Kasvua sammalesta Pohjois-Karjala
Growth from moss North Carelia

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Regional Council of NORTH KARELIA

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Cultivated moss to replace peat-based production

- Developing sustainable production at peat-mining altered peatland areas
- Improving peatland natural functions, ecosystem services and biodiversity
- Providing science-based knowledge for peatland enterpreneurship
- Piloting cultivation and developing methodology
- Pilot sites, training, workshops, guide material
- Stakeholder networking, enterpreneur collaboration, communication

The most important peat former and carbon sink

Sphagnum cultivation in NW Germany

Prospects of *Sphagnum* cultivation enterpreneurship

- Alternative of peat in growth media, animal bedding, environmental protection + special products
- Improving natural state of peatlands and predictabe raw material
- Water and landscape engineering, restoration, machinery development, planning and automatization
- Targeting peat producers and land owners
- All peat-based livelihoods

Bulk peat applications – special products

Development tasks from planning to harvesting

WP1 Innovative solutions to cultivation

Peatland biology application

- Opimized cultivation: testing methods for establishment, adjusting conditions
- Biomass production potential: survival, growth, condition
- Integrating with other peatland use: solar energy, restoration
- Technical solutions for monitoring: data logging for water level, flow, temperature, PAR…
- Material research → project at Kuopio campus

Kosteikkoaurinkovoimala Tanskassa

Rahkasammalten kasvatusta Saksassa

WP2 Planning *Sphagnum* cultivation and ecosystem services

Remote sensing and GIS application

- Place of *Sphagnum* cultivation in degraded peatland area restoration
- Impacts of *Sphagnum* source material collection
- Planning methods for holistic improvement of peat-mining degraded peatland areas: paludiculture opportunities, carbon balance, water impacts, biodiversity
- Integrating cultivation in catchments and other peatland use

Peatland catchments are mosaics of land use

Succesful cultivation depends on holistic catchment-scale planning

Model sites of *Sphagnum* cultivation

- First Sphagnum cultivation areas are important testing and model sites
- Practical solutions for establishing, maintaining and monitoring *Sphagnum* cultivation
- Proofs of *Sphagnum* yield potential
- Water and climate impact verification
- Living lab for education and research collaboration

Opiskelijat istuttamassa kihokkeja Kyyrönsuon turvekentälle

Uusi tuotantomuoto kaipaa mallin toimintatavoille ja varmistusta tuloksille

First pilot area at Kyyrönsuo peatland, Kontiolahti

First pilot area at Kyyrönsuo peatland, Kontiolahti

Maximum vitality
Minimum effort

Optimal conditions

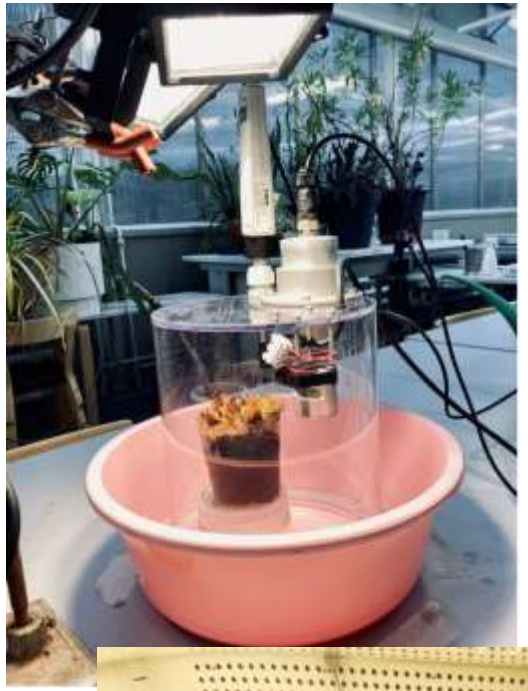
Instant start of optimal growth

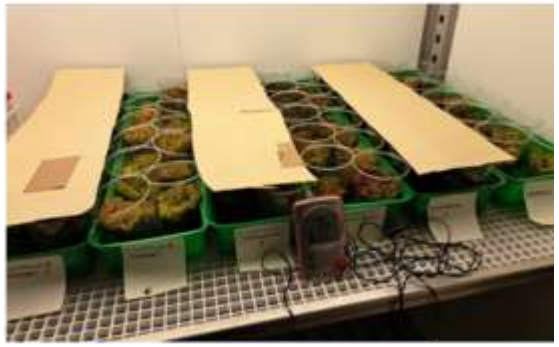
Sphagnum cultivation


November start – June situation
Common peatland species


June start – July situation
Fast growing riparian species

Moss Test Lab at Joensuu Campus, UEF





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