No	No	No

Since the study resumed in 2018 some smaller businesses declined to participate, and one (Evergreen Peat) joined the study. No businesses joined or left the study between 2015 and 2018/19 that would have a material bearing on the conclusions drawn in this report.

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