Introduction to Horti-BlueC & Webinar 5

Bart Vandecasteele, ILVO

Interreg

EUROPEAN UNION

2 Seas Mers Zeeën

Horti-BlueC

European Regional Development Fund

ADAS

CATO ENGINEERING

Agaris

ILVO

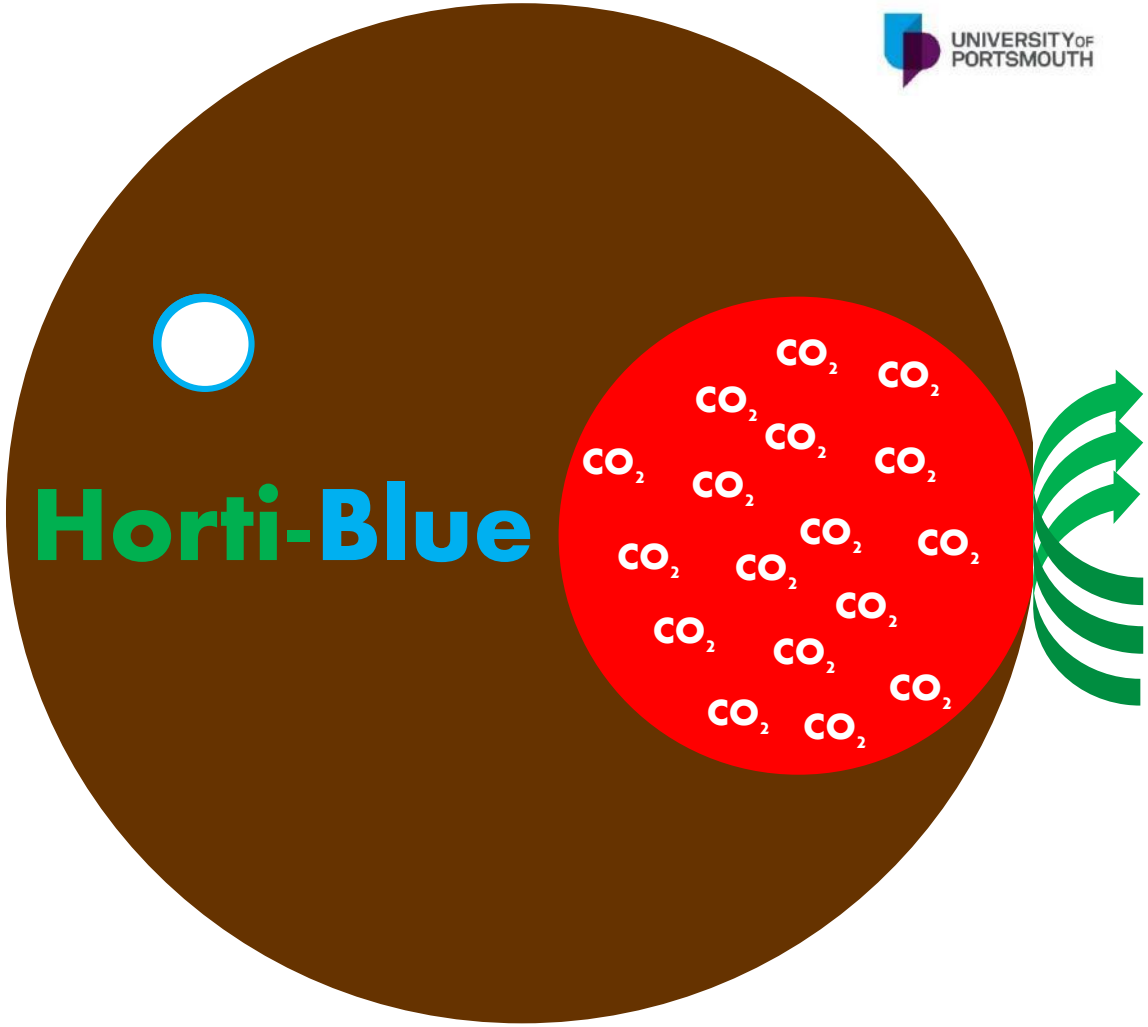
NIAB EMR

PROEFCENTRUM HOOGSTRATEN

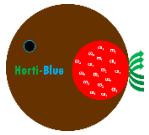
Université de Lille

UNIVERSITY OF PORTSMOUTH

ECN | TNO innovation for life

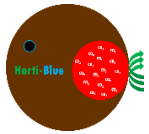


4 Horti-BlueC webinars



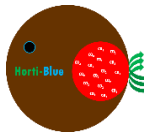
Horti-BlueC webinar 1: Large scale gasification for energy and biochar production

More info
Recording
Factsheet



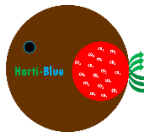
Horti-BlueC webinar 2: Production of chitin from shrimp shells or Chinese mitten crab

More info
Watch recording
Factsheet



Horti-BlueC webinar 3: Spent growing media for direct reuse or as a feedstock for biochar and compost

More info
Watch recording
Factsheet

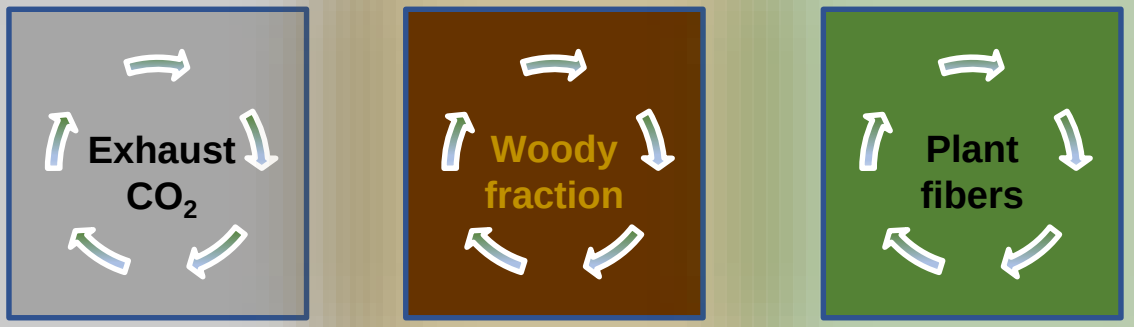


Horti-BlueC webinar 4: New growing media blends for strawberry and tomato

More info
Watch recording
Factsheet

Horti-BlueC and biochar

- Biochar production + energy (for greenhouses)
- Biochar use in Growing Media
  - Amendment (g/L)
    - Disease suppression
    - Fertilizer
    - Liming agent
  - Bulk replacement (> 10 vol%)
- Spent growing media => feedstock for biochar?
- Spent growing media with biochar => C storage?



Large scale gasification, CO_2 reduction & biochar production

Baseline scenario: Heating with natural gas

New scenario: Large scale gasification: energy production in combination with biochar production

Energy production: revenues

- lightning the greenhouse?
- Heating greenhouses?

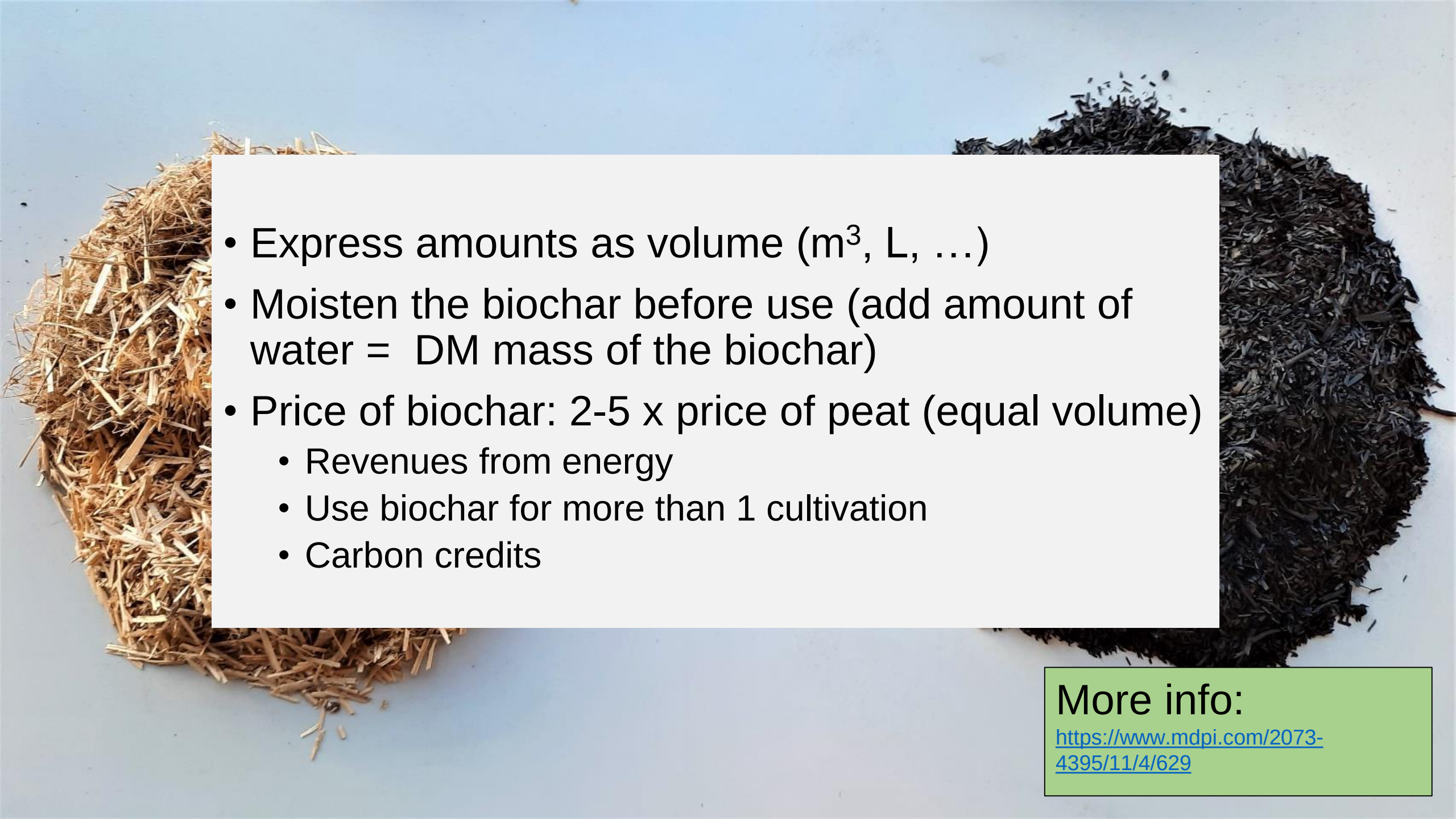
With optimal feedstocks: woody biomass, micanthus straw, flax shives

Application of biochar for bulk replacement in growing media

Pressure: replacing natural gas

Implementation in 5 years from now is feasible

Horti-Blue



- Express amounts as volume (m^3, L, …)
- Moisten the biochar before use (add amount of water = DM mass of the biochar)
- Price of biochar: 2-5 x price of peat (equal volume)
  - Revenues from energy
  - Use biochar for more than 1 cultivation
  - Carbon credits

More info:
https://www.mdpi.com/2073-4395/11/4/629

Growing media:

Sustainable?

Available (amounts and quality)?

Renewable?

Ready to switch to alternatives?