

# Botany Farms 30 Sep 2023

Prepared using UK as the region in the Farm Carbon Calculator.

## Carbon balance

### Emissions

**121.90**

tonnes CO<sub>2</sub>e per year

### Offset

**-121.93**

tonnes CO<sub>2</sub>e per year

### Carbon Balance

**-0.03**

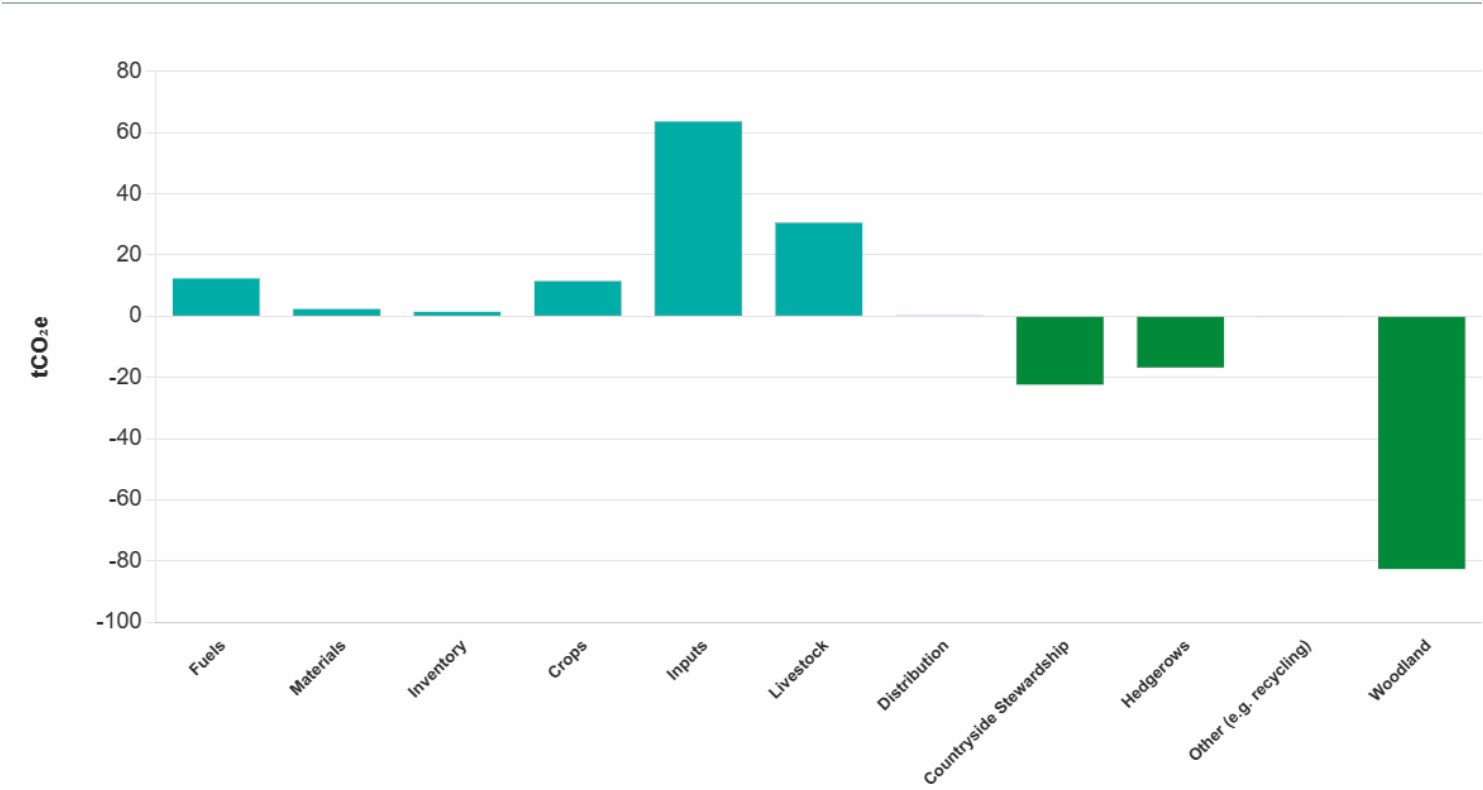
tonnes CO<sub>2</sub>e per year



KPIs

Carbon Balance / hectare:	Carbon Balance / tonne:	Fuel / hectare:
0.00	-0.0001	0.1365
tonnes CO2e/hectare/year	tonnes CO2e/tonne of product	tonnes CO2e/hectare from fuel
Fertiliser emissions:	Water:	Carbon Income:
0.4914	0.0345	£0.00
tonnes CO2e per ha from fertilisers	m3 water per tonne of product	carbon income (£)

Breakdown of Emissions and Sequestration



# Table of Emissions and Sequestration

Emissions	tonnes CO <sub>2</sub> e per year	%
Fuels	12.31	10.10%
Materials	2.32	1.90%
Inventory	1.42	1.16%
Crops	11.44	9.38%
Inputs	63.61	52.18%
Livestock	30.51	25.03%
Distribution	0.29	0.24%
Total	121.90	100%

Offset	tonnes CO <sub>2</sub> e per year	%
Countryside Stewardship	-22.35	18.33%
Hedgerows	-16.75	13.74%
Other (E.G. Recycling)	-0.17	0.14%
Woodland	-82.65	67.79%
Total	-121.93	100%

# Emissions by Scope & Greenhouse Gas

Emissions	Emissions by Scope				By GHGs			Total
	Scope 1 tCO <sub>2</sub> e	Scope 2 tCO <sub>2</sub> e	Scope 3 tCO <sub>2</sub> e	Outside of Scope tCO <sub>2</sub> e	CO <sub>2</sub> tCO <sub>2</sub> e	CH <sub>4</sub> tCO <sub>2</sub> e	N <sub>2</sub> O tCO <sub>2</sub> e	
Fuels	9.89	0.11	2.32	0.00	12.31	0.00	0.00	12.31
Materials	0.00	0.00	2.32	0.00	2.32	0.00	0.00	2.32
Inventory	0.00	0.00	1.42	0.00	1.42	0.00	0.00	1.42
Crops	11.44	0.00	0.00	0.00	8.41	0.00	3.03	11.44
Inputs	22.38	0.00	41.23	0.00	55.42	0.00	8.19	63.61
Livestock	30.51	0.00	0.00	0.00	0.00	28.88	1.63	30.51
Distribution	0.00	0.00	0.29	0.00	0.29	0.00	0.00	0.29
Total	74.22	0.11	47.58	0.00	80.17	28.88	12.86	121.91

## Yield

Total Production	Units	Yield
Crops: Agricultural Crops	tonnes	332.22

### Common Land

Area	Subdivision	Emissions (tCO <sub>2</sub> e)	Active Livestock Units
	0	0.00	0
Total		0.00	0

## Farm details

Report type	Standard
Region	UK

## Report Disclaimer

This Carbon Footprint Report has been generated using the Farm Carbon Calculator, a software tool developed by the Farm Carbon Toolkit. Alongside Farm Carbon Toolkit's General Terms & Conditions, please read this disclaimer carefully before interpreting or relying upon the information presented in this report.

- **Data Input Responsibility:** The accuracy and completeness of the carbon footprint calculations depend on the quality and accuracy of the data inputted into the Farm Carbon Calculator. Users of this report are responsible for providing accurate and reliable data, understanding that any inaccuracies or omissions may affect the calculated results.
- **Accuracy and Assumptions:** The carbon footprint calculations and any benchmarks presented in this report are calculated using a variety of standards and protocols, with emissions factors drawn from scientific literature and industry data. While every effort has been made to draw on high-quality and up-to-date information, users should understand that there can be inherent limitations and uncertainties associated with the underlying methodology and data sources.
- **General Information:** This Carbon Footprint Report is intended to provide general information and estimates regarding greenhouse gas emissions, carbon sequestration, and nitrogen balance. For specific advice or guidance, we recommend supplementary consultation with appropriate experts or advisors.
- **Use of Report Data within the Voluntary Carbon Marketplace:** The Farm Carbon Toolkit acknowledges that some users of the Farm Carbon Calculator may be interested in participating in the voluntary carbon marketplace. It is essential to note that this Carbon Footprint Report should not be used as the sole basis for participating in carbon offsetting schemes without the implementation of an independent verification process. It is strongly recommended that any carbon offsetting scheme adheres to recognized best practices, such as The Oxford Principles for Net Zero Aligned Carbon Offsetting, which address important considerations such as additionality, permanence, and double-counting.
- **Limitation of Liability:** The Farm Carbon Toolkit and its staff shall not be held liable for any direct, indirect, incidental, consequential, or punitive damages arising from the use of this Carbon Footprint Report, including but not limited to any errors, omissions, or misinterpretation of the information presented.
- **Third-Party Content and Links:** This Carbon Footprint Report may contain references to third-party content or websites. The Farm Carbon Toolkit does not endorse or assume any responsibility for the accuracy, completeness, or reliability of such content or websites.

By using this Carbon Footprint Report, you acknowledge and agree to the terms and conditions outlined in this disclaimer.









**Report downloaded:** 28/02/2024 08:26

## Full Data



---

## Fuels





### Diesel

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Red diesel (gas oil)	3,420 Litres	11.60	94.20%	  	
Road diesel	110 Litres	0.35	2.83%	  	

### Electricity




Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Average tariff	550 Kilowatt hours (kWh)	0.14	1.17%	  	

### Liquid fuels




Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Petrol	80 Litres	0.22	1.80%	  	

## Materials

### Aggregate

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Average aggregate by weight	2 Tonnes	0.01	0.64%	  	

### Cement

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
General cement by weight	0 Tonnes	0.04	1.79%	  	

### Complete fencing

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Barbed wire (3 strands)	1,391 Metres	2.06	88.54%	<div> <div>✓</div> <div>✓</div> <div>⬜</div> </div>	

### Roads & tracks

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Recycled Asphalt Plannings	6 Tonnes	0.12	5.04%	<div> <div>✓</div> <div>✓</div> <div>⬜</div> </div>	

### Stone

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
General stone by weight	1 Tonnes	0.08	3.40%	<div> <div>✓</div> <div>✓</div> <div>✓</div> </div>	
Limestone by weight	0 Tonnes	0.01	0.50%	<div> <div>✓</div> <div>✓</div> <div>✓</div> </div>	

### Water & Sewage

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Mains water	11 Metres cubed (m3)	0.00	0.07%	<div> <div>✓</div> <div>✓</div> <div>⬜</div> </div>	

Inventory

Farm Machinery - Fore end loaders

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
LuiGong mini digger	21 Horsepower	0.84	59.08%	<div><div>✓</div><div>✓</div><div>✓</div></div>	

Implements (by weight)

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
ATV trailed flail mower 120FM	0 Tonnes of metal	0.08	5.38%	<div><div>✓</div><div>✓</div><div>✓</div></div>	<a href="#">🔗</a>

Road vehicles - Cars and Vans

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Honda ATV- TRX500 FA6	7,000 £ spent on new vehicle	0.50	35.54%	<div><div>✓</div><div>✓</div><div>✓</div></div>	

Crops





Agricultural crops

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Barley	129 Tonnes harvested	4.21	36.79%	<div><div>✓</div><div>✓</div><div>✓</div></div>	<a href="#">🔗</a>
Linseed	30 Tonnes harvested	2.71	23.69%	<div><div>✓</div><div>✓</div><div>✓</div></div>	<a href="#">🔗</a>
Wheat	173 Tonnes harvested	4.52	39.52%	<div><div>✓</div><div>✓</div><div>✓</div></div>	<a href="#">🔗</a>


















Inputs

Fertiliser









Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Custom blend	19 Tonnes	44.33	69.69%	  	

Sprays - Generic

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Fungicide	15 Kg of active ingredient	0.43	0.68%	  	
Growth Regulator	60 Kg of active ingredient	1.14	1.79%	  	
Herbicide	663 Kg of active ingredient	17.66	27.76%	  	
Insecticide	0 Kg of active ingredient	0.00	0.01%	  	
Molluscicide	4 Kg of active ingredient	0.04	0.06%	  	

## Livestock

### Sheep

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Ewes	115 Average head of livestock on farm during last year	24.94	81.73%	  	
Lambs	60 Average head of livestock on farm during last year	5.58	18.27%	  	




## Waste - Offsets

### Plastics (Recycling)

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
HDPE	0 Tonnes	-0.17	100.00%	  	

## Distribution

### Contracted

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
HGV (33t +)	21 Delivery distance in miles	0.29	100.00%	  	

# Sequestration

## AB1 - Nectar Flower Mix

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Baseline: winter wheat	2 Hectares (ha)	-9.77	8.02%		

## AB9 - Winter bird food

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Baseline: winter wheat	2 Hectares (ha)	-12.58	10.33%		

## Hedgerows

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Hedgerows (large growth with trees)	8,046 Length in metres	-16.28	13.37%	<div><div>✓</div><div>✓</div><div>✓</div></div>	<a href="#">🔗</a>
Hedgerows (managed)	1,714 Length in metres	-0.47	0.39%	<div><div>✓</div><div>✓</div><div>✓</div></div>	<a href="#">🔗</a>

## Species and age specific

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Mixed	4 Hectares (ha)	-82.65	67.88%	<div><div>✓</div><div>✓</div><div>✓</div></div>	<a href="#">🔗</a>