



What's changed?

April and Spring updates 2025

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Methodology v.3.2

Data collection spreadsheet v.1.6.3

References v.1.6.4





As a leading Carbon Calculator, The Farm Carbon Calculator is upgraded on a regular basis. Our users therefore benefit from the most recent science, new additional features and a continually improving experience. Read on to find out more.

There will be a series of updates in Spring 2025 where this methodology will be updated further. We expect changes to how the livestock section functions and to how we calculate emissions relating to land use change. Our next scheduled interim update will be in Autumn 2025.

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1. At a glance

Here's a quick summary of everything that has changed in the current version of the Farm Carbon Calculator.

This update is our most extensive and thorough calculator release in recent years, and is only possible thanks to the growth of our calculator team, the support we receive from our farm advisory colleagues and administrative support. These improvements also owe thanks to you the user for your support, enquiries and ongoing interest in supporting our mission at the Farm Carbon Toolkit.

In this release we have added and updated emissions factors for items and activities you will perform on-farm, and we have added functionality to make entering data into the system easier, and therefore make generating carbon footprint of your farm smoother and more accessible.

All **3000+** items already in the carbon calculator have been checked for validity and accuracy, as they are every year, and these have been updated where any have changed or where new data has been released.

We have added **7000+ more** items to the calculator so it can better reflect your farm. These include: thousands of spray and fertiliser products, hundreds of sources of organic fertility, hundreds of new crops grown often in market gardens across the country, more livestock feeds than ever before, options to reflect agroforestry practices on-farm, the addition of new materials which we see used in all settings, and more miscellaneous additions besides.

Despite these big increases in items, many of the functionality changes that have occurred in this update will be subtle for the user, but are significant improvements to how the calculator works and feels.

You will notice improvements to the information we include whilst you enter data that reflects your farm which are based on user feedback and enquiries we have received. Options around poultry are easier to access. You can search for products within lists of information to speed up the data entry process, and we have simplified report comparisons and your report summary pages to highlight the important information.

For our commercial users we have streamlined and improved the development of your white label and other professional services you receive, meaning user groups and projects gain bespoke capability we hope they will use to start footprinting faster than ever before.



In summary:

- **New fertiliser and spray products have been added**, allowing the use of thousands of common brand name products to be reflected in your carbon footprint.
- **New livestock feed options have been added from GFLI** (The Global Feed LCA Institute) which allows feed components to be entered with more granularity, and more accurately.
- **New items have been added to reflect crops and sources of organic fertility commonly used in Market Gardens** – part of a pilot development project supported by LANTRA Wales and Social Farms and Gardens which gives these users a better home for their data within the system.
- **New & updated organic fertility sources have been added.** This includes more nuance to reflect varied farming practices: enter different application types, general location of use, the approach to application, and efforts toward emissions mitigation.
- **New woodland, agroforestry, silvopasture and in field tree options.** Allowing users to reflect how woodlands are increasingly seen in farm-specific settings.
- **New surfacing and miscellaneous materials have been added.** Allows users to enter landscaping activity to their reports and if they wish, to use CAD-based data more smoothly.
- **New search functionality in drop-down boxes** will make it easier to find items or products in our expanding list of options.
- **Improved access and clarity for poultry farmers** with a separate livestock data entry section and the addition of more poultry feeds.
- **Simplified and improved ability to compare reports**, meaning more insights can be made year on year or between enterprises.



2. Updated data sources

Every year we check and update any data sources which we use to provide emissions factors behind the items in your report.

We do this because as the world changes, and research also develops, we expect some of these to change. Emissions factors change because the real emissions associated with materials, transport, energy generation and just about all human activity also changes annually. As farmers looking to calculate accurate annual footprints we must reflect the wider picture.

This release sees us update four of our major data sources to use their most recent figures:

- the UK GHG inventory (produced by Ricardo and released by the UK Government annually)
- The UK Gov emission conversion factors (released by DESNZ annually)
- the ICE data base (in it's 4th edition by Circular Ecology)
- the GFLI database (access to the most recent emissions factors from 2023)

Using the most recent emissions factors is essential to maintain the accuracy of your carbon footprint because the emissions in your report represent emissions releases at the time, which allow you to benefit from the great work being made in de-carbonising our industrial processes.

For example, in the most recent DESNZ conversion factors (Ref 107) the Scope 3 emissions associated with electricity generation have decreased by ~9%, and this will be partially due to the transition to more renewable energy sources. This transition is developing, and as more renewables are incorporated more reductions will be seen in future years. As such electricity use from the year from 1 April 2025 onwards, at least until figures update again, will be associated with ~9% less emissions than the preceding year.

These data sources also underpin many of the core items in the calculator since they are used to derive emissions factors for other items.

For example, in the newest version of the ICE database (V4, Ref. 108) the emissions factor for galvanised steel has decreased from V3 to V4 by ~5%, from 2760 kgCO₂e/tonne to 2620 kgCO₂e/tonne. From this we calculate emissions factors for fencing wire and netting for example, so all decrease. In this example the emissions associated with barbed wire falls from 0.2128 kgCO₂e/meter to 0.2020 kgCO₂e/meter.

3. How changed emissions factors may affect your reports

To help our users understand how updated emissions factors in the new methodology will affect reports in our system, we have used a few example farms through The Farm Carbon Calculator with real anonymised data. The reports were moved between our previous methodology and this update



by moving the report date - both before and after 1st April 2025 (The new methodology described in this update covers the year 2 April 2024 - 1 April 2025).

The results of this are shown below:

Table 1. Comparison of Carbon Footprint Reports using methodologies 3.1 & 3.2

Report	Category	1 April 2024 onward (tCO2e)	After 1 April 2025 (tCO2e)	Category Difference (%)	Total Difference (%)
Report 1 Arable farm (an example)	Fuels	150.09	148.55	-1.02 %	Emissions: -15.97 %
	Materials / inventory	0.91	1.03	13.19 %	
	Crops	351.65	193.55	-44.96%	Balance: -17.72 %
	Inputs	514.49	511.54	-0.57%	
	Livestock	N/A	N/A	N/A	
	Waste	0.02	0.01	-50 %	
	Sequestration	-104.97	-104.14	-0.79 %	
Report 2 Beef Farm (an example)	Fuels	43.78	43.80	0.05 %	Emissions: -10.48 %
	Materials / inventory	0.91	0.84	-7.69 %	
	Crops	30.89	30.89	0 %	Balance: -11.65 %
	Inputs	57.69	57.69	0 %	
	Livestock	717.40	628.42	12.4 %	
	Waste	0.13	0.04	-69.23 %	
	Sequestration	-85.86	-85.85	-0.01 %	
Report 3 Poultry Farm (an example)	Fuels	162.56	153.74	-5.43 %	Emissions: -9.16 %
	Materials / inventory	2.71	2.47	-8.86 %	
	Crops	6.40	6.40	0 %	Balance: -32.31 %
	Inputs	14.60	14.60	0 %	
	Livestock	100.23	78.60	-21.58 %	
	Waste	11.10	11.10	0 %	

Report	Category	1 April 2024 onward (tCO ₂ e)	After 1 April 2025 (tCO ₂ e)	Category Difference (%)	Total Difference (%)
	Sequestration	-216.82	-216.82	0 %	
	Processing	5.25	8.19	35.90 %	
Report 4 Dairy Farm (an example)	Fuels	143.09	138.98	-2.87 %	Emissions: 3.78 %
	Materials / inventory	6.70	6.58	-1.79 %	
	Crops	86.89	86.89	0 %	Balance: 5.42 %
	Inputs	60.45	60.45	0 %	
	Livestock	2459.50	2589.41	5.28 %	
	Waste	0.06	0.02	-66.67 %	
	Sequestration	-453.66	-453.31	-0.08 %	
	Processing	23.30	23.53	0.98 %	
Report 5 Horticulture Farm (an example)	Fuels	106.83	106.88	0.05 %	Emissions: -4.96 %
	Materials / inventory	569.94	550.60	-3.39 %	
	Crops	204.50	262.83	22.19 %	Balance: -5.95 %
	Inputs	22.13	22.13	0 %	
	Livestock	N/A	N/A	N/A	
	Waste	0.53	0.16	-69.81 %	
	Sequestration	-398.89	-386.45	-3.12 %	
	Distribution	12.36	13.36	0 %	

Between this methodology and the last, there are varied changes in the report results. In the above examples, the changes in total emissions for the farm carbon footprint is anywhere from 3.78% to -15.97%. Due to changes in estimated sequestration, the overall carbon balance also changed between 5.42% and -32.13%. Whilst -32.13% is quite a large difference, this decrease was mainly driven by a decrease in emissions associated with livestock feeds, where there is now improved accuracy in specific livestock feeds emissions factors.



In these examples, the carbon emissions and carbon balance both rise and fall, with the carbon balance following the direction of the carbon emissions. The change in carbon emissions was more pronounced which suggests changes to calculated emissions are driving overall change between methodologies, not sequestration.

In some categories, like waste, we see large changes, with emissions decreasing. However, as waste typically forms a small part of most farms' footprints, which is reflected in these reports, these changes do not impact the total report's emissions by a large amount.

In some of the examples, emissions from fuels dropped by as much as -5.43% whereas in one instance it increased by 0.05%. Emissions associated with crops, livestock, and inputs were seen to both rise and fall. In these areas we cannot predict the effect of the changed methodology without knowing which exact items are selected. This document will guide as to which factors are having the most effect here, by presenting their percentage change in Table 2.

Users of the calculator should still select a reporting period which best reflects their farm, or the purposes of their report. We would like to underscore that we consider the changes which are displayed above between methodologies are a normal and expected feature of carbon footprinting businesses within an environment where the science, underlying data, and methodologies are being developed in parallel.

4. Corrections to previous versions of the Calculator

Sometimes in the process of our work we make errors – and due to our system being in constant use, these are reflected in reports generated at certain times. Where this has been the case in previous years you can find corrections on our website on the [Resources page](#). When we make a correction, we ensure to check all previous emissions factors are corrected, which means if you recalculate an old report, you may see that the emissions change. We have corrected the following items in this update:

- Plant-raising media (all items drawn from reference 16 in our references list) had previously used an offsetting approach to calculate emissions factors, taking into account carbon sequestration. As this was identified to not be GHG protocol compliant, now the Life Cycle Analysis – LCA approach is used instead. This has led to an increase in these emissions factors.
- The carbon sequestration associated with growing perennial stone fruit, nuts and miscanthus was being underestimated. This value has been corrected so increased sequestration is seen resulting from these crops on an annual basis.
- Categories in Distribution > Road | Sea | Rail | Air freight used an incorrect kilometer to miles conversion, meaning the emissions associated were being underestimated. In Public transport > Bus, this conversion was omitted, meaning these emissions were being also underestimated.



- Under specific car fuel use entered by miles and miles per gallon (mpg), emissions factors were being reported per litre rather than per gallon. This has been corrected by applying a conversion factor, but means emissions associated with this mode of entry have increased.
- ForFarmers feeds were updated in 2024, however the change was overridden, so these factors have been re-implemented.
- Biomass crops > Hemp had previously contained an emissions factor that assumed roots were renewed every 3 years rather than being an annual crop. It is now an annual crop meaning the emissions associated with root residue renewal have increased.
- The emissions factors for derived fertilisers had been underestimating the emissions from N, P & K due to an error in the way constituent components were implemented as a percentage of the total product. A correction to how the emissions factors are generated has rectified this error but means emissions associated with derived fertilisers have increased.
- An individual error with Countryside Stewardship scheme GS4: Legume and herb-rich swards meant the modelled sequestration was incorrect and this error has been rectified.
- The term 'Offsets' was previously used to describe carbon sequestration within the tool and on the results page, this terminology has now been updated to 'Removals'.

Fixing existing reports

⚠ This update means that if an existing report made before 1 April 2025 which contains the above items is copied or edited, or you click 'recalculate' on the report, your emissions results will change. If you would like to prevent this happening accidentally, you can lock your report from the report summary page. Then you can copy the report and amend the copy.

The copy function can be used to leave an original undisturbed. Amend the new copied report, since this will update anyway during the copying process. It is not necessary to amend or change an old report if this has been used or reported externally.

If you need assistance with this make sure you contact our team.

5. Summary of new items added

We are pleased to announce that the calculator has again grown to better reflect farming in the UK, different farm types, and a greater range of practices. We know that every time such developments are made we allow farmers to better reflect their activities within their carbon footprint.

The below list is a summary of items added during this update and we encourage you to browse the list, and use anything you recognise in your farm activities in your next report. If you use something on-farm and can't find it - [get in touch](#) and our team can help you enter it, or record your request for our next update. More detail on these is provided in the Calculator alongside the items in the form of tool-tips.

Table 2. Items added, or terms changed, for v3.2 (April, 2025)

Items	Ref	Notes
Fuels		
Updating of DESNZ emissions conversion factors	107	Emissions factors for fuels have been updated to the most recent DEZLN release. For most items the change is minimal (<5% change), below are some more significant changes.
Liquid fuels > Biodiesel HVO	107	Increased by 10%
Electricity > Average tariff	107	Decreased by 9.5%
Electricity > 100% renewable tariff	107	Decreased by 18.5%
Cars > Specific Data > Diesel (Miles per gallon) & Petrol (Miles per gallon)	107	Correction to emissions factor by applying litres to gallons conversion factor.
Cars > Specific electric vehicle energy use	107	Decreased by 9.5%
Cars > Small electric vehicle miles	107	Decreased by 11% (incl. Contracted miles)
Cars > Medium electric vehicle miles	107	Decreased by 12% (incl. Contracted miles)
Cars > Large electric vehicle miles	107	Decreased by 15% (incl. Contracted miles)
Public transport > Bus	107	Increased by 50%. N.B. There was also an omitted conversion from km to miles in one of the emissions factors for bus transport that has now been corrected.
Separation of Natural gas, LPG and CNG.	107	Separated options now available, for each. The LPG factor has increased by 13% for emissions per litre.
Materials		
Surfaces, paving & decking <ul style="list-style-type: none"> • Sub base • Surfaces and paving excl. subbase • Surfaces and paving incl. Subbase 	108	New options added for landscaping, with various material options and base options. Users can enter square meters of surfaces or weight of materials

Items	Ref	Notes
<ul style="list-style-type: none"> Decking 		
Update of ICE emissions factors	2 & 2.a -> 108	Emissions factors sourced from (or derived using) ICE V2 & ICE V3 have been updated to ICE V4. For most items the change is minimal (<5%), below are some of the more significant changes:
Aggregates > Asphalt by volume	108	Decreased by 9%
Aggregates > Gravel by weight	108	Decreased by 16%
Aggregates > Reinforced concrete & Blocks	108	Decreased by 8%
Steel > Stainless steel	108	Decreased by 32%
Steel > Rebar	108	Decreased by 13%
Timber > Gulam	108	Decreased by 45%
Building materials > Plaster, Pain & vinyl	108	Increased 26%
Agricultural consumables > Rubber (and derived products)	108	Decreased by 16%
Update of DESNZ materials emission factors	86 -> 107	As with ICE this is an update of the materials emissions factors, for most the change is minimal, below are the significant changes:
Plastic > PVC (including derived products, i.e. pipes, tanks, etc.)	107	Decreased by 13%
Plastic > PP (including derived products, i.e. posts, vine ties, etc.)	107	Decreased by 17%
Plastic > LDPE (including derived products, i.e. pipes, wrap, film)	107	Increased by 14%
Plastic > PET (also Hort consumables > PET)	107	Decreased by 29%

Items	Ref	Notes
Water & Sewage > Mains water	107	Decreased by 13%
Water & Sewage > Sewage treatment	107	Decreased by 8%
Paper & Cardboard (including derived products, i.e. boxes and punnetts)	107	Increased by 48%
Horticultural materials > Fleece & netting	107	Decreased by 17%
Horticultural materials > Polyethylene sheet	107	Decreased by 50%
Inventory		
Machinery & shed emissions factors	107 & 108	Updated in line with new material emissions factors from ICE V4 & the most recent DESNZ emissions factors.
Implements	107 & 108	New options to add wood and plastic implements by weight.
Agricultural building > Shed with concrete floor	108	Increased by 7% due to increase in concrete EF.
Cropping and fertility		
Updated crop emission factors	94 & 111	Updated emissions factors in line with the most recent UK GHG inventory release. Most changes are minimal (<5%), below are some of the more significant changes.
Agricultural crops > Fodder and forage > Leafy / Root / Other fodder crops	111	Decreased by 26% / 44% / 68% as as result of UK GHG Inv. changes to residue nitrogen content and dry matter fraction retained in the field.
Agricultural crops > Sugar beet residues left in field / half removed / all removed	111	Decreased by 77% / 80% / 89% as as result of UK GHG Inv. changes to residue nitrogen content and dry matter fraction retained in the field. Due to such a large change, these emissions factors have been backdated throughout the calculator.
Biomass crops > Hemp	94 & 111	Correction to renewal rate of below ground residues to reflect annual crop.

Items	Ref	Notes
Organic fertility sources: <ul style="list-style-type: none"> • Cattle FYM, • Cattle Slurry, • Digestates, • Biosolids, • Compost & Straw, • Sheep, Goat & Horse FYM, • Pig FYM, • Pig Slurry, • Poultry manure, • Other sources (i.e. paper crumble) 	51, 94, 96 & 111	448 New options available, with separation by source, manure content (i.e. dry matter %, separated solids & liquids), application location (to grassland or arable), timing (year round, spring, summer, autumn), application approach (broadcast, injection, trail hose/shoe, etc.), and incorporation options (not incorporated, ploughed in, tine, harrow, disced).
Organic fertility > Cattle FYM spread on grassland in spring / rest of the year	51, 94, 96 & 111	Increased by 25% / 30% as more nuanced than previous calculation.
Organic fertility > Water treatment cake	51, 94, 96 & 111	Decreased by 15% as more nuanced than the previous calculation.
Organic fertility > Barley straw spread on arable	51, 94, 96 & 111	Decrease by 78% as more nuanced than previous calculation.
Organic fertility > Wheat straw spread on arable	51, 94, 96 & 111	Decrease by 51% as more nuanced than previous calculation.
Organic fertility > Goat FYM	51, 94, 96 & 111	Increased by 100% as a result of separation of 'Other livestock' manure nitrogen content values
Organic fertility > Horse FYM	51, 94, 96 & 111	Decreased by 35% as a result of separation of 'Other livestock' manure nitrogen content values
Organic fertility > Sheep FYM	51, 94, 96 & 111	Decreased by 28% as a result of separation of 'Other livestock' manure nitrogen content values
Organic fertility > Pig FYM	51, 94, 96 & 111	Increased by 36% as a result of separation of pig manure types and nitrogen content
Organic fertility > Poultry manure spread in spring / autumn	51, 94, 96 & 111	Increase by 7% / 14% due to separation by timing in direct N ₂ O emissions.
Market Garden crops <ul style="list-style-type: none"> • By kilos produced, 	94 & 111	New crop options available with scales appropriate to smaller scale production and yields.

Items	Ref	Notes
<ul style="list-style-type: none"> • By punnett • By individual item (i.e. per apple) • By pack/bunch 		
Market Garden Organic fertility	16, 51, 94, 108 & 111	Options for organic fertility at a market garden scale, with plant raising media included.
Corrections to plant raising media	16	Emission factor pulled from LCA approach rather than previous offsetting approach to align with GHG protocol guidance.
Seed > Seed potato general	94 & 111	Decreased by 50% as as result of UK GHG Inv. changes to residue nitrogen content and dry matter fraction retained in the field.
Inputs		
Search functionality added to inputs	~	Allows user to type in product or item name in long lists of options.
Average fertilisers	48, 49 & 94	New options added; separation of prilled and granular AN, anhydrous ammonia, MAP, SOP & separation of NPK by manufacturing process
Correction to calculation of derived fertilisers	~	Previously underestimating the NPK content. Correction ensures % of the constituent is accurately captured.
Derived fertilisers (specific fertiliser products)	48, 49, & 94	100 New options added.
Generic & non-listed Liquid fertiliser	48,49, &94	New average options based on available products added.
Generic sprouting suppressant	40	New generic option based on kg Active ingredient added.
Specific spray products > Fungicides	40 + Specs	1,920 new products added, emissions derived from their product constituents.
Specific spray products > Growth regulators	40 + Specs	320 new products added, emissions derived from their product constituents.
Specific spray products > Herbicides	40 + Specs	3,096 new products added, emissions derived from their product constituents.

Items	Ref	Notes
Specific spray products > Insecticides	40 + Specs	578 new products added, emissions derived from their product constituents.
Specific spray products > Molluscicides	40 + Specs	198 new products added, emissions derived from their product constituents.
Specific spray products > Sprouting suppressants	40 + Specs	1 new product added, emissions derived from its product constituents.
Livestock		
Poultry re-organisation	~	Poultry given a new drop down (moved from other livestock) to ease data entry.
Reorganisation of animal feeds	17 & 105	Feed emission factors sourced from GFLI and an ADAS report on food emissions have been separated. Straw, silage, hay and Haylage have new dropdowns with more options available.
Non-organic GFLI feed components.	105	90 New GFLI animal feed components added, with transportation emissions included.
Update of GFLI feed component emission factors	105	Existing emissions factors from GFLI updated, below are those with significant changes.
Non-organic GFLI components > Crude Rapeseed oil (pressing)	105	Decreased by 34%
Non-organic GFLI components > Crude soybean oil (solvent)	105	Decreased by 37%
Non-organic GFLI components > Lucerne	105	Decreased by 28%
Non-organic GFLI components > Flaked maize	105	Decreased by 29%
Non-organic GFLI components > Maize gluten (dried)	105	Decreased by 46%
Non-organic GFLI components > Oat grain	105	Increased by 19%
Non-organic GFLI components > Peas	105	Increased by 18%

Items	Ref	Notes
Non-organic GFLI components > Rapeseed meal	105	Decreased by 18%
Non-organic GFLI components > Soybean hulls	105	Decreased by 59%
Non-organic GFLI components > Soybean meal (solvent)	105	Decreased by 26%
Non-organic GFLI components > Sugarbeet	105	Increased by 100%
Non-organic GFLI components > Winter wheat grain	105	Increased by 10%
Straw feed & bedding <ul style="list-style-type: none"> • Barley straw • Wheat straw • Organic wheat straw 	17	15 new options. Users can enter dry weight, fresh weight, area harvested, or by the bale (heston, round bale & rectangular)
Baled silage <ul style="list-style-type: none"> • Extensively grown (10 year ley) • Intensively grown (5 year ley) • Organically grown (3 year ley) 	17	15 new baled silage options. Users can enter dry weight, fresh weight, area harvested, or by the bale (heston & round bale)
Clamped ley & maize silage <ul style="list-style-type: none"> • Extensively grown (10 year ley) • Intensively grown (5 year ley) • Organically grown (3 year ley) • Maize silage (conventional) 	17	13 new options. Users can enter area harvested, volume, dry weight or fresh weight.
Hay feed <ul style="list-style-type: none"> • Extensively grown (10 year ley) • Intensively grown (5 year ley) • Organically grown (3 year ley) 	17	18 new options. Users can enter area harvested, dry weight, fresh weight, and by the bale (heston, round bale & rectangular)

Items	Ref	Notes
Haylage feed <ul style="list-style-type: none"> Extensively grown (10 year ley) Intensively grown (5 year ley) Organically grown (3 year ley) Wrapped or Unwrapped. 	17	35 new options. Users can enter area harvested, dry weight, fresh weight, and by the bale (Large rectangular bale, round bale & rectangular)
ForFarmer feed blends	98	Re-implementation of the 2024 emissions factors for updated values. This does include some considerable change in emissions.
Feed blends: <ul style="list-style-type: none"> 16% CP Dairy blend 18% CP Dairy blend 21% CP Dairy blend 24% CP Dairy compound 18% Fibre blend 18% Starch compound 	105 & Calc	Update to emissions associated with new GFLI emissions figures for the constituents. The calculations are explained in our methodology.
Premix minerals	105	Mineral factors increased 8x in line with the most recent GFLI figure. Options now added for cattle and sheep.
Calf rearing	105	Starter feed and milk replacer powders have increased in line with new GFLI values for components.
Supplements > Envirolac & Megalac	105	Emissions factors have increased by ~34% in line with new GFLI values for components
Poultry feeds additions and updates	105	5 New layer specific feed blends added based on known feed blends for poultry and using GFLI values for components. Existing poultry feeds have been updated to newest GFLI values (30% decrease for all bar super finisher)
Bedding > Compost & Lime	3 & 16	Two options added to beddings.
Waste		

Items	Ref	Notes
All > Updated emissions factors	107	Emissions factors updated in line with the most recent DESNZ release. N.B. Emissions associated with recycling and combustion have decreased by 68%.
Distribution		
Correction to Road, rail and freight emissions factors.	~	Previously an incorrect conversion from tonne.km to tonne.miles was used, this has been corrected for all current factors and all previous factors.
Updating road, rail, and freighting emissions factors	107	Updating in line with the most recent DESNZ emissions factors. All minor changes.
Processing		
Sugar from sugar cane / sugar beet	105	Increased 100% / 66% as moved from outdated LCA to GFLI figures.
Packaging emissions factor updates	107 & 108	Updates to material emissions factors are reflected in the packaging derived from these materials. Paper and card based packaging increased by 48%, plastic emissions changed (see materials), water emissions decreased.
Sequestration		
Recalculation of average woodland species <ul style="list-style-type: none"> Broadleaf woodland Coniferous woodland Mixed woodland 	104	Using the complete Woodland carbon code data set rather than select exemplar species. Sequestration decreased 24% for broadleaf and 16% for coniferous, and increased 10% for mixed which is now 50:50 broadleaf and coniferous.
In field trees	104	25% decrease in sequestration in line with change to broadleaf woodland average.
Agroforestry & silvopasture	104	New options for trees planted in-field, with various densities per hectare available at different age groups.
Cricket bat willows	104	New cricket bat willow plantation options at different age groups.
Average woodlands	104	New management specificity available, with thinned and non-thinned woodlands
Field border woodland strips	104	New option to enter thin borders of woodlands by width and length.

Items	Ref	Notes
Perennial crops	26	New specific perennial crop options available to capture sequestration from perennial cropping.
Perennial crops > stone fruit / nuts / miscanthus.	26	Correction to emissions factor, sequestration value increased 50% / 20% / 20%.
Higher tier stewardship and land management change	44 & 63	New options added, and clearer descriptions of the land management change for each option.
Countryside stewardship schemes	63	Codes added to baseline options to allow easier distinction of data. Alternate HLS codes for CS schemes now listed as well.
Correction to GS3 & GS4 emissions factors	63	Error correction, factors had been switched.

6. Additional and improved modelling of Agroforestry associated sequestration

Woodlands can be a major area of carbon sequestration on farms, significantly influencing the carbon balance in your report. We use data for carbon removals in this area from the Woodland Carbon Code (Ref. 104). Until this update woodland options were available for by species and by age of the trees, as well as options for average woodlands where the detail was not known or, in-field trees when trees can be counted. We have expanded the options available to you as follows:

Table 3: New agroforestry options

New Features	In detail
Woodland management practices reflected in emissions of 'average woodland'	Users can now enter whether they thinned woodlands or not. We aim to also add this for when woodland is entered species and by age in our next update.
New agroforestry and silvopasture options	Users enter these based on planting densities and the age of the woodland.
New option to add cricket bat willows	Cricket bat willows can now be added - with an assumed 10m spacing and the resultant sequestration is calculated. Users have the option to select the age of the plantation, and the area under production.
Added the ability to enter strips of woodland	On areas of woodland which in the UK typically border farmland or fields and where the hectareage is unknown or



New Features	In detail
	hard to estimate, users can instead enter the length and width of the woodland. To receive estimations of likely sequestration.

7. Improved carbon footprinting experience for Market Gardeners

Table 4: Market gardener experience changes

Development activity	Key features
A new input section for the entry of crops and organic fertility now separates these items from the rest of the calculator. There are now 16 new crops - an increase of 24%, and a total of 82 crops can be entered using different units more relevant to market garden scale agriculture, or small scale horticulture.	116 new means to enter crops added
3 new sources of organic fertility were added, and all 12 sources of organic fertility can now be entered in kg instead of m3 or tonnes which is a more suitable scale for market garden settings.	3 new sources of organic fertility added
We produced specific written guidance for completing a farm carbon footprint - a tailored version of our 'Quick Start Guide' - which directs users better toward decisions relevant to them, and highlights the recent changes to the Calculator.	1 additional pdf guidance document
We developed this document as a requirements list for the larger development of a horticultural calculator, and includes all the changes which could not be implemented within the project timeframe.	Reduced development cost for future developments
Soon we will also include the following key performance indicators as part of this work - reported here for completeness: <ul style="list-style-type: none"> • Production kilos per m2; • Water use • Soil organic matter percentage. 	3 new KPI's for market gardeners

If you have any questions about how these changes can be utilised, or about how you can help fund development work to make the calculator even better for horticulture and growers across the UK please [get in touch](#).

8. Improved report download CSV file

Our popular .csv download was simplified to ensure report details for the downloaded report be more easily seen, but also easily removed to make CSV files quicker to analyse and build graphs or tables from. Users removing or hiding the first 2 columns of data, contain a file with only the emissions-related information they need for graphs.



More information was also added to the .csv download file so our team can better support users with queries about the information within their report download.

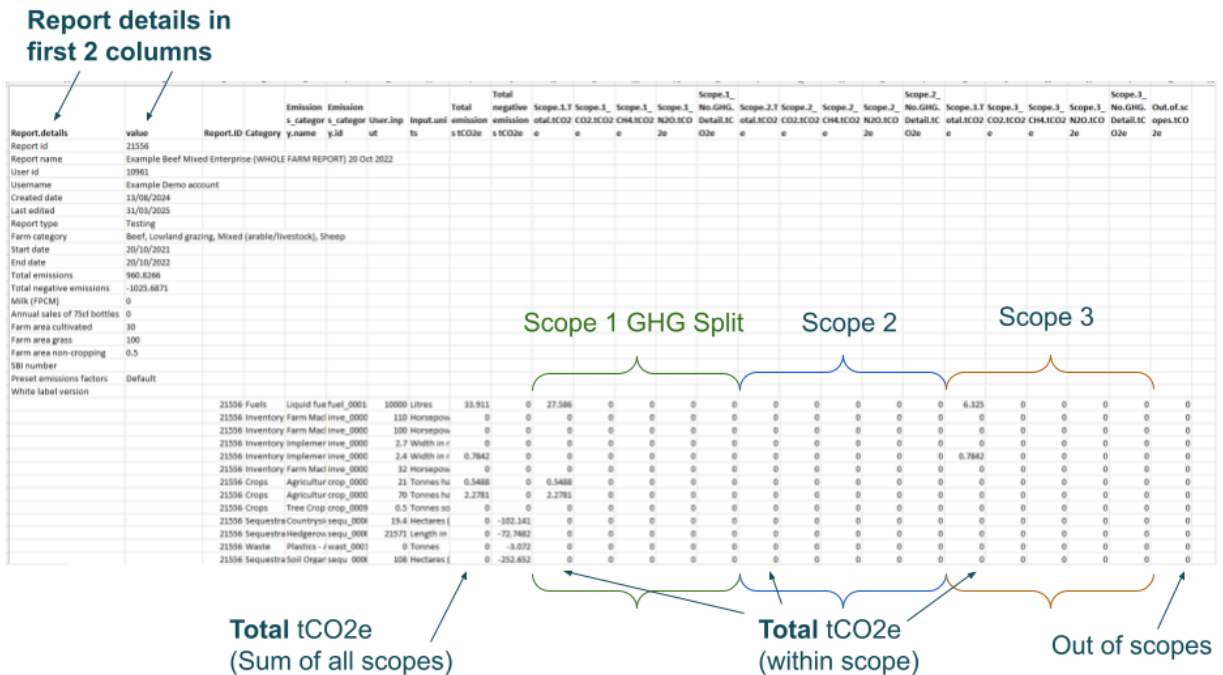


Figure 1. Example of .csv export of report with annotation of how to interpret the resulting data.

9. Shared folders

Since our last major update we have enabled all users to make use of Shared Folders within their account dashboards. Shared Folders let you group reports and carbon footprints together and allow you to share these also with other users you trust so they can view and edit your reports.

You may invite other Farm Carbon Calculator users who have their own account to become a member of the folder by clicking 'invite' on the Shared Folder.

These invited users request membership and you as an admin can approve requests. Approved members then have access to be able to view, edit, copy, and create new reports in the folder - so make sure you only approve requests from those you know.

If you as a user have oversight over many businesses - like our trusted consultants, food processors, or others - we might advise creating a shared folder for each company you work with, to enable you to share specific reports with the appropriate farmers, or colleagues. We'd encourage you to make this feature work for you so get in touch if you would like guidance about how it can help you.

Read more or watch a video about [How Shared Folders Work](#) on our information page.



10. New pdf guides available

We're always following information relating to what our users tell us both in our annual feedback survey and through ongoing enquiries and engagement with farmers across the UK. In response the following guides were developed to better assist farmers:

Table 5: Overview of PDF changes

New item	Notes
Carbon Audits in Scotland Guide - March 2025	Detailed guidance available for farmers in Scotland using the Farm Carbon Calculator to create 'Carbon Audits' as required as part of the Whole Farm Plan scheme. We explain about this scheme and offer lots of information to help farmers receive a footprint for free, or with other sources of support.
Carbon Footprint My Market Garden Guide - April 2025	In this document we outline how a market gardener or similar horticulturalist, or grower can make use of new features indicated elsewhere in this document to maximise the benefit of these changes for each farmer, and increase the accuracy of their reports.



12. Contacting us

We welcome Calculator users to contact the Calculator team with questions, suggestions and comments at any time.

For general enquiries, please email: calculator@farmcarbontoolkit.org.uk or reach out to a member of our team.



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13. Copyright and use

This document is subject to copyright © Farm Carbon Toolkit, 2025. We would suggest you share this with your team or point other users to this document where you think they would benefit from it. In case it changes – send them the link to our [resources page](#) so they can see the latest version.