Innovations in Domestic Biomass Feedstock Production:
The Envirocrops web app

Kevin Lindegaard Woodheat 2023 Conference 24 October 2023



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Typical steps in a biomass crops FS

Step 5 Step 1 Step 2 Step 3 Step 4

What type of biomass fuel do I want?

How much fossil fuel is currently used?

What Biomass crops are suitable?

Based on yield expectation what amount of land is required?

Are there any constraints e.g. SSSIs, AONBs, natural heritage?

Step 7 Step 8 Step 6

What is the capital cost of establishing XX hectares? In total and per hectare?

If we start planting next year, when will we achieve the amount of biomass required?

What is the current land use? What will be the lost income from this land use?

What is the lifetime production cost? p/kWh or £/t fuel produced?

Step 9

Logistical issues:

Step 10

What storage space required? How much ash produced?

Step 12

What are the pre planting regs

Step 13

How do we thereafter?

What varieties or species do I plant?

Step 15

Who can help prepare the land, plant the crop and harvest the crop?

Step 16

Step 11

What are the regs associated with using the fuel? RH, BSL/ Woodsure & SFR

Potential environmental benefits e.g. Carbon savings

prepare the land for planting & manage the crop

Step 14

The problem with a feasibility study

- It might not be feasible!
- A snapshot in time
- Out of date as soon as they are published



Biomass crops information

- Farmer led investigations
 - Internet based
 - Scattered info
 - Out of date
- Independent consultancy support
 - Few experts
 - · Has a price tag
- Practitioner based information
 - Not independent
 - Usually one tracked
 - Comes with sales pitch



The Envirocrops revolution



Answers to the big questions*

- How much land do I need to become self sufficient?
- What are the best biomass crops and the best varieties?
- How long will it take to get to peak production?
- How much will it cost to produce?
- What is the return on investment?

- How much space will it require to store?
- Will it require drying?
- How much ash will be produced?
- Are there any legal requirements?
- Who are the best people to help me do it?



^{*} For those that already have a biomass boiler















Eucalyptus

Poplar

Novel Energy Crops

Energy Grasses

Sign up

www.envirocrops.com

Get started

Before you get started, we need to ask a few questions to better understand your current position and background. Once we have gathered a few details, you will be able to plan your land to help determine which crop is best, as well as the estimated yields and timescales.

Continue

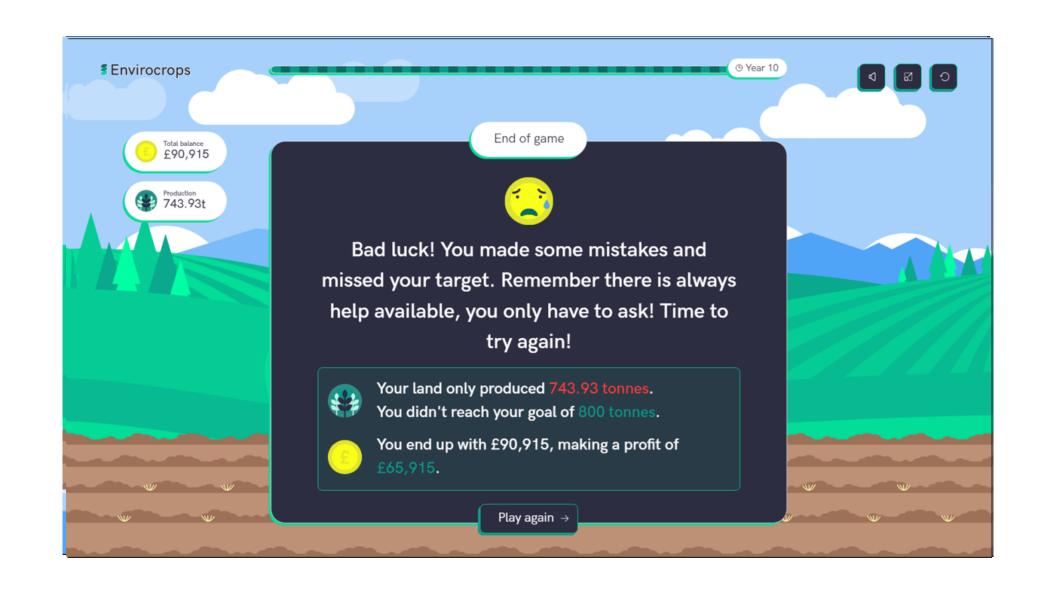
Already have an account? Log in



Stem Game

www.envirocrops.com/play









Enter our competition to be in with a chance to win!

https://envirocrops.com/resource/PrizeCompetition







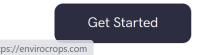




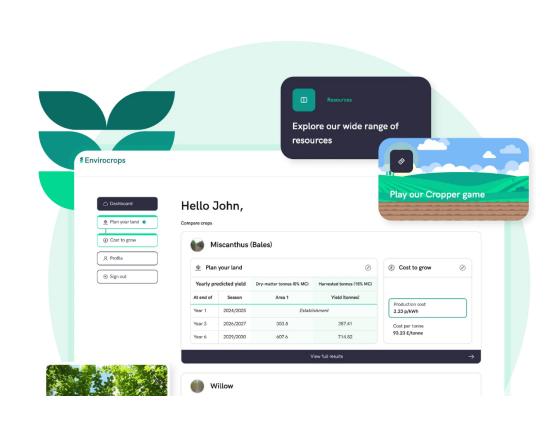
About STEM Game Resources

Envirocrops

Intelligent and accessible – the free decision making web based app putting you in control of biomass production.



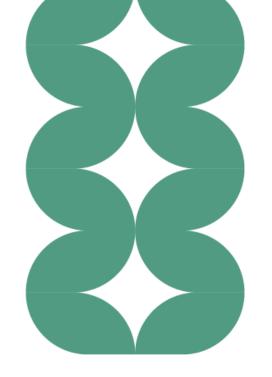
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Resources Dashboa Complete the table below 0 Select the tick boxes that apply to you and edit the estimated values if needed. 0 Land Preparation Operations - Miscanthus (Bales) 0 Operation Cost / ha Number of operations 0 Ploughing £70 0 Power Harrowing 1 (+) £70 0 0 Rolling 1 (+) £30 0 Sub-Soiling £70 1 (+) 0 0 (+)£50 Discing 0 0 Fertiliser Spreading 0 1 (+) £200 \wedge Pre-Plant Spraying £0

Why should you be interested?

- Boiler owner / landowner find out how to become self-sufficient and save on fuel costs
- Boiler owner / non landowner find out likely costs of buying fuel
- Woodfuel supplier biomass crops that might plug a supply gap
- Consultant / Carbon trader / Agricultural student get up to speed with the latest developments
- Small companies online directory and marketplace
 - Selling plant materials, contractor, consultant, woodfuel supplier, service engineer, agronomist
- Policy maker / Academic test proposed policy incentives and see if they make financial sense / market trends



Thank you for your attention

envirocrops.com/resource/Prize Competition

App feedback
Cropper feedback

