

**Industry  
experiences of  
peat-free media  
adoption**

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# The industry business transition spectrum...

Peat-free subject  
has just reached  
the radar

Trials have  
commenced

Full commercial  
peat-free  
production in  
place

**A wide spectrum of business transition towards peat-free,  
most have moved on from stage 1....**

# Tips for the late-starters.....



	<b>Actions</b>
1	<b>Define what you need from your growing media</b>
2	<b>Speak to your growing-media manufacturer</b>
3	<b>Attend training events to view results and to network with others</b>
4	<b>Start your own small-scale trials</b>
5	<b>Measure plant performance and other parameters</b>
6	<b>Build up your cultural knowledge from the trials</b>
7	<b>Adjust cultural inputs and plan storage</b>
8	<b>Look at your costs</b>
9	<b>Agree your product specifications and supply with your manufacturer</b>
10	<b>Talk to your customers throughout</b>
11	<b>Analyse and monitor your crops regularly</b>
12	<b>Track performance from year to year</b>

<https://hta.org.uk/grower-support-campaign/growing-media/tips-for-going-peat-free>

# Quality control



- Really important to get what you require from the start.
- Review the specifications with your growing media suppliers – physical (constituents, AFP, particle sizes, moisture content, fertiliser inclusion, wetters, gels etc.) and chemical (pH, EC etc.) and have detailed discussions about management – buffering capacities, water retention, need for further nutrition etc.
- Take samples of fresh growing media and store in a dark cool place for the duration of the crop.
- Inspect incoming media for moisture distribution and temperatures, if hot (a sign of biological activity) test for EC prior to use.
- Apply active stock control on incoming batches of growing media, don't place new media in front of previous batches.
- Avoid storing in direct sunlight under glass.

# Quality control



<b>Composition</b>	70 %	Cocopeat
	15 %	Perlite
	15 %	Wood fibers
<b>Fertilizers</b>	0,5 kg/m <sup>3</sup>	NPK fertilizer + trace elements
	0,5 kg/m <sup>3</sup>	N fertilizer
	25 g/m <sup>3</sup>	Fe
<b>Specifications</b>	pH*	4,7 - 5,3
	EC*	0,8 - 1,2
<b>MPS data</b> (from added fertilizer)	N	138 g/m <sup>3</sup>
	P <sub>2</sub> O <sub>5</sub>	70 g/m <sup>3</sup>
	K <sub>2</sub> O	120 g/m <sup>3</sup>



# Management and monitoring



- Avoid a 'pot and forget' mentality.
- Materials are now 'biologically active', so physical quantities in pots can change over time, pHs can drift, individual nutrient levels can rapidly fall (nitrogen) and also be aware of calcium and magnesium levels – especially in small cells.
- Irrigation water which has a high alkalinity will have more impact (but will supply calcium), as will acidifying liquid feeds, and large 'dumps' of high EC feeds.
- Can get build-ups of potassium (with coir and green waste ingredients) and sulphates from fertilisers in general.
- Therefore, there is a need to actively and regularly manage the media throughout production. Take regular analyses and get a quality probe to monitor EC and moisture.

# Management and monitoring



# Cultivation (1)

- **Irrigation** – check on uniformity of application by each system, have an idea of the amount of water in a container, and the amount needed to top up, beyond simply looking at the media surface.
- **Nutrition** – it's not a question of throwing more fertiliser at the situation, this can lead to high ECs, build up unwanted elements and compounds and potential pollution. Application of required elements, quickly, this will make liquid feeding more important.
- **Pot fill** – need to allow for any settling or slumping, whilst minimising spilt media, and also allow for corresponding depth of plug.



## Cultivation (2)

- **Scheduling** – does the media impact time to finished product (reduce or increase), does it improve rooting and establishment or extend the times.
- **Plant performance** – variation in performance response in the same media between species and even varieties.
- **Overwintering** – will this be better or worse, if media is better drained will this lead to lower root ball temperatures and more root death and plant losses?
- **Vine weevil** – do eggs and larvae survive better, anecdotal evidence to suggest better survival in coir?
- **Weed levels** – is there less liverwort, moss and weed generally.

# Cultivation



## Impacts on machinery

- Peat-free media doesn't impact all machinery, machinery with more exposed moving parts and media with a high percentage of long fibres can give rise to issues.
- Exposed chains can be an issue, picking up fibres and jumping or snapping at sprockets.
- Brushes can become blocked and cease to function.
- Media may weigh more and impact motors.
- Spilt media can block sensors on conveyor belts and on machinery.

# Impacts on machinery



## Ongoing....

- There are more physical constituents within blends to deal with.
- Blends are still being developed and supply chains fine-tuned. Therefore, blends will change which may impact performance. *Blend development at the same time as offering commercial product is tricky.*
- Not all species perform as well in the same blend, a range of blends (perhaps even from different suppliers) may therefore be required to produce the range of species offered by many businesses.
- What about the 10-20% of plant species that are proving difficult to propagate/grow in peat-free?

# HTA Technical Support Webpages

## Growing Media

This section provides guidance and technical information to assist with the transition to peat-free growing media. Most businesses are still on a learning curve in terms of adopting such media, and are in the process of trialling a range of growing media blends and making the necessary cultural changes to get the most out of them.



GROWING MEDIA  
Moving to peat-free



GROWING MEDIA  
Physical constituents of peat-



GROWING MEDIA  
Irrigation of peat-free crops



GROWING MEDIA  
Nutrition of peat-free crops



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<https://hta.org.uk/grower-support-campaign/growing-media>