



“Transition to Peat Free”

Environmental Horticulture, Division of Science and Collections

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Why Peat-Free?

- Peat bogs act as **Carbon sinks**
- Regulate **Hydrology**
- Support unique and diverse **Biodiversity**



- ✓ Mitigate the **climate and biodiversity crises**
- ✓ Meeting the **net zero 2050 target** of the UK

‘To accelerate the transition to peat-free horticulture’

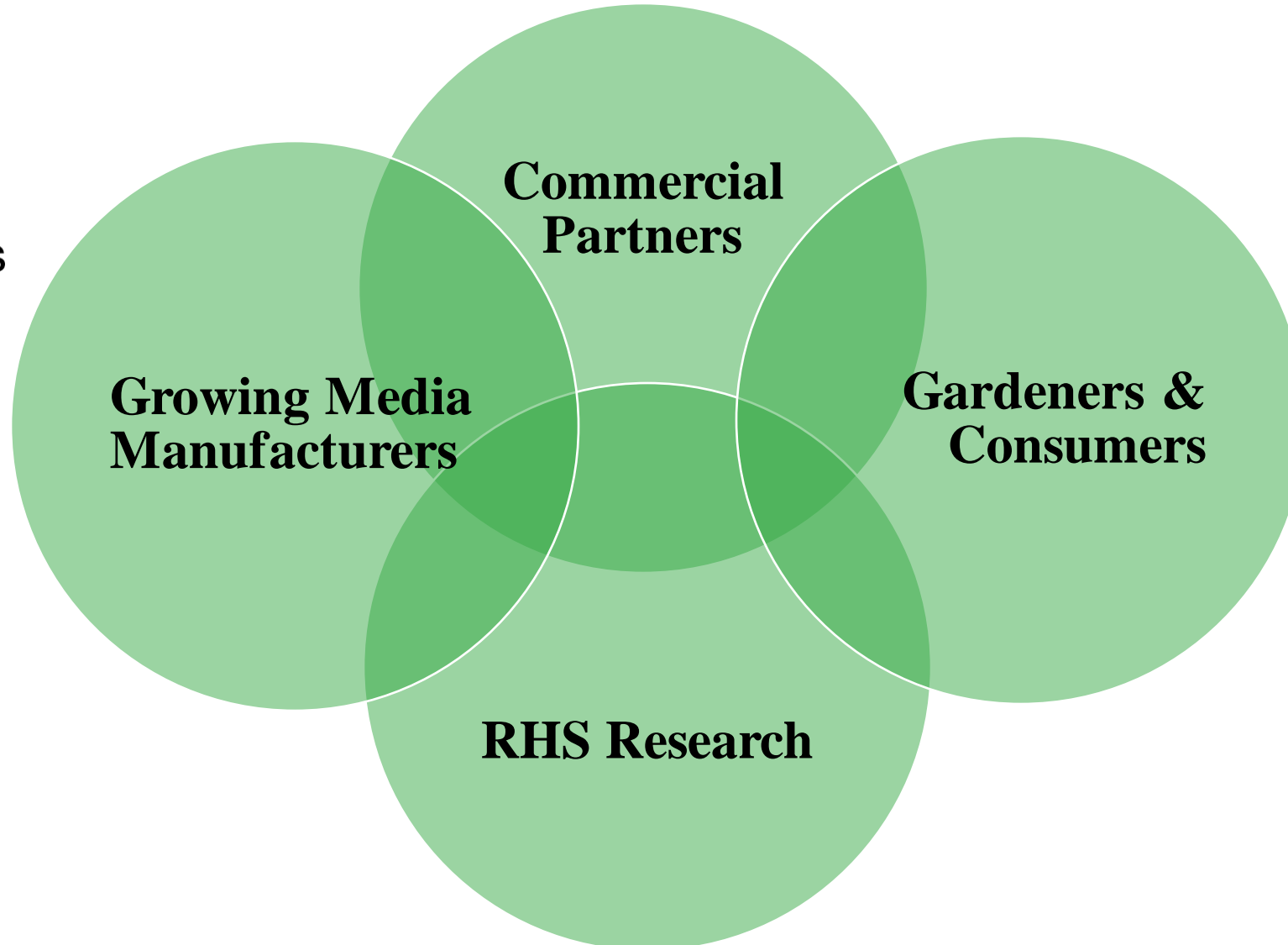
Project objectives

- To support the horticulture industry, domestic gardeners and RHS transition to the use of 100% peat-free growing media through **research evidence**
- To research **economically** and **environmentally** sustainable, as well as **practically viable**, peat-free growing media solutions
- To trial effective management of **substrate** composition, **water** and **nutrients** for peat-free growing
- To support the delivery of the RHS Sustainability Strategy: **Net Positive for Nature and People Target 1 – Climate Positive by 2030.**

Project Partners and Collaborators



Department
for Environment
Food & Rural Affairs



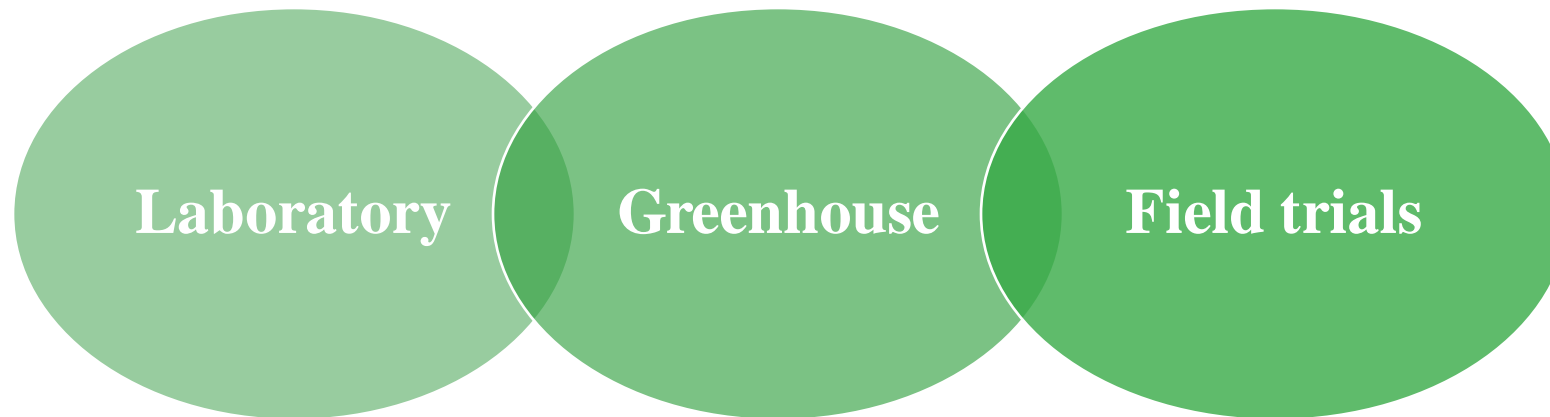
JOHNSONS
NURSERIES



Research Trials

To meet the practical requirements of the production system in which peat-free substrates are being utilized

RHS and Commercial partners



Setting up Commercial-Scale Peat-Free Trials

Overview:

1. Key challenges
2. Aims/objectives
3. Plan of work/timeline

Research considerations:

1. Scale of the trials
 - No. of plant types/plant groups
 - No. of growing media
 - No. of plants
2. Season
3. Growing conditions

Scientific rigour:

1. **Randomisation**
2. **Replication**
3. **Control**
4. **Data capture and management**
5. **Analysis/Assessment**

Fellowship Trials

			
<p>Peat-Free Growing - Herbaceous Perennials</p>	<p>Peat-Free House Plant Propagation</p>	<p>Peat-Free Ericaceous Trials</p>	<p>Peat-Free Growing - Shrubs, Perennials and Landscape Plants</p>
			
<p>Peat-Free Growing - Alpines, bulbs, herbaceous, hardy nursery stock</p>	<p>Peat-Free Propagation - Herbs and Outdoor bedding plants</p>	<p>Peat-Free production of culinary herbs</p>	<p>Peat-Free Propagation</p>

RHS Industry Peat-Free Survey 2023

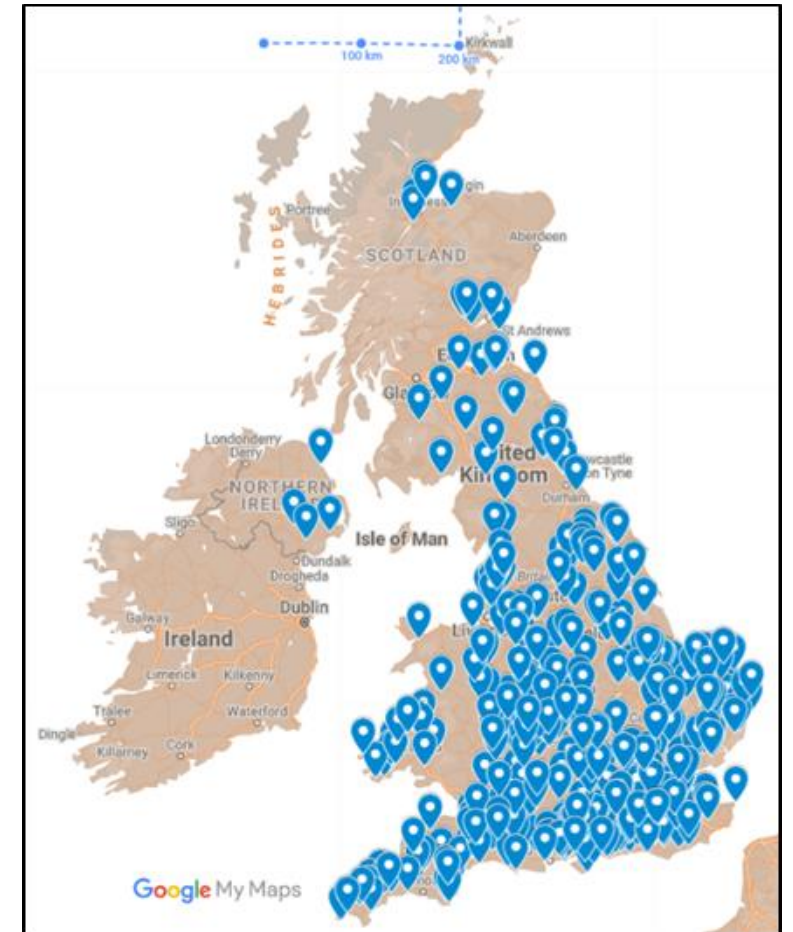
Key Challenges:

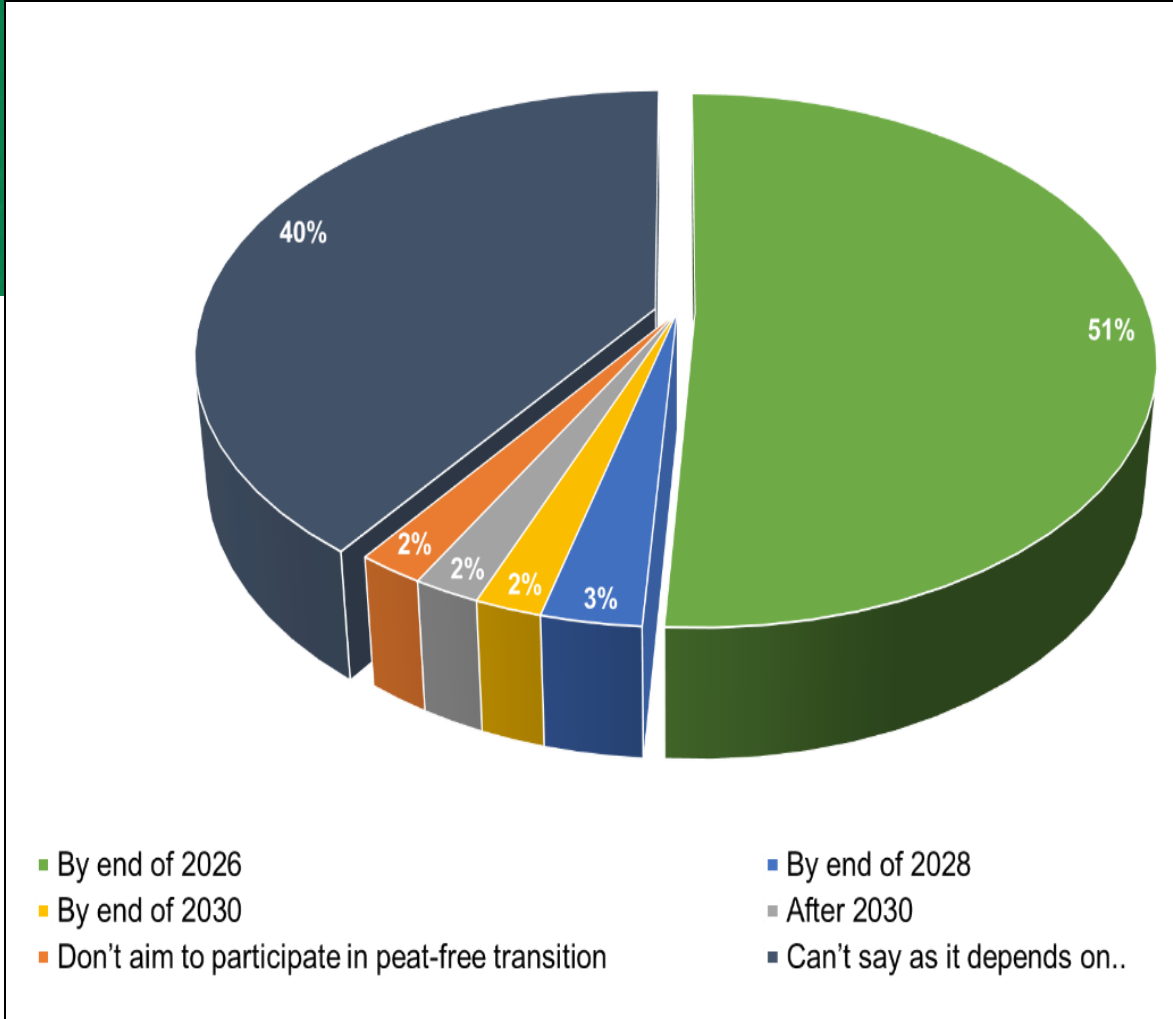
- Irrigation
- Cost
- Nutrition

Assistance Industry needs:

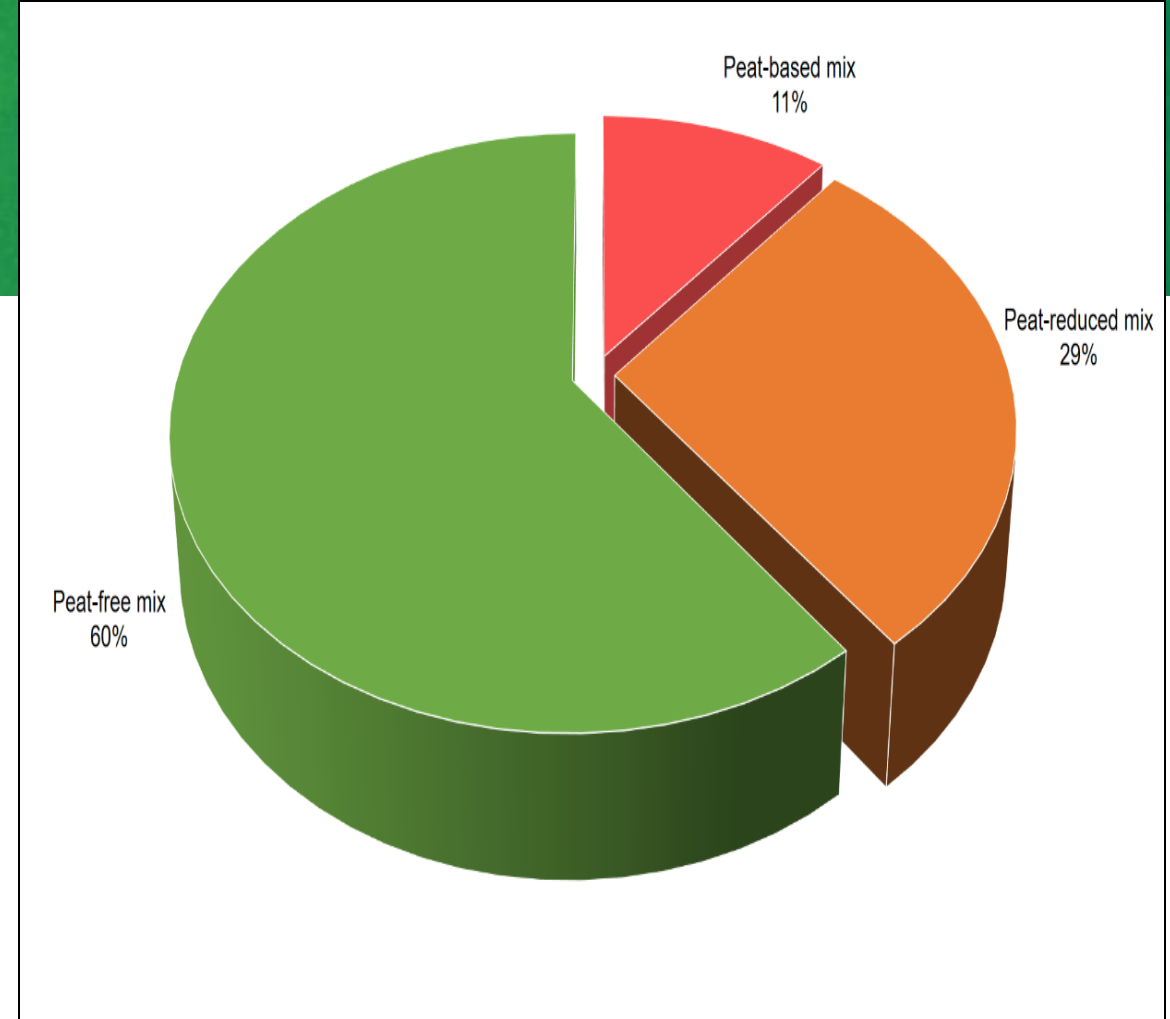
- Technical support
- Knowledge/Information hub
- Financial support from Govt.

Source – [RHS Industrial Transition to Peat-Free Survey 2023 Report](#)





Peat-free timeline*

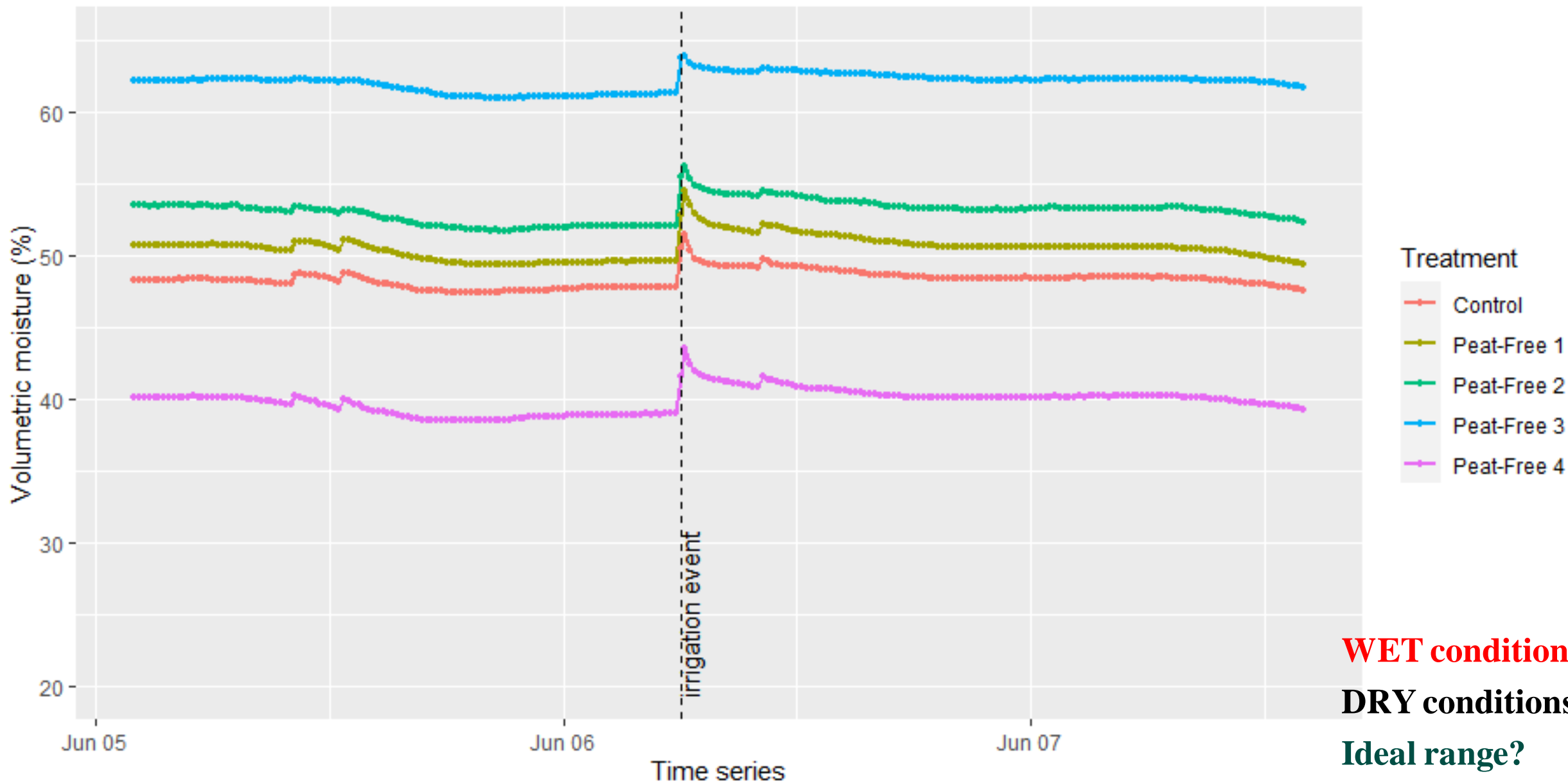


Percentage of peat-free, peat-reduced and peat-based mixes used



Irrigation

Volumetric moisture distribution in different growing media (Peat based-Control and Peat-Free)



WET conditions?

DRY conditions?

Ideal range?

Irrigation

Key takeaway messages and practical considerations:

- The volume of water required after potting varies considerably between mixes
- Peat-free needs to be treated differently in terms of irrigation
- Some peat-free mixes can hold/retain better volumetric moisture (%) compared to peat-based/reduced nursery control growing media
- Fine-tuning irrigation alone can potentially reduce leachates, and nutrient loss associated with overwatering

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RHS resources to support the Transition to Peat-Free

Peat-free portal for industry

Discover the latest research, resources and recommendations to assist your transition to peat-free, as well as details of free workshops and events for growers

Science



**Harper Adams
University**



**Coventry
University**

Technical support, communication and dissemination

- Peat-Free Campaign Manager – Claire Thorpe
- Peat-Free Transition Technician – Nicola Barker

Knowledge and technology transfer : Key stakeholders

Communication and Dissemination

RHS

- RHS webpages
- Reports
- Workshops
- Field trips
- Horticulture fairs/shows
- Media communications

Professional horticulturists

- Peat-free growing medias
- Evidence-based reports
- Grower protocols
- Factsheets
- Trial protocol
- Workshops
- Grower factsheets
- Online web content
- Popular science articles

Scientific audience

- International peer-reviewed journals
- Conferences

Government

- Reports
- Press related queries

Transition to Peat-Free Horticulture

Potential Peat-Free alternatives, Circular Economy, Sustainability and Productive Horticulture

#PeatFree

#UKGrown



Source: RHS

Reduce

Reuse

Recycle &

Reinvest

Acknowledgements





Thank you

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Visit RHS Peat-Free Portal For Industry:
www.rhs.org.uk/peat-free-industry

