

Our carbon footprint 2015

Measuring the amount of carbon emitted by a person, business, organisation or country is what is called a 'carbon footprint'. For us we consider it very important to monitor what our carbon footprint is every year, and how it changes.

So what's recorded?

We look at all our inputs to the business over the past 12 months to work out our carbon emissions. This includes:

- Fuels – like diesel and petrol, as well as electricity and all business travel
- Materials – embodied energy in materials like wood, plastics and metals
- Fertility – the biological emissions from processes including composting and nitrogen fixation
- Distribution – fuel used to distribute produce to customers (food miles)
- Waste – how much waste is produced and the emissions that creates

Then the other part is the carbon sinks on the farm that absorb atmospheric carbon every year. These include:

- Woodland
- Hedges
- Uncultivated grassy areas
- Orchards
- Soils

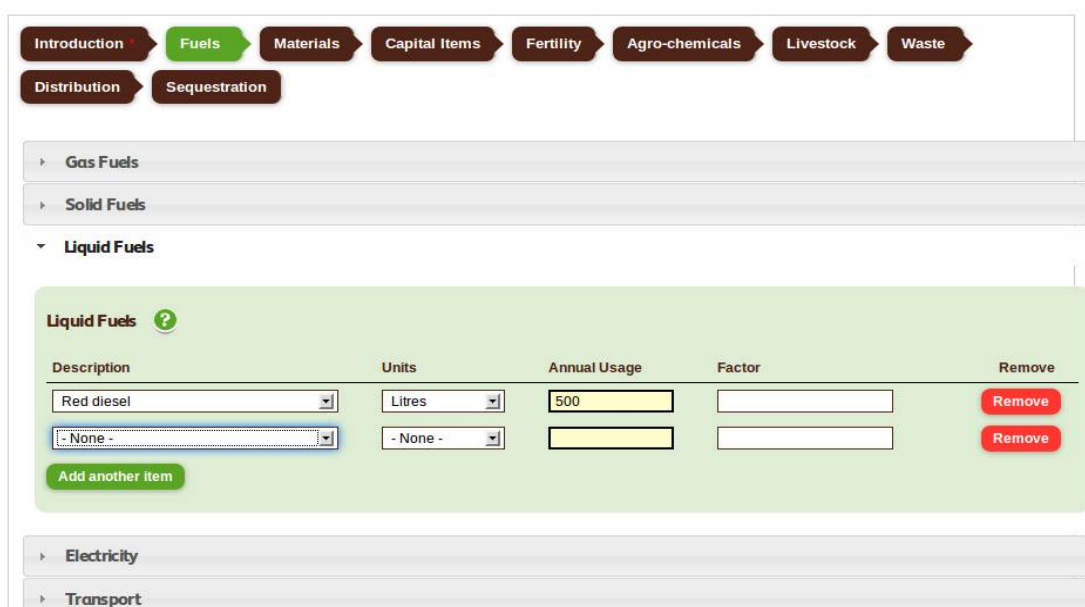
How do you calculate the numbers?

We use the online tool [Farm Carbon Calculator](#), which allows the user to enter data for their own farm and it works out the carbon emissions and the carbon sequestered (absorbed) by biomass and soils.



Farm Carbon Calculator

The online Calculator looks like this:



The screenshot shows the 'Fuels' tab selected in the navigation bar. Below the navigation bar, there are expandable sections for 'Gas Fuels', 'Solid Fuels', 'Liquid Fuels', 'Electricity', and 'Transport'. The 'Liquid Fuels' section is expanded, showing a table with the following data:

Description	Units	Annual Usage	Factor	Remove
Red diesel	Litres	500		Remove
- None -	- None -			Remove

Below the table is a green button labeled 'Add another item'.

Results for 2015 (most recent calculation)

The results from the Farm Carbon Calculator show how much Carbon Dioxide equivalent (CO₂ e) greenhouse gases Scilly Organics has produced, and what proportion of the emissions each section represents. It also shows how much Carbon Dioxide (CO₂) has been sequestered.

Emissions

	CO ₂ e (kg/year)	% total emissions
Fuel	1,027	44.5%
Materials	280	12.15%
Capital Items	219	9.49%
Livestock	0	0%
Fertility	279	12.08%
Agro-chemicals	0	0%
Distribution	651	28.22%
Waste	-149	-6.44%
Total:	2,307	100%

Sequestration

	CO ₂ (kg/year)	% total sequestration
Orchards & Vineyard	207	1.77%
Woodland & Hedges	19,108	162.8%
Field Margins	111	0.95%
Wetland	0	0%
Soil Organic Matter	-12,709	-108.28%
Woodland (detailed analysis)	5,020	42.77%
Total	11,737	100%

This means that the biomass and soils on the farm absorbed nearly 12 tonnes of CO₂, whilst the emissions from other inputs measured less than 2.5 tonnes of CO₂ e.

Fuel use and distribution of food make up the largest emissions sources, with a smaller amount coming from nitrous oxide releases from fertility sources, and embodied emissions in capital items (polytunnels and glasshouse) and materials used (cement, wood, plastics, etc).

However the the woodland and hedges on the farm are absorbing a lot of CO₂, which is far outweighing all the emissions that are created in running the business.

To put that plainly, every time you vegetables from Scilly Organics you're supporting a system that is contributing to reducing atmospheric carbon levels. If every farm were doing that then we would be making a serious positive impact on climate change.

Aims for 2015

The good part of this calculation is that allows you to identify which parts of the business are creating emissions and which assets are absorbing the most carbon. It therefore focuses you on how to improve. Our aims for this year are:

- Reduce fuel use further
- Plant more hedges
- Raise organic matter levels in soils
- Measure organic matter levels in uncultivated areas of the farm
- Reduce waste levels and increase recycling rates

Written by Jonathan Smith. 1st December 2016.