



Farm
Carbon
Toolkit

Annual Review

2024



Foreword

Welcome to our 2024 Annual Review which celebrates 15 years of growth for our organisation and details the impact we have had over the past 12 months. I feel very privileged to work with all the brilliant people at Farm Carbon Toolkit and to lead our mission to support a transition to climate and nature-positive food and farming systems in the UK and beyond.

It is very clear that agriculture is starting to feel the necessity to reduce greenhouse gas emissions and remove carbon from the atmosphere. As other sectors decarbonise, the proportion of the total emissions attributable to agriculture is rising. This is putting agriculture more firmly in the spotlight and we are becoming involved with significant initiatives to properly understand the impact on GHG emissions of farming practice change and to provide insights for those providing financial incentives for these changes. This is necessary and valuable work. However we are clear that land managers have a significant ability to remove carbon from the atmosphere and are the only sector that can do this without recourse to the need for high tech.

Two of my highlights from 2024 have been creating the collaboration between ourselves, Agrecalc and Cool Farm Alliance to work together to harmonise and standardise footprinting methodologies where we can. This is critical to provide maximum confidence in carbon assessment tools for farmers and growers. My second highlight was to see one of our demonstration farms from the Farm Net Zero Project win our Carbon Farmer of the Year Competition. Andrew and Clare Brewer were worthy winners and exemplified the peer-to-peer approach which we strive to bring to all we do with farmers and growers.

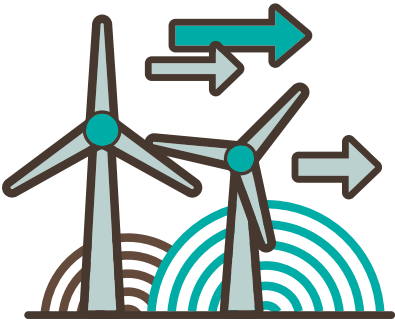
Liz Bowles

Liz Bowles
Chief Executive
February 2025

“

I feel very privileged to work with all the brilliant people at Farm Carbon Toolkit and to lead our mission to support a transition to climate and nature-positive food and farming systems in the UK and beyond”

Liz Bowles,
Chief Executive



Our Mission, Vision and Values

Farm Carbon Toolkit is driven by strong values. From our inception in 2010, we have worked to enable a diverse farming and food sector that is part of the climate and nature solution. We empower businesses to thrive with positive environmental and social impacts, underpinned by our evidence, expertise and care.

As an independent, farmer-led social enterprise, our approach and values are the same now as they were 15 years ago.

Our Vision

Our vision is an accelerated transition for farms to climate-positive businesses, with healthy soils, rich in wildlife, and with well-managed water resources. Farms will produce healthy, nutritious food, underpinned by resilient, financially successful and sustainable businesses.

Farmers and growers are empowered to take action. They will be innovative, well respected and attract a diverse range of people to work in the industry.



Our Mission

We achieve this through the provision of world-leading practical and impact-led solutions to farmers, growers, land managers and their customers, to support the transition to climate-positive and resilient food production systems.

FCT is a farmer-centric and farmer-led Community Interest Company, providing tools and advisory services to measure, understand and reduce business carbon footprints alongside supporting nature recovery.

We employ our skills and expertise as thought leaders to enhance industry understanding of the interaction between climate, nature and agriculture.



Fifteen Years of Growth

To begin, we feel we need to pause to recognise the incredible contribution of our co-founder and Director Adam Twine. Driven by his deep commitment to tackling climate change, a lifelong farmer and renewable energy pioneer His leadership has been instrumental in shaping FCT's mission.

Adam has spent decades engaging with sustainable farming and ethical business. Adam has worked to ensure that farmers and growers have access to independent, practical tools to support farmers to be more sustainable and carbon neutral. As Adam has stepped back as a director, he is now recognised at FCT as Emeritus Director.

This year marks an important transition for FCT in its growth and maturity. FCT has played a key role in research and demonstration projects that explore the practicalities of low-carbon farming. Early initiatives, such as the **Soil Carbon & Demo Farm project**, investigated how different management practices affect soil carbon storage and measurement.



Adam Twine at FCT's Annual Field Day 2023

Timeline from inception to present:

2010

FCT Founded by Adam Twine & Chris Walford

2012

Online Toolkit Launched

2013

Farm Carbon Calculator (re) Launched!

2014

Our first staff member Becky Willson joins

2015

Soil Farmer of the Year Competition Launched

2017

Soil Carbon & Demo Farm projects explore the impact of management practices on soil carbon

2020

New project with Duchy of Cornwall farms

2021

Farm Net Zero project launched

2023

FCT Annual Field Day

2023

Carbon Farmer of the Year Competition Launch

2024 onwards

Continued growth in projects and staff...

FCT's early work focused on providing practical resources, leading to the following developments:

- Online Toolkit in 2012 launched. As awareness of the role of agriculture in climate change grew, so did the need for farmer-led, evidence-based solutions.
- FCT's first staff member, **Becky Willson**, recruited in 2014. Becky's arrival marked a turning point, enabling FCT to scale up its work.
- In 2015, FCT launched the **Soil Farmer of the Year** competition, celebrating innovative farmers who are improving soil health and carbon sequestration.
- In 2020, we partnered with the Duchy of Cornwall to support tenant farmers in reducing their GHG emissions.
- The launch of **Farm Net Zero** in 2021 further showcased the power of farmer-led action.

- In 2023, we built on this with the launch of the Carbon Farmer of the Year competition, further recognising and promoting leadership in on-farm carbon management.

The **Farm Carbon Calculator** has also developed into an industry-leading software tool. Designed. This gives farmers and growers a clearer understanding of their emissions and carbon sequestration potential, the Calculator is now widely used by farmers, consultants, and businesses, underpinning decision-making at both farm and policy levels.

Our current projects include; Centre for **High-Carbon Capture Cropping**, the **UK Nitrogen Climate Smart Project**, **LUNZ** Footprint as well as projects with various estates and supply chain businesses drive real- world change at scale.

FCT's growth over recent years has been remarkable.

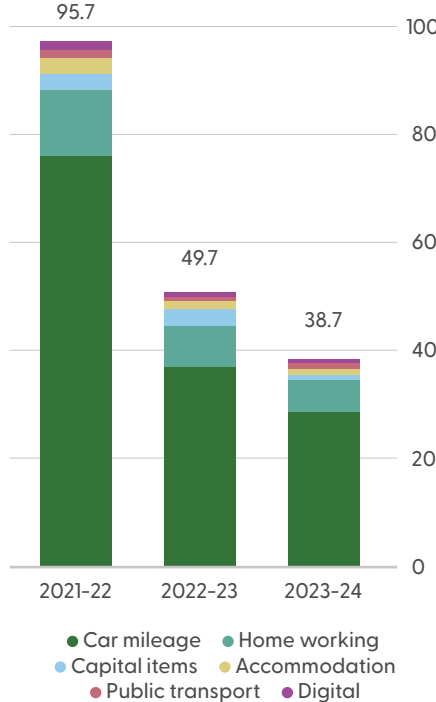
- From 2021/22 to 2023/34 FCT turnover has increased by 450%
- In 2021/22 our team was 6.6 FTEs it is now 19 FTE

This expansion reflects the increasing demand for independent, farm-focused carbon and sustainability advice, as well as FCT's growing influence in shaping the future of UK agriculture.

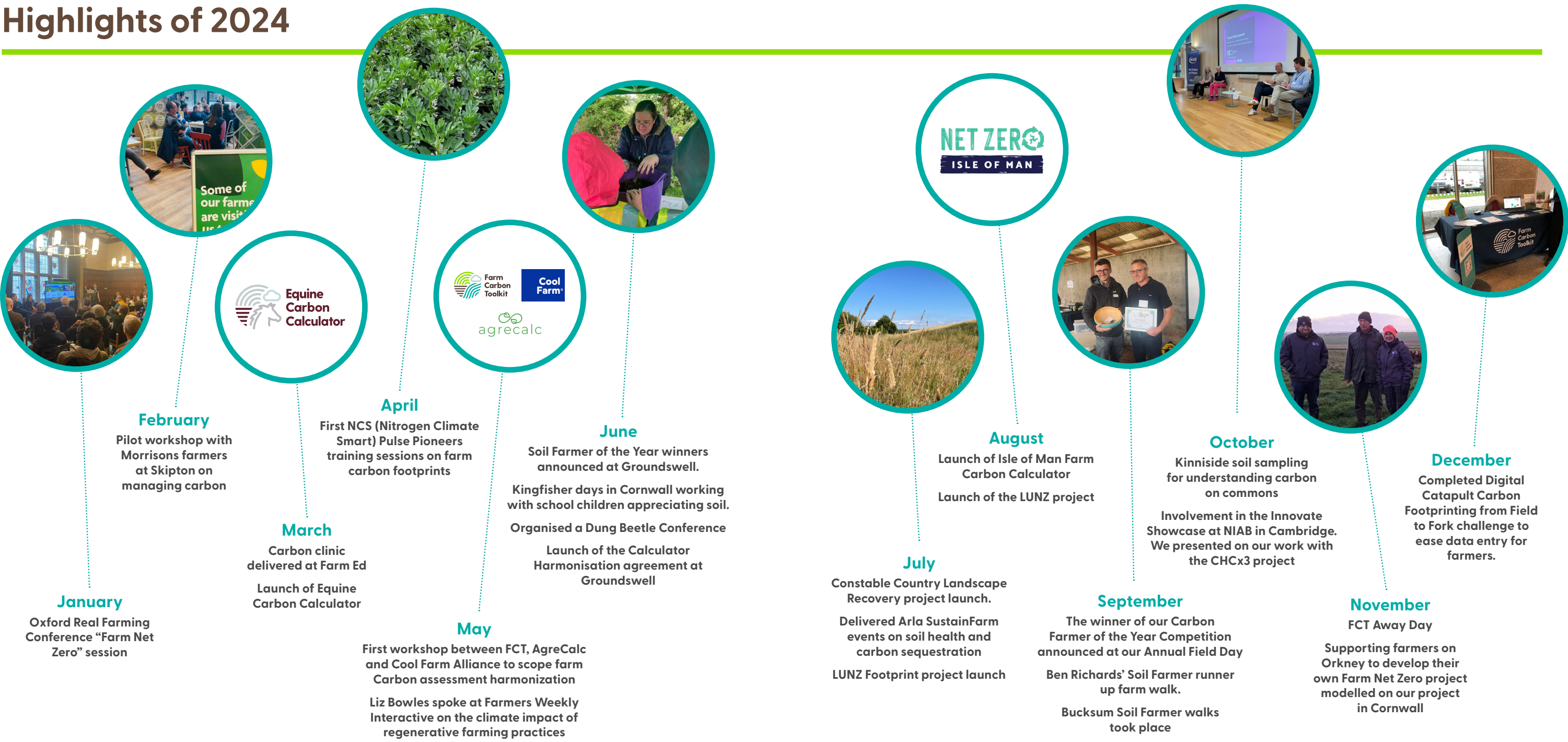
We are grateful for the vision of our founders, the dedication of our team. The continued passion of farmers and partners we work with. With exciting challenges and opportunities, FCT remains committed to equipping the farming sector with the tools, knowledge, and support needed to drive meaningful climate action. As we celebrate 15 years of Farm Carbon Toolkit, we continue to value, being collaborative grass roots initiative, practical, empathetic and science-driven.

Greenhouse gas emissions per £1,000 of turnover (kg CO2e / £1,000)


Our Carbon Footprint	Greenhouse gas emissions, kg CO2e				Scope
	2021-22	2022-23	2023-24	%	
Car mileage	21,872	26,094	33,192	75%	1
Home working	3,384	5,182	6,902	16%	3
Accommodation	848	915	1,040	2%	3
Public transport	307	789	1,362	3%	3
Capital items	783	1,906	897	2%	3
Digital	537	783	600	1%	3
Total kg CO2e	27,731	35,669	43,993	100%	
Emissions per £1,000 of turnover	95.6	49.6	38.7		



Highlights of 2024




STAFF NUMBERS 
+23%

18,000
Calculator website active users 

FARM BUSINESSES ENGAGED WITH
254 

+2,000 
People learning directly from FCT through talks, courses, webinars and farm walks

FARM CARBON CALCULATOR WHITE LABELS AND LICENSES
19 

71,000
FCT website active users 

Our Advisory Work

The breadth of activity that has taken place within the advisory team during 2024 has been incredible. Our FCT advisors pride themselves on their ability to meet farmers and growers where they are and translate complex, often theoretical information into practical steps that align with the farmer’s motivations for their farm.

Although 2024 has been a year of uncertainty for farmers in terms of policy direction, support mechanisms and future strategy, we have engaged with farmers across all

farming systems, sizes and enterprises to help them understand more about greenhouse gas emissions and carbon sequestration, and the benefits for their farm business.

Key projects completed this year include:

Landscape scale projects

Providing individual carbon footprinting and soil baselining for businesses across a landscape or national park, and action plans for what can be done to reduce emissions and improve sequestration. Alongside individual plans, FCT advisors have also provided the cumulative impact across the wider landscape, bringing footprints together to highlight the opportunities to reach net zero and the key practices that will achieve it.

Individual farmer support

2024 saw the launch of our new farmer offer, providing tailored support on specific technical areas, including bespoke grassland management advice, the production of nutrient management plans, integrated pest management and soil health advice which provides compliance with SFI options.

Quantification of longer term impact

Through our longer term projects like Farm Net Zero we are now seeing real change happening at farm level. We have seen progress on reducing emissions and increasing sequestration which can help to inspire change and show what is possible. Farmers within these projects have the ability to innovate and try new things with the technical support of the advisory team; and see real results which can then be used to inform the development of the carbon calculator and provide evidence around the impact of these management changes.

“

We first started working with Becky and her team at Farm Carbon Toolkit 4 years ago as part of a project spanning all 18 members of the Central Chilterns Farmer Cluster, helping them to establish their own farm carbon baseline for each of the members.

We specifically wanted a partner that we could build a relationship with and that would engage and support farmers through the process with on-hand support.

Becky and her team have delivered this in spades and have taken the time to deliver whole cluster workshops before and after to demystify farm carbon and provide tangible simple to understand results.

A productive, engaging and supportive partnership and one that is helping to drive change on many levels.”

Nick Marriner
from Chilterns



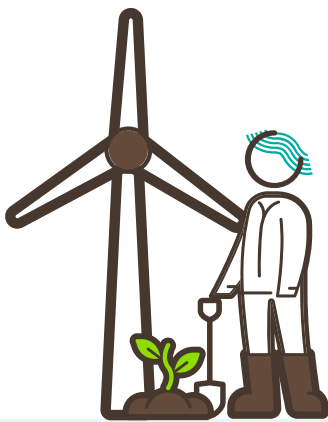
Our Software Services

The Calculator team that looks after the software and science behind our Farm Carbon Calculator has grown this year, to help support a 22% increase in the number of farmers and growers using the tool over the past year.

We have also seen growth in the breadth of businesses looking to support their supply chains, estates or catchment groups with bespoke versions of the Calculator to meet the needs of their members and suppliers.

We particularly want to highlight the collaboration, vision and ambition of farmers, supply chains and the government on the Isle of Man, that has driven the launch of the Isle of Man Farm Carbon Calculator. Since its early inception with FCT advisors supporting the footprinting of a number of farms for the Isle of Man Creamery, through to the launch of the tool for all farmers and growers on the Island, getting everyone talking has been key to the success of this initiative. The Department for Environment, Food and Agriculture (DEFA*) have worked closely with the MNFU and other stakeholders to make sure the use of the tool supports business decisions on-farm as well as making funding available to undertake a carbon footprint through the Island's agri-environment scheme.

Launched in September 2024, a third of the Island's farms have already completed a carbon assessment using the Isle of Man Farm Carbon Calculator, supported by a DEFA Farm Carbon Engagement Officer.

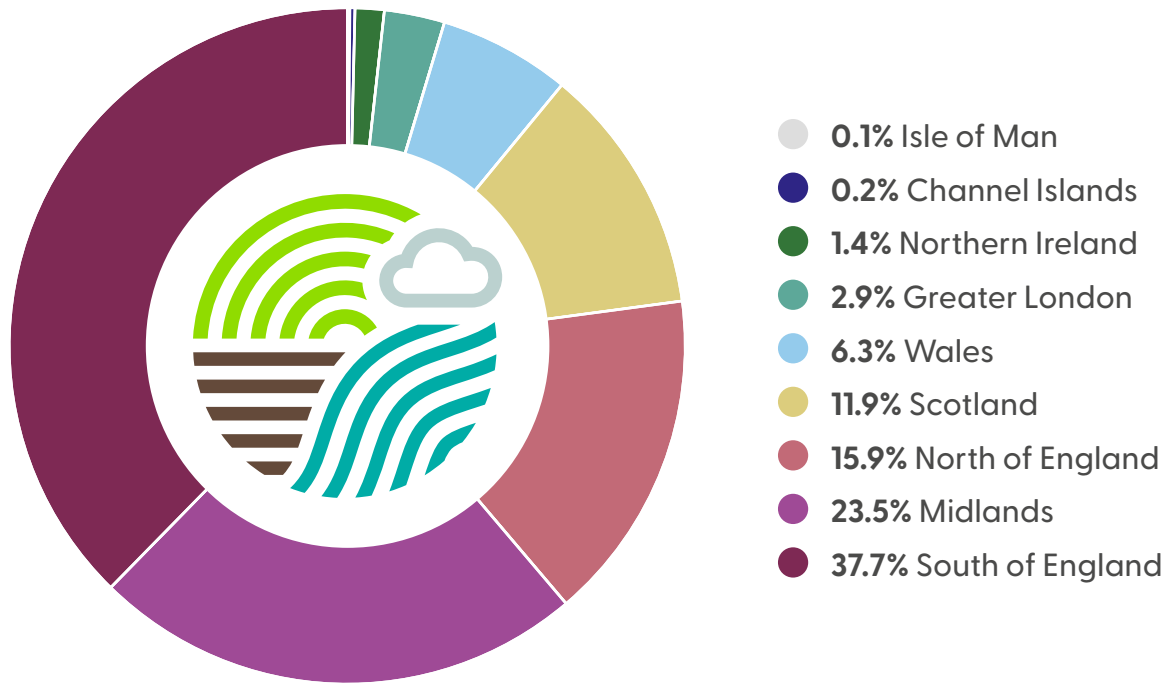


We engaged FCT to assist us with developing a bespoke calculator that would not only help farmers understand their footprint with farm emissions but their carbon sequestration too. The toolkit is farmer friendly, and as more businesses engage, the quality of insights will improve making it increasingly relevant to the Isle of Man's agricultural sector and help farmers understand their climate impacts within our unique farming landscape. FCT has been great to work with and we look forward to seeing where this journey takes us."

Emma Corkill
Farm Carbon Engagement Officer/ Net Zero Isle of Man



*The Isle of Man Carbon Calculator has been developed by Farm Carbon Toolkit in partnership with the Department of Environment, Food & Agriculture (DEFA) and Net Zero Isle of Man, and funded by the Climate Change Fund.



Education and Training summary

The FCT team has had a busy year delivering training and education.

We are often to be found delivering training in the field, in a village hall, round the kitchen table, in a pub or at a conference venue. 2024 has seen FCT deliver a wide range of speaking events, such as our **Annual Field Day** in September in Herefordshire; the first conference dedicated to the appreciation and management of Dung Beetles alongside showcasing our Farm Net zero farmers at the **Oxford Real Farming conference** and contributing to multiple sessions at **Groundswell**.

Our Calculator team has launched free monthly training sessions on the use of our **Carbon Calculator**. These are targeted at farmer users, advisors or professional licence holders. Within the Advisory team we have delivered events spanning a wide range of topics from specific technical workshops on **grassland diversity**, cover crop selection or **reducing nitrogen use** in arable systems, to insights into evolving **carbon markets**; the importance of baselining and the impact on **GHG emissions** of adopting more **sustainable farming practices**. We are passionate about turning what is often thought of as a dry and confusing topic into something which makes sense and is relevant to the audience in question.

During 2024 we put two more cohorts through the **BASIS certified course**; which involves in depth study for 6 days culminating in an exam. We have had a wide range of delegates on this course which include sustainability professionals, estate managers, farm advisors, vets and farmers, all of whom have found it insightful and useful for their day to day work.

We are also dedicated to ensuring that the next generation of farmers and growers enter the industry informed and excited about the opportunities that exist around managing carbon.



“

Hi Becky,

Massive thank you for all your incredible teaching for the GHG & Carbon Basis course in November and December. I really enjoyed the course and was bowled over at the breadth of knowledge of both practical farming and the science behind it, you all have. You guys really went beyond just the curriculum. Please thank Hannah as-well - she covered cropping in an insightful way. I would recommend this course to anyone who is interested.

It's inspired me to follow this further, as there is clearly much to be done in agriculture”

Ed Reynolds who attended the **BASIS 2024 course**

We have developed curriculum material for **university courses**, contributed to current course provision in regenerative agriculture, and helped to provide opportunities for students to see the concepts in practice.

We engaged with over
3,000 people directly through talks, events and courses

Soil Farmer of the Year

2024 saw the launch of the ninth annual Soil Farmer of the Year competition in partnership with Innovation for Agriculture, with continued sponsorship and contribution from the team at Hutchinsons and Cotswold Seeds.

Once again, the competition set out to find farmers and growers who demonstrate their passion for managing the soils in a way that maximises soil health in order to support a productive agricultural business.

After a challenging year with unprecedented levels of rainfall, farm resilience has been critical and we were amazed at the high standard of farms and market gardens who entered the competition. Our finalists perfectly encapsulate the diverse mix of entrants we received.

Our winners for 2024 were Tracy Russell and David Newman, from Bucksom at Shabbington Fields Farm in Buckinghamshire. They implement a

four-year rotation, featuring one year of cash crops which are mulched and rotated into three years of fertility-building herbal leys. This strategy ensures long-term soil health and nutrient balance. Their operation includes over 40 crops, with polytunnel and field rotations designed to replenish the soil with diversity the key to their success. Our runners-up were Ed Horton from SS Horton & Sons in Gloucestershire and Ben Richards from Middle Trelan Farm Ltd in Cornwall.

The competition goes from strength to strength, with farms continuing to demonstrate the progress being made in UK agriculture. Tracy Russell and David Newman wrote:

“

In a difficult farming year, winning the 2024 SFOTY award was certainly a highlight and watching the film made afterwards enabled us to sit back & think wow that's us, we're actually quite amazing aren't we”

Tracy Russell and David Newman

We are hugely excited to be celebrating 10 years of the Soil Farmer of the Year competition in 2025!



Carbon Farmer of the Year

The Carbon Farmer of the Year competition aims to recognise and champion farmers and businesses who are leading the way in adopting farming practices and developing new technologies that are helping to reduce farm emissions while optimising output.

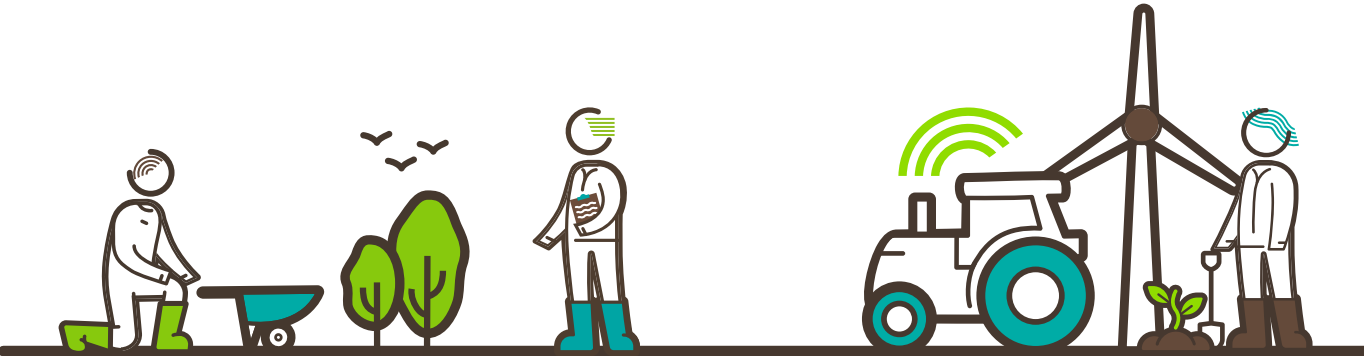
The competition seeks out those farmers and growers who are engaged with, and passionate about, reducing their business' climate impact through changing management practices to reduce greenhouse gas (GHG) emissions, and who are reaping the benefits through the increases in profitability and resilience that results from these reductions.

The long-term objective of this competition is to create a network of alumni who are changing their management practices to better manage emissions and carbon storage on farmland, and who will inspire others through activity, practical demonstrations, and advocacy for changing management practices. Past winners and runners-

up include Doug Christie from Durie Farms, Fife; Lockerley Estate in Hampshire; Thomas Gent from Cambridgeshire; Andrew Brewer from Cornwall, Tom Burge from Exmoor and Greenville Dairies from Newton Stewart, Northern Ireland. All of these farms have, or will have, hosted farm walks that have allowed other farmers and growers to see firsthand the actions they have taken on their journey towards a net zero farming future and the multiple benefits this has had on their businesses, the environment and their ability to adapt to increasingly volatile climate and market conditions.

2024 winner Andrew Brewer of Ennis Barton, Fraddon, a dairy farmer supplying Arla UK stood out to the judges for his understanding and application of a range of management practices to enable his pasture-based dairy farm to remove atmospheric carbon into soils, trees, and hedges, while simultaneously minimising farm missions by focusing on maximising milk from forage. We are grateful to HSBC UK Agriculture who joined us in 2024 to sponsor this competition.

This is the only competition of its kind which seeks to identify and reward those who are working hard to manage emissions and carbon storage. Winners are announced at the Farm Carbon Toolkit Annual Field Day held in Autumn of each year.



What Next?

Advisory service development

Advisory service development
Alongside our work at landscape scale we are developing a range of services to support land managers in adopting and reporting on farming practices to reduce emissions and build carbon sequestration on farmland. Examples include nutrient and soil management planning.

Playing our part in supporting how UK agriculture responds to the climate and nature crisis we are living through

Increasingly we are providing quantified data on the emissions and nature impact of farming practice adoption, which will assist land managers in their choice of more sustainable systems. A few years ago, it was clear that there was a critical lack of such data to support decision-making. Now, we are able to provide this as a critical support element.

Responding to the need for ever greater accuracy on greenhouse gas auditing

As the science of farm carbon footprinting evolves and the need for more accurate data for onward reporting becomes more pressing, we are investigating how we can best support Calculator users to be able to verify their data.

Harmonisation and standardisation of Calculators used in the UK

Work in this area is ongoing, with the Review of Evidence for Alternative Fertilisers announced recently. This will see the formation of an independent Steering Group to oversee the development of a unified process for bringing new, low-emission fertilisers into Carbon Assessment Tools. This approach will likely be adopted for other low-emission and emission-mitigation products as they come onto the market.

Expansion of our Calculator services

As a result of the development work over the last two years and the creation of an API, we are now starting to develop integrations with a range of other management data platforms to simplify the process of data inputting for all our users. This will also support easier data verification.



Thank You

We are incredibly grateful to all our project partners, clients and all who have inspired us and supported us through the past year. These are just some of the organisations we work with...



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