

### Sphagnum BeadaHumok<sup>®</sup>

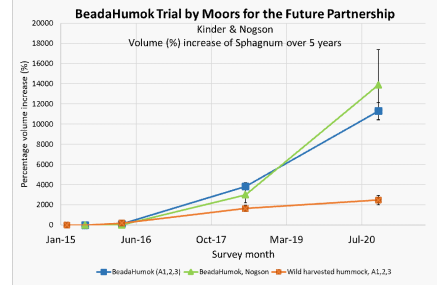
BeadHumok<sup>®</sup> are sustainably produced multi species Sphagnum moss plugs developed for optimal establishment and growth



- >15 million produced
- Grown 100% Peat Free
- No donor site damage through wild harvesting
- Multiple Sphagnum species for targeted restoration
- Resilient and rapid establishment and growth
- Easy to transport and plant
- Sustainable production methods



### BeadHumok<sup>®</sup> Volume Accumulation

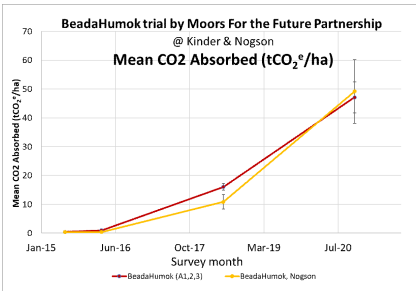


BeadHumok<sup>®</sup> demonstrated significantly accelerated rates of volume accumulation when compared to wild harvested and translocated material

**Average of 125 x volume increase over 5 years**

Data collected and provided by Moors for the Future Partnership

### Accelerated Carbon Sequestration



Average of >47 tCO<sub>2</sub><sup>e</sup>/ha sequestered over 5 years

A single BeadaHumok can sequester ~300 l of CO<sub>2</sub> over a 5-year period = 522 gCO<sub>2</sub><sup>e</sup>

Revegetating with Sphagnum BeadaHumok presents the opportunity for significant carbon sequestration beyond the avoided emissions of hydrological restoration alone

Data collected and provided by Moors for the Future Partnership

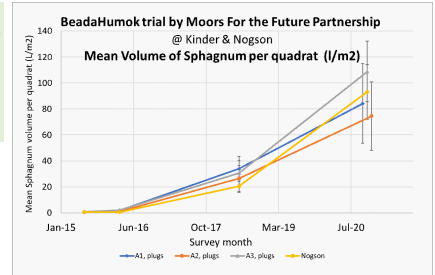
### Natural Flood Management

Densely planted BeadaHumok<sup>®</sup> (9/m<sup>2</sup>) after just 5 years of growth can absorb over TWO Inches (53mm) of rainfall

(Assuming bulk density 30g/l and Sphagnum holds 20 x it's weight in water)

If planted at scale across upland peatlands, this would significantly reduce reliance on flood defence infrastructure

Presents a long-term solution, as water retention capacity will continue to increase as sphagnum grows



Data collected and provided by Moors for the Future Partnership

### Water Quality Improvement & Wildfire Prevention

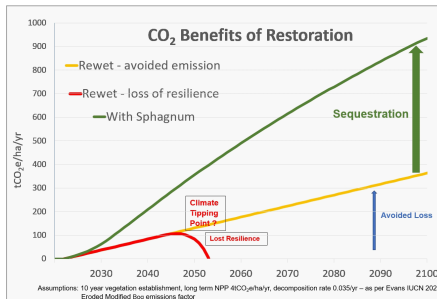
Water filtration capacity of Sphagnum reduces turbidity of peatland runoff and prevents peat erosion into water courses

This reduces the cost of water purification for water companies, incentivising effective revegetation



Due to the enormous water retention capacity of Sphagnum, established carpets can prevent the encroachment and spread of wildfires, and protect other vegetation and the peat below

### Increased Climate Resilience



Without Sphagnum introduction there is a significant lost opportunity for carbon sequestration

Sphagnum also stabilises and maintains localized hydrological conditions, to strengthen & protect vital hydrological restoration work which alone would be threatened by increased climate stress

These factors combined provide resilience against the influence of projected climate change impacts

### Boosting Biodiversity

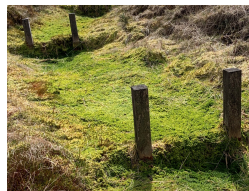
Sphagnum functions as an **Ecosystem Engineer**

Influences conditions - lowers pH, maintains water table, stabilises peat surface

Produces optimal environment for the development of native peatland communities

Planting can be supplemented with moorland plug plants for accelerated habitat niche development and companion planting with Sphagnum BeadaHumok<sup>®</sup>

Opportunity for funding through Biodiversity Net Gain requirements and the development of Conservation Covenants



Input	Wild Harvesting	Micropropagation
Harvesting	Impact at Donor site	No impact
Growth	Slower	Faster
Supply	Limited	Scalable
Species	Limited Control	Highly Controlled
CH <sub>4</sub> mitigation	Slower	Faster
Cost	Lower	Higher

