

Common reed as growing media-now

- ▶ Common reed is an excellent growing medium raw material, fully organic product
- ▶ PH 6,5, WHC 78 %, EC ($\mu\text{S}/\text{cm}$) 153 as a basic, non-fertilized version (Method 1)
- ▶ Kiteen Mato and Multa Oy/ltd. holds production method patent
- ▶ Method 1, simple procedure, harvest, crush, compost/stir, packed for sales
- ▶ Method 2, use of microbes + P → faster results
- ▶ Method 3, machine production with/without Horse Manure+ Canary Reed bedding, biofertilized, sterilized and can be produced 24/7, fully ready 1-2 weeks
- ▶ Method 3, Pricing +10-25 % vs. other premium fertilized peat-free growing medias
- ▶ Problems:
 - ▶ Harvesting is expensive, quite often logistical problems, amounts small/moderate
 - ▶ Locations all over Finland, mainly coastal region in Southern/Western Finland
 - ▶ Sea shores approx. 30 000-40 000 ha and lakes 100 000 ha (1 million m³ of sediment)



Common reed as growing media-2024->

- ▶ Common reed cultivation for old peat fields, multiple advantages
- ▶ “Watering” old peat fields will decrease emissions drastically. Raising water level from 60 cms to 30 cms will cut GHG emissions in half
- ▶ After peat production loadbearing roads and storage area in place/ready
- ▶ Location volumes multiplied by 50-100+ times (Canary Reed in Isojoki, Finland 120 ha in production since 2019)
- ▶ Highly improved logistics, harvesting and production sites
- ▶ More versatile harvesting, cheaper/common machinery can be used
- ▶ Labour impact in isolated places mainly Eastern Finland
- ▶ ACE Life funding 9 MSEK for KMM



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Common Reed as a cultivated crop

- ▶ Common reed cultivation for old peat fields and wetland areas
- ▶ Reed cultivation of irrigated peat fields as part of carbon compensation (carbon sink, evaporation of marsh gases is prevented, leaching of nutrients into waterways is reduced)
- ▶ Carbon capture and storage (CCS) costs 120-240 EUR/ton, peat fields wetting 10-20 EUR/ton (Prof. Raisa Mäkipää)
- ▶ At the same time our Canary Reed filter can reduce leaching nutrients up to 60% → cleaner ditch water, filter under testing by SoilCo/KMM/Centre for Economic Development, Transport and the Environment
- ▶ Income for the farmers and image benefit for Finland



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Thank You !

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