



Connect and continue discussions on our
social media channels

@BiomassConnect
#BiomassConnect

Harnessing Innovation the Future of Biomass

Professor Jeanette Whitaker
UK Centre for Ecology & Hydrology



UK Centre for
Ecology & Hydrology



What are biomass crops?



SRC Willow



SRF Eucalyptus



SRF Alder



SRC & SRF Poplar



SRF Black Locust

Harvesting cycle:

Short rotation coppice (2-3 years)

Short rotation forestry (8-15 years)

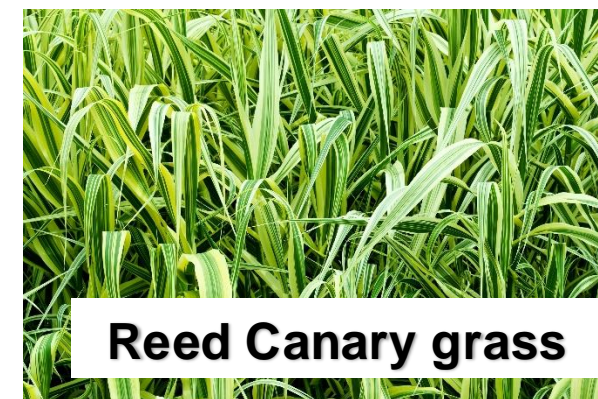
Perennial grasses & forbs (1 year)



Miscanthus



Switchgrass



Reed Canary grass



Sida



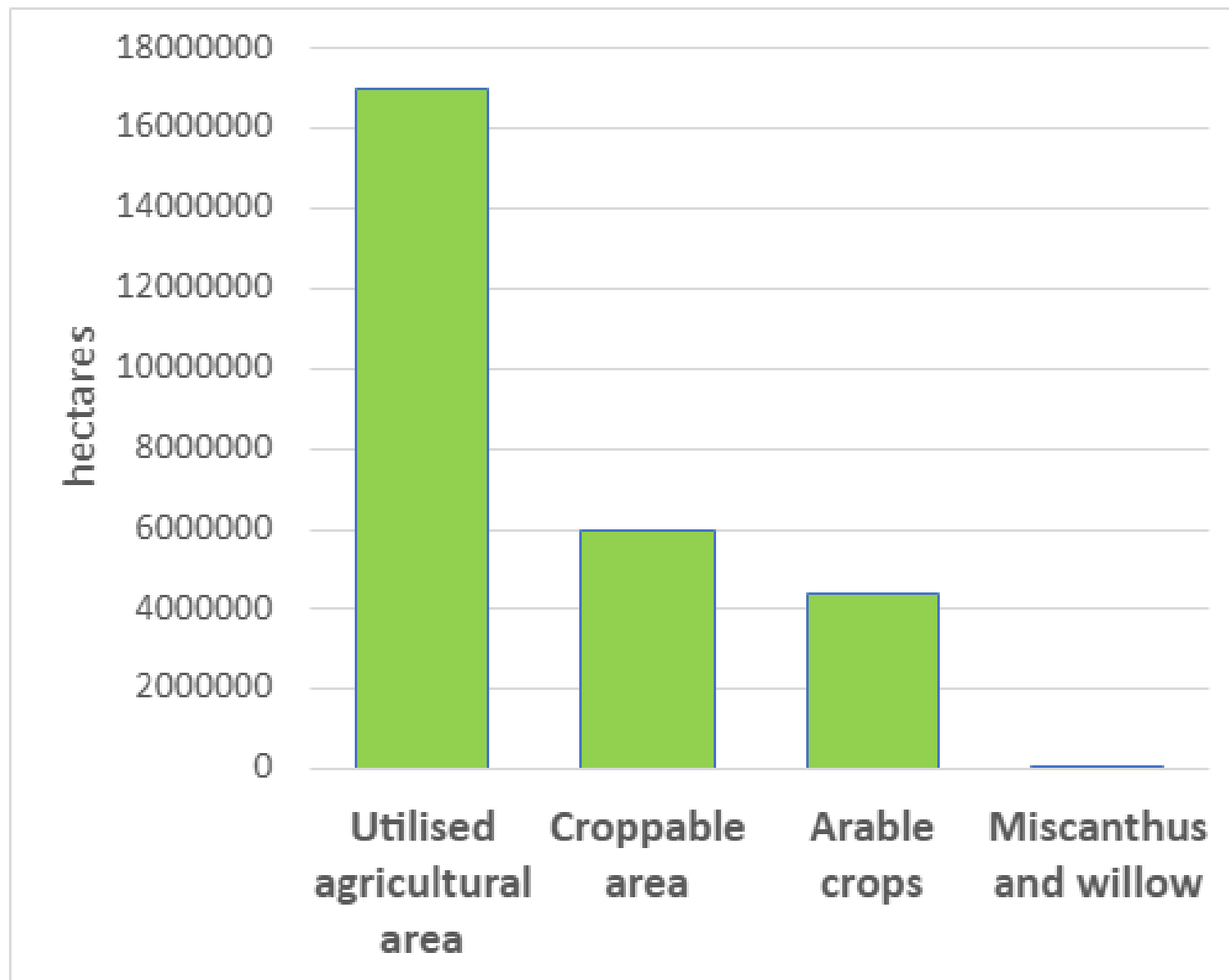
Silphium



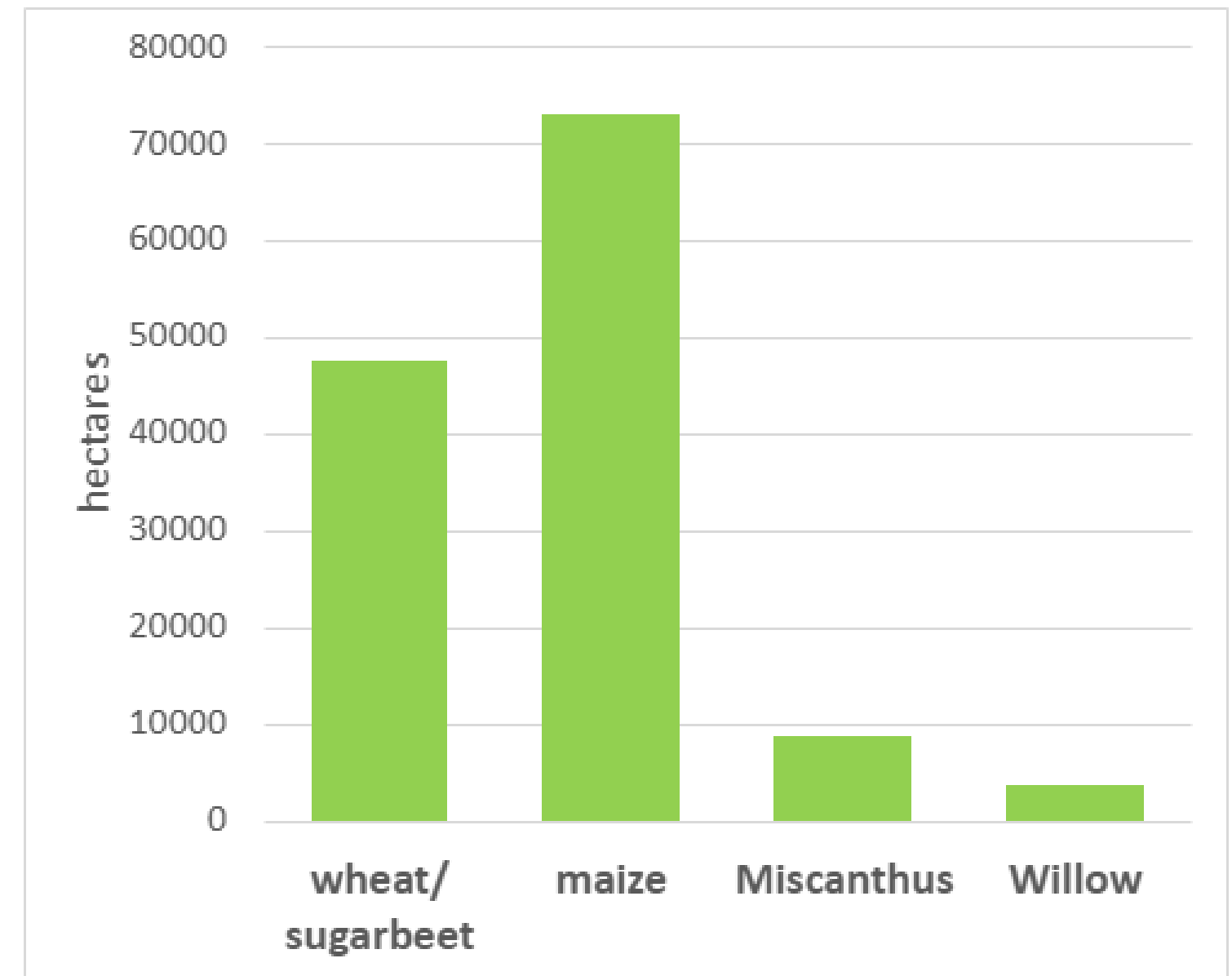
Hemp

How much land is used for biomass crops?

Agricultural land area



Land area used for bioenergy



What can biomass crops be used for?



Bioenergy
Heat, Power,
BECCS



Agriculture
Bedding, Compost,
Phytoremediation



Materials
Construction,
textiles, packaging,
active ingredients



Health and beauty
Pharmaceuticals,
Food supplements,
cosmetics



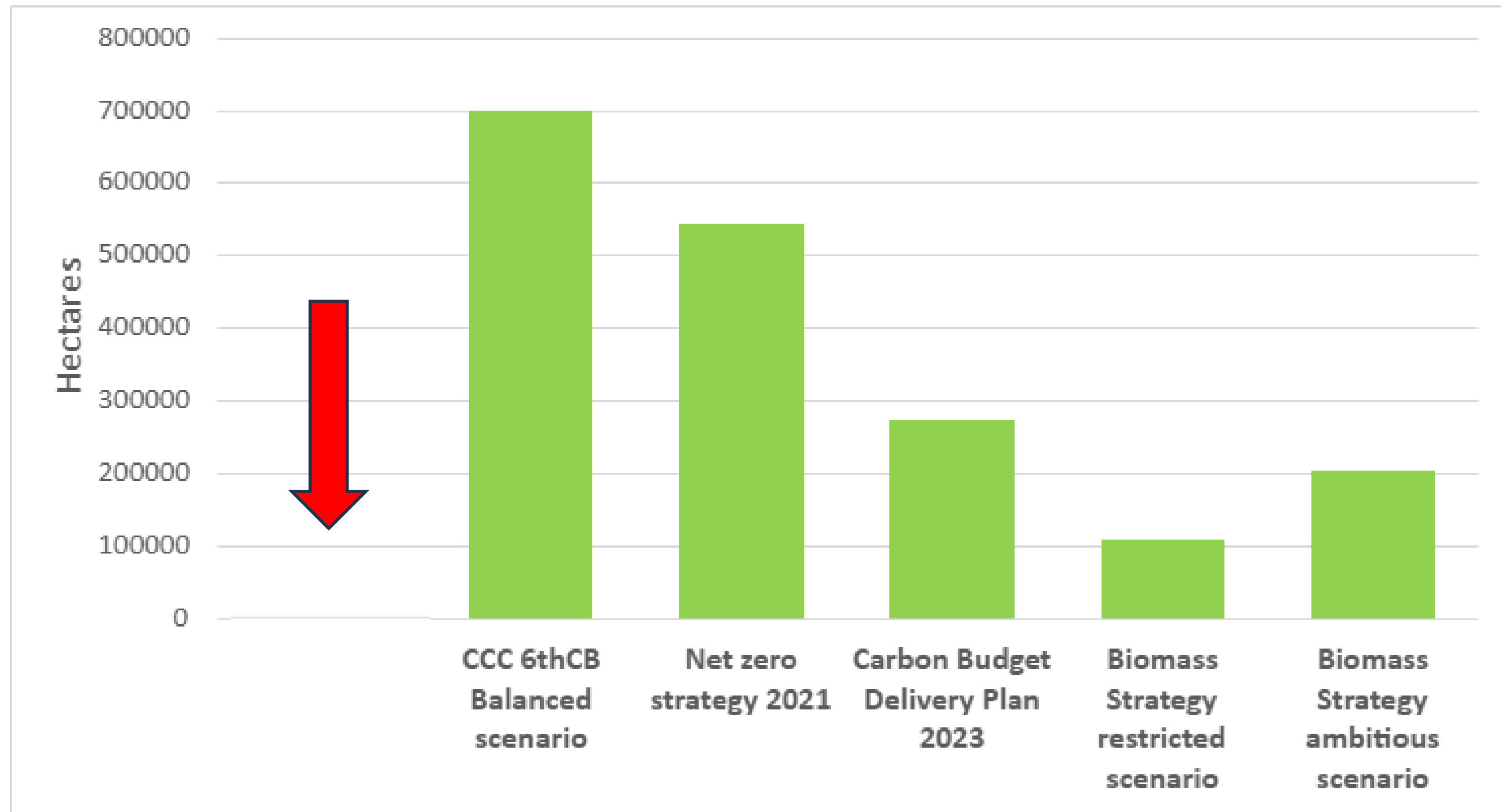
Solid Biomass in UK energy	Total (kt)	UK (%)
Wood (forest residues)	7,829	38
Waste wood	2,732	95
Other residues and sludge	1,116	86
Straw	896	100
Biomass crops	63	99.3

* Ofgem Biomass Sustainability Dataset 2020-2021

66% of biomass for renewable heat, power and transport is UK produced

We need more biomass and more UK biomass.....

What is the ambition for biomass crops?



Biomass Feedstock Innovation Programme

Biomass Feedstock Innovation Programme (DESNZ)

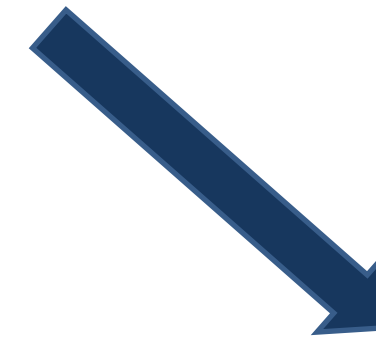
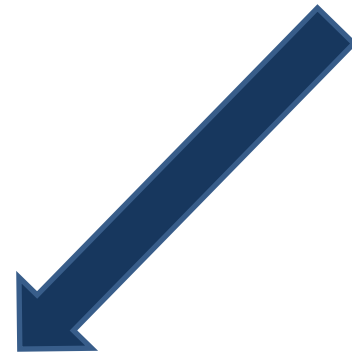
- £36M programme funded through Department for Energy Security & Net Zero
- Aiming to increase the production of sustainable UK-grown biomass
- Funding innovative ideas that address barriers to biomass production

11 Biomass Innovation Projects were funded

- Breeding platforms for biomass crop varieties
- Propagation, establishment and harvesting technologies
- Decision support tools
- Crop monitoring and data capture
- On-farm pelletisation
- Semi-wild biomass harvesting
- Marine algae biomass production



Biomass Connect: Innovation & Information Platform



Aims

Improve knowledge of biomass cultivation best practice and innovations

Generate independent information on biomass agronomy, crop performance and environmental benefits



Eight Biomass Hub Demonstration sites
across the four nations of UK

Biomass Information Hub

Online and in-person demonstration and knowledge sharing events and materials

Biomass Demonstrator Hubs

1,451,896 plants planted across the Biomass Connect network...



Woody crops

- Willow (SRC)
- Poplar (SRC and SRF)
- Eucalyptus (SRF)
- Alder (SRF)
- Black Locust (SRF)

Perennial grasses & forbs

- Miscanthus giganteus
- Miscanthus 'Athena'
- Reed Canary grass
- Switchgrass
- Sida
- Silphium



North Wyke Demonstration Hub – September 2024



Delivering evidence on biomass crop performance




Demonstration events

bc biomass connect

SFI schemes and biodiversity for biomass crops

May 16th
NIAB, Headley Hall



DEMO EVENT



Where do we now?

CENTRE FOR HIGH CARBON CAPTURE CROPPING



bc biomass connect

Biomass Connecting with the Future - Now!

September 12th
BGI
Chesham




DEMO EVENT



bc biomass connect

Integrating biomass crops into farming or land management systems

September 26th
Rothamsted Research
North Wyke



DEMO EVENT



bc biomass connect **PBC4GGR**

Willow for biomass production: Unlocking Opportunities, Carbon Sequestration and Biodiversity

October 8th 2024
Myerscough College
nr. Preston



DEMO EVENT



Website

www.biomassconnect.org

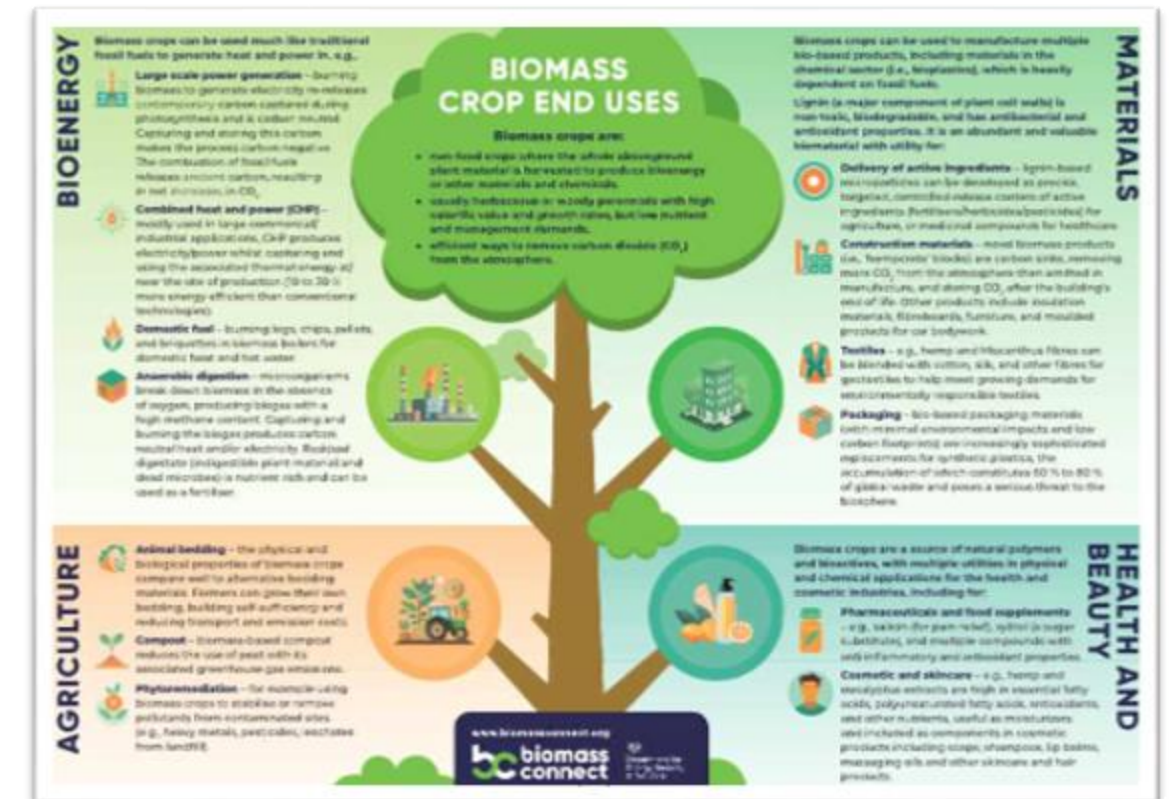
Technical literature

Demonstrator Hub information

News & updates

New media content

Events programme



<https://www.biomassconnect.org/comms-newsletter-sign-up/>

What are we hoping to achieve in Showcase 2024?

1. Increase your knowledge and awareness of biomass crops and innovations in the sector
2. Create a vision for the role of UK-produced biomass in Net Zero *and* develop an action plan to achieve it



Focus on the future not the past

- Input on development of biomass value chains (NNFCC session day-2)
- Working across silos and supply chains to create a blueprint for the future of the biomass industry (Creative Exchange sessions, both days)