



Innovation in Domestic Biomass Feedstock Production: Biomass Connect and the Envirocrops App

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CROPS FOR ENERGY LTD

BIOENERGY 1: BIOMASS POWER AND NET ZERO: WHAT IS ITS ROLE?
ALL-ENERGY 10 MAY 2023



Department for
Energy Security
& Net Zero



Department for
Energy Security
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Biomass Feedstock Innovation Programme

- £36M programme
- Aiming to increase the production of sustainable UK-grown biomass
- Innovative ideas that address barriers to biomass production
 - Breeding platforms for biomass crop varieties
 - Propagation
 - Establishment and harvesting technologies
 - Decision support and geospatial tools
 - Crop monitoring and data capture
 - On-farm pelletisation
 - Semi-wild biomass harvesting
 - Marine algae biomass production



biomass connect



- Raising awareness of biomass through demonstrations and knowledge sharing
- Independent information on biomass agronomy, economics and environmental benefits
- Geographic variation in biomass crop performance
- Supporting innovation development
- Supporting innovation development

Envirocrops

Decision support tool allowing users to do their own feasibility study

- Land requirement calculators
- Timescale calculator
- Economic calculators – production costs, return on investment?
- Logistics calculator - space requirements; transport requirements
- Decision trees on what to do when
- Digital mapping and yield model predictors
- Best practice guidelines
- Online directories - best varieties, contractors



Project collaborators



afbi



CALVIUM^o



Willow



Poplar



Miscanthus



Switch grass



Eucalyptus



Black Locust &
Alder



Reed canary
grass



Sida, Hemp &
Arundo

8 Biomass demonstration hubs across the UK:

DEMONSTRATION BLOCKS OF 10 BIOMASS SPECIES

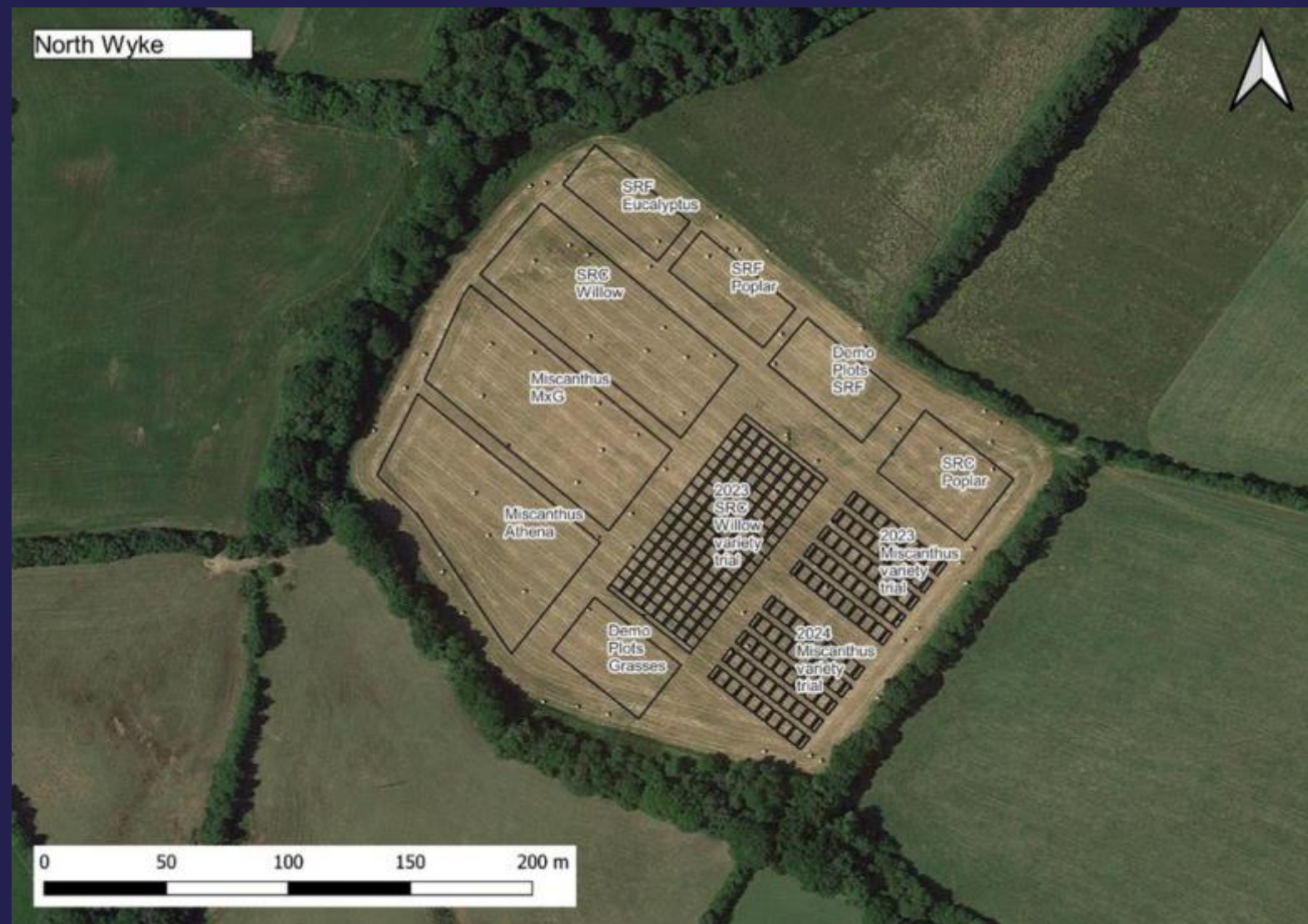
- 5 hectare demonstration sites at 8 locations
- Data on UK-wide performance of 10 different biomass species
- Environmental impacts of biomass crops e.g. soil carbon, biodiversity

SRC AND MISCANTHUS VARIETY TRIALS

- The first multi-site variety trials for biomass crops in the UK
- Data on variety performance across UK
- Varieties produced by leading UK and Swedish breeders



Rothamsted Research - North Wyke, Okehampton





Industry focused webinars and newsletter
















YouTube



Complete the table below

Select the tick boxes that apply to you and edit the estimated values if needed.

Land Preparation Operations - Miscanthus (Bales)

Operation	Cost / ha	Number of operations
<input checked="" type="checkbox"/> Ploughing	£70 	 1 
<input checked="" type="checkbox"/> Power Harrowing	£70 	 1 
<input checked="" type="checkbox"/> Rolling	£30 	 1 
<input checked="" type="checkbox"/> Sub-Soiling	£70 	 1 
<input checked="" type="checkbox"/> Discing	£50 	 1 
<input checked="" type="checkbox"/> Fertiliser Spreading	£200 	 1 
<input type="checkbox"/> Pre-Plant Spraying	£0	1



Total balance
£90,915

Production
743.93t

End of game



Bad luck! You made some mistakes and missed your target. Remember there is always help available, you only have to ask! Time to try again!



Your land only produced **743.93 tonnes**.
You didn't reach your goal of **800 tonnes**.



You end up with £90,915, making a profit of **£65,915**.

Play again →

What's next

Envirocrops

- Make any necessary improvements changes as a response to Biomass Strategy
- Add more crops
- Logistical pathways
- Bite sized chunks of information
- Update yield models
- Commercial elements

biomass connect

- Complete planting of all crops at all sites
- Demo events
- Economic case studies
- Autumn webinar programme



- Continue way beyond March 2025
- Independent information, independent support
- Long term yield information

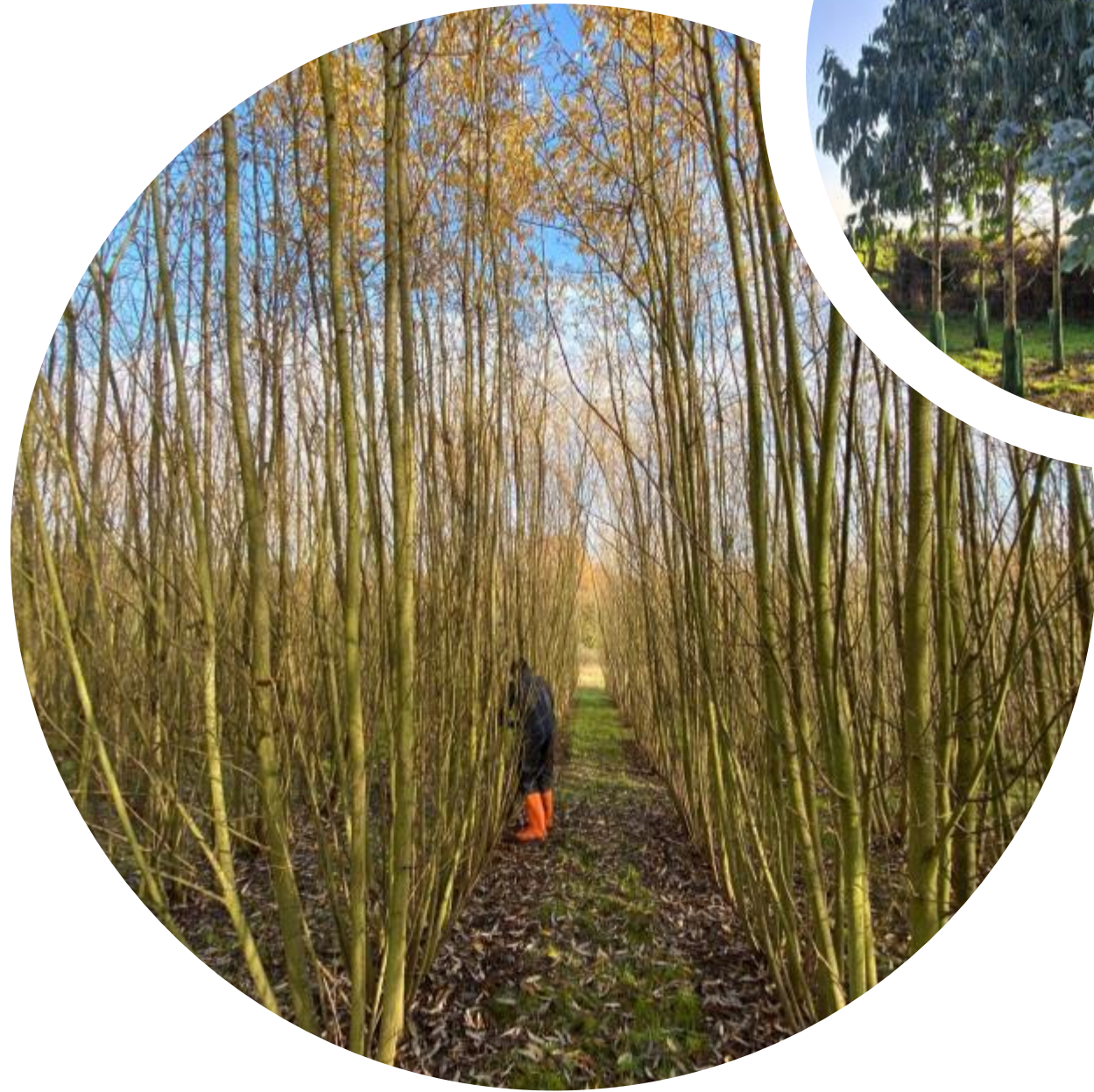
Envirocrops

- Include all crops with environmental credentials
- Self sustaining through commercial elements and possible trading platform
 - Biomass, carbon, land
- Non-profit
- Opportunity to plough revenue into other areas of long-term biomass research

**The vision for
the future**

 **Envirocrops**

www.envirocrops.com



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