Annual Report Calendar Year – 2022







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About Cool Farm

The Cool Farm Alliance is a science-led, not-for-profit membership organisation (community interest company) that owns, manages, and improves the Cool Farm Tool (CFT) and cultivates the leadership network to advance regenerative agriculture at scale.

The Cool Farm Alliance growing membership includes many of the world's leading food and beverage companies, NGOs, academic institutions, farmer groups and agronomists. The Cool Farm Tool engages and empowers users through quantification and modelling "what-if" scenarios covering on-farm greenhouse gas emissions, carbon sequestration, biodiversity, water and food loss and waste. Cool Farm Alliance members share the need for a respected, consistent, standardised, independent calculation engine and have joined the Alliance to ensure the Cool Farm Tool meets this need, now and in the future.

The Cool Farm Tool is simple to use yet scientifically robust in the complex arena of carbon accounting, characterised by:

• It is farmer focussed, reflecting common farm management practices and requiring only input data a farm manager would typically have easily to hand.

- The use of robust, deterministic site sensitive, peer reviewed models and methods to calculate greenhouse gas emissions, carbon sequestration and other environmental impacts of agricultural activities.
- Uncovering in a practical and pragmatic way, practices and actions which are associated with positive (and negative) environmental performance.
- By utilising the tool to support scope 3 GHG calculations, companies can more accurately track GHG emissions across their supply chain.

The well-established and highly respected Cool Farm Tool is used by tens of thousands of users in 150 countries supplying global markets.

Our mission

To accelerate the transition to regenerative and sustainable agriculture by providing globally aligned, credible and science-based metrics, tools and resources that create impact.







Chair welcome

Dear Alliance Members,

I write to you to express my gratitude for your many contributions to making 2022 the best year yet for the Cool Farm Alliance. I am energised by the unique diversity of our membership and together, we can ensure that the Cool Farm Alliance remains a driving force towards a regenerative, sustainable food system.

In 2022, Richard and the team have really stepped up and led significant change across the Alliance. I know you will all join me in appreciation for their work.

Our 2022 highlights include:

- A refreshed governance structure to enable faster decision making and establish more ways for members to contribute.
- We **initiated critical working** groups tackling issues such as regenerative agriculture and biodiversity and bring about a much-needed update to the Cool Farm Alliance business model.
- We started the journey towards putting the Cool Farm Tool onto a future-fit platform.
- We have **built a secretariat** that is resourced to support this new and existing phase of the Cool Farm Alliance.

In 2009, when I first worked with the Cool Farm Tool, it was supported by a small group of pioneering individuals and organisations. Back then the industry was trying to figure out how to do Product Carbon Foot-printing in agriculture effectively. Together, through innovation and collaboration across the membership, we have established the Cool Farm Tool as a **leading impact assessment tool**.

Now, as our industry is trying to figure out how to scale sustainable, regenerative agriculture and credibly assess and communicate the impacts, we again need to tap into our **pioneering**, **collaborative roots**. We need to come together as a membership, bring our diverse perspectives from all parts of the food system to support the Cool Farm Alliance to **continue its transition to provide the tools and resources we need to help us create the impact we aspire to**.

Yours truly,



Andre Eitner Cool Farm Alliance Supervisory Board Chair





Richard Profit CEO

CEO welcome

2022 has been a momentous year for the Alliance. We have seen the restructure in our governance model, an introduction of a new business model, with it bringing a new secretariat team and new services to our members.

The Cool Farm Tool received its first major update in 2022 with the launch of CFT 1.0, this brought an update to the methods underpinning the crop pathway. We restructured our Board, creating two new roles (Community and Farmer) to better reflect our broad range of stakeholders. From this we launched an update to our business model that strengthened our financial position and our core secretariat team.

As part of the new business model, we:

- Restructured our membership tiers to better reflect the range of members we have
- Introduced API licencing to enable commercial use of the API's and allow for future investment into our API functionality
- Developed new training services, including the Certified Advisor Scheme training pilot, which will raise literacy and capability for advisors using the Cool Farm Tool in their work with farmers (see page 19 for more information).

The growth in membership reinforced another good financial year for the Cool Farm Alliance, coupled with continued generosity from members to support work on regenerative agriculture, biodiversity, and perennials, has meant that we were able to invest even more into our Alliance.

Revenue in 2022 was £1,372,089, up 13% on 2021.

This enabled investment in CFA staff to allow us to move forward into 2023 with more capacity to support members and accelerate our methods and technical delivery.

I want to personally thank our new secretariat team. We have grown from four to twelve staff. The team have worked well

to establish new ways of working and form a new highly capable team. We will continue to refine our work to bring greater focus and service to our members and users.

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We are in a strong position to support our members on their journey to deliver positive sustainable change."

However, 2023 brings opportunity and challenges. The draft GHG Protocol Land Sector Guidance brings some muchneeded clarity to the sector, but at the same time promises greater complexity in modelling and reporting of emissions and removals, which we are working to address. There is also greater competition in the carbon modelling space, which reflects the growing interest in the carbon markets.

Our community is growing, and we now have 136 members and 14 partners. This goes to reinforce the value of our Alliance as our collaborative efforts, transparency in our methods and not-for-profit status continues to set us apart, and the positive impact that is possible from the Alliance continues to grow.

These are challenging and rewarding times ahead for all of us and I am excited about our future together.











Supervisory Board and Secretariat

Meet the Supervisory **Board and Secretariat**

Supervisory Board

We took the opportunity to restructure the Alliance governance in 2022. This allowed us to transition our Executive Committee into our Supervisory Board, introducing two new roles (Community and Farmer) to better reflect our broad range of stakeholders.



Chair **Andre Eitner** PepsiCo



Vice-Chair **Graham Mullier** Syngenta



Science Engagement **Frank Brentrup** Yara



Farming Mateusz Ciasnocha European Carbon Farmers



Community **Eduard Merger** Solidaridad Network



CEO **Richard Profit** Cool Farm Alliance



Digital Strategy Giulia Stellari Independent

Secretariat

Strong growth in membership and an increase in membership fees made it possible to add eight staff members to the Cool Farm secretariat in 2022. This brings the total staff size to 12.



Daniella Malin Head of Impact and Collaboration



Richard Profit CEO



Michaela Aschbacher Training and **Consulting Manager**



David McMahon Product Manager



Kirsten Crutchley Admin Manager



Megan McKerchar Science & Methods Manager



Charlie Curtis Head of Agronomy and Environment



Nina Fischer Yargici Membership Manager



Emily Durrant Programme and Impact Manager



Adam Slate Technical Manager

10.0

N adar



Kandia Appadoo Communications Manager



Honor Leyshon Project Support Officer





Science Advisory Council

Transforming our Innovation Hub into the new Science Advisory Council

In the past year, we have made significant strides in our efforts by transforming our Innovation Hub into the Science Advisory Council.

This council meets every other month and plays a crucial role in making strategic decisions regarding science and methods for the Cool Farm Alliance. Their duties involve ensuring the credibility and transparency of methods used, as well as enabling the acceleration of science and method development in our organisation.

As part of our commitment to continuous improvement, we have identified methods of improvement for the Cool Farm Tool, and we are actively working on improving the SOC and compost modelling for CFT 3.0 in 2024. These efforts will help us streamline our processes and achieve greater efficiency in our work. We are proud of the progress we have made and are excited for the future innovations that will come from our Science Advisory Council.

We aim to have 6-12 members within the Science Advisory Council, and we look forward to welcoming more members in the coming months.



Dr. Frank Brentrup Senior Scientist Yara



Dr. Murray Gardener Innovation & Business, Partnership University of Oxford



Dr. Megan McKerchar Science & Methods Manager, Cool Farm Alliance



Julia Chatterton Researcher Unilever



Dr. Sat Darshan Khalsa Researcher & Tree Agronomist



Dr. Jan Peter Lesschen Senior Researcher Wageningen Research



Dr. Dali Rani Nayak **Research Fellow** University of Aberdeen



Prof. Eduardo Arrellano Associate Professor Universidad Católica de Chile in Animal Ecology



Dr. Lynn Dick **University Lecturer** University of Cambridge



Prof. Quirine Ketterings Animal Science **Cornell University**



Cool Farm Alliance members

Growth in membership

Membership is crucial in determining Cool Farm's success, driving use at scale and enabling alignment throughout the industry.

This year, we welcomed 35 new members to make the tool even more fit for purpose and drive positive change.

Although we tried our best, certain members decided to leave the Cool Farm Alliance. We bid farewell to 13 members in 2022 due to different reasons. Nevertheless, we are using this feedback to gain a deeper insight into our members.



Members +20% vs 2021



New joiners by member profile

- 13 Consultancy
- 10 Food & Beverage Company
- 6 Manufacturing / Industrial Firm
- 4 NGO
- 2 Farmer Organisation



By membership tier







Cool Farm members and partners (as of December 2022)



Cool Farm Tool - global user distribution

2022 performance in numbers



Cool Farm Tool

Operating at both ends of the supply chain, the Cool Farm Tool empowers farmers with knowledge and helps corporate buyers understand where and how to support change.

WebApp Users

29,646 +33%

Assessments

125,378

+52%

Asia and Oceania

26%

Countries

150 (No change)

API Connections

+100%

Cool Farm Tool - global user distribution 10





Accounts Summary

Cool Farm Alliance Annual Accounts Summary 2022

Our revenue in 2022 allowed us to invest in our new staff capability to support our new business model and improve members support for 2023.

We have increased our capacity for science and methods development, along with our product team, to manage the continued development of the Cool Farm Tool; and our team providing support, training, and communications to the Alliance community.

We have delivered the major CFT upgrade to version 1.0 and completed much of the work for CFT 2.0 in 2022. Along with introducing feed additives, upgrade to the N₂0 modelling, separation of emissions and removals in the aggregation report, user ability to have multiple farms and a major update to the technical documentation.

We were also able to claim back research and development tax credits, for our innovative work in translating science for practical application into the CFT, which in turn we are able to reinvest back into CFT research and development.

Our ongoing commitment to the CFT can be seen in our plans for 2023. With the new business model, generous ongoing member project contributions, and drawing on our core reserves, we are planning to invest an unprecedented amount to further upgrade the CFT, with the upgrade to CFT 2.0, preparation for CFT 3.0, improved alignment with the new GHG Protocol guidance, delivery of the Perennials Module and the start of a major overhaul of the foundation architecture of CFT.

Accounts Summary

Cool Farm Alliance Annual Accounts Summary 2022

	2022 Plan	2022 Actual	2023 Plan	
Income				
PY Reserves Carry forward	£181,746	£181,746	£361,075	
Membership Fees	£1,055,036	£1,107,724	£1,504,261	
Other funds	£363,264	£264,365	£578,481	Includes Grant funding and member project contributions
Draw down from Reserves			£218,244	
Total Income	£1,418,300	£1,372,089	£2,300,986	
Expenses				
Management Costs	£635,473	£506,428	£709,342	Core secretariat management staff
Operational Costs	£171,004	£248,057	£356,973	Professional fees, subscriptions, communications, tradeshows, insurance etc.
Technical Sub-contractors	£195,400	£168,431	£253,228	Science, methods and project management sub-contractors
CFT Product Development	£376,500	£368,525	£981,443	CFT hosting, maintenance and development
Unallocated funds				
Total Costs	£1,378,377	£1,291,441	£2,300,986	

Net R&D Tax credit benefit		£98,681	ТВС	Research & Development tax credit application for 2020 and 2021 spend. 2022 application is underway.
YE P&L	£39,923	£179,329	£0	
YE Reserves Carry forward	£221,669	£361,075	£142,831	

	2022 2023

nco	me	2022
	Membership Fees	81%
	Member Project Contributions	15%
	Grant Income & Other Funds	4%
	API Licencing	n/a
	Non-Member Project Contributions	0.14%



Expenses		
	Management Costs	39%
	Operational Costs	19%
	Software Product Development	29%
	Technical Sub-contractors	13%







In 2022, three key developments have set Cool Farm up for success going forward.

The release of CFT 1.0 and associated communications preparing users, coordinating member testing, responding to feedback, and describing key differences.

This process, now tried and true, clears the path for future scientific and methodological enhancements with greater ease.

The increase in staff size from four to 12



Cool Farm



Here are some highlights from 2022:

Governance

A new governance structure

- Moving the part time "General Manager" position to a full-time CEO
- Joining two previously separate governing bodies, the Board and the Executive Committee combined to form the Supervisory Board. With this, the Chair of the Executive Committee, Giulia Stellari, handed over to Andre Eitner as the Chair of the Supervisory Board.
- The creation of a Science Advisory Council merged the Science and Methods Committees, and the new Member Advisory Council to convene member participation and voice.

Biodiversity

Launched a Biodiversity Working Group to enhance the Cool Farm Tool biodiversity with the view to establishing it as an industry standard.

Perennials

Completed fundraising for the new Perennials module.

Regenerative Agriculture

Launched Regenerative Agriculture Working Group to Using the latest science, Cool Farm added modelling consider how the multiple benefits of regenerative agriculture for feed additives. This is a new method for mitigating may be quantified and expressed in the Cool Farm Tool. enteric methane emissions from livestock. See page 22 for more information

Transparency

Improved transparency by embedding the Technical Description into the webapp. Methodological transparency sets the Cool Farm Tool apart and aligns with the ethos of the organisation as a free, publicly available asset.

Membership

As the Cool Farm Alliance continues to grows, the decision was made to migrate to a Customer Relations Management (CRM) platform. Cool Farm continues to add new members. With this growth comes the administrative challenge of keeping all our communications and points of connection organised and coordinated.

Soil Carbon

Developed an enhanced Tier 1 model based on IPCC 2019 methodology.

Nitrous Oxide Emissions (N₂O)

Developed a new N₂O emissions model in line with the latest IPCC 2019 methodology. The methodology is enhanced by a refined estimate of soil moisture. This is key because beyond rate of application, moisture is one of the strongest drivers of N₂O emissions.

Development Priorities

One of the benefits of Cool Farm Alliance membership is having a voice in the development priorities for the Cool Farm Tool. The new Agile Portfolio Management launched this year brings more structure and democracy to that voice as it allows members to vote on priorities.

Feed additives

Annual Meeting

This virtual meeting highlighted the growth of the Alliance and projects on-the-ground using the Cool Farm Tool to advance sustainable agriculture.









New Cool Farm Alliance members

Inspiring others to take action and join our community

The Cool Farm Alliance membership saw a significant growth by 20% in 2022, with 35 new organisations joining. On a more qualitative level, the support of, as well as relationship with and between new and existing members, was strengthened through the growing secretariat team.

Our diverse group of members all share the vision of the Cool Farm Alliance. Hear from some of our newest members about their reasons for joining the Cool Farm Alliance.

We were particularly inspired by the theory of change stated by our new member Fall Line Capital, a farmland and agri and food tech startup investors:

"Greenhouse gas footprints will become an increasingly relevant measure of farm environmental performance.

By becoming proficient (and then expert) in greenhouse gas footprinting, we can begin to differentiate the performance of our portfolio of farmland. By proactively educating our tenants on how to calculate a crop's GHG footprint, we enable our farms to address GHG risks and position themselves for positive impact on climate. Through our investments in ag tech companies, we can further support these positive impacts through new innovations that add value on the farm."

Welcome to our 35 new members

- Agricarbon UK
- Agricultura Regeneratio
- AgrilOT
- Ben & Jerry's
- Bidegaray & Asociados
- Carbon Asset Solutions

- Carbon Metrics Ltd
- Climate Farmers
- CottonConnect
- Digital Green
- EBDA (Egyptian Biodynamic Association)
- Tilda Ltd
- Farmers Mutual (Regen Digital)
- Fertiberia
- First Climate
- FirstFarms

- fodjan
- Gateway Dairy
- HiPP
- Interfood
- Keurig Dr Pepper
- Koltiva

Fall Line Capital's Director Giulia Stellari has been supporting the Cool Farm Alliance as a Board Member on the Supervisory Board.

Our new corporate member Viterra is a world-leading, fully integrated agriculture network that connects producers to consumers in 37 countries with sustainable, traceable, and quality-controlled agricultural products.

Viterra: "We believe in the power of connection. Together, we are stronger, and achieve more."

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Viterra is seeking to use the Cool Farm Tool to support measurement of the company's scope **3 emissions, to help** pursue its goal of supplying sustainable agricultural products and mitigating climate change."

As the last new Cool Farm Alliance member of 2022, Interfood represents "the essential link between global dairy industry suppliers and customers, continuously creating innovative services and products."

"Interfood intend to use Cool Farm to calculate baseline at dairy sources, farmers and co-ops, and as such helping farmers and co-ops to implement GHG reduction programs."

These are just a few examples of the compelling reasons why members are joining our community. We believe that everyone has the power to make a difference, and that by coming together we can build connections as well as leverage and share knowledge.

If you're interested in joining the Cool Farm Alliance, please get in touch here and let's start to make an impact together.



- Koninklijke Douwe Egberts B.V. (JDE Coffee)
- Landler (Landbanking group)
- Mercon Coffee Group
- Mondra

- National Hemp Association
- Potato Sustainability Alliance
- Severn Trent Water
- Suntory
- Symbrosia

- Varaha Climate AG
- Vayda
- Viterra
- Volcafe (formerly held a membership as Carcafe)

136 **Cool Farm** Alliance members

(at the end of 2022)













Working Group summary

Building alliances through our Member Advisory Council and Working Groups

At the end of 2022 Cool Farm established the Member Advisory Council (MAC), to act as the primary conduit though which the members' voice, collectively, reaches the secretariat and Supervisory Board.

The MAC has representatives from the several working groups run by Cool Farm, which bring together members and subject matter experts, to share knowledge and shape the future of the Cool Farm Tool.

If the Cool Farm Alliance was a vehicle, and the Cool Farm Tool the engine, the working groups would be the wheels, the means of covering new ground, making headway with good ideas, finding solutions to common problems, taking initiatives forward.

Though COVID has made this harder in recent years, through our working groups, members can also build alliances, forge friendships, track and motivate progress.

The current working groups descriptions can serve as inspiration as many more are possible.

Biodiversity

Facilitation funded by Syngenta. The purpose of this group is to build on the momentum behind the Cool Farm Tool's existing biodiversity module with the view to establishing it as the industry standard for taking management decisions in support of onfarm biodiversity in a traceable, comparable, and fair way. This project kicked off a pre-competitive cross industry collaboration to enhance the Cool Farm Tool biodiversity module and facilitate cross-industry thinking on what biodiversity-enhancing practices supply chain actors should promote and the metrics to measure, monitor and report on these practices. The group's work helped to convene and align industry expertise and identified four top priorities that representatives are now exploring:

- Guiding users in understanding and actioning the results. Explaining what the results mean and highlighting opportunities for improvement.
- Building an API for the biodiversity module.
- Completing the second half of the tropical forest biome to add evidence-based scores and make this version of the biodiversity module 'live' on the Cool Farm Tool website.
- Publishing the rationale for the methodology used in the biodiversity module.

Beef & Dairy

The Dairy and Beef Working Group is comprised of Cool Farm member businesses that have common interests in these modules of the Cool Farm Tool, and a desire to work together to maximise knowledge exchange and jointly refine the use of the Cool Farm Tool.

This is the longest running working group and was established in 2016 to shepherd a major revision to the dairy and beef pathway.

This year the group formed a subgroup to specify improvements to the manure module. These improvements will enable the tool to model GHG emissions more closely from practices farmers use such as moving manure through multiple systems over time and the use of manure separators.

This group shepherded many improvements to the tool over the years including, most recently the ability to include the use of feed additives in the tool, the ability to split emission reductions and carbon removals for transparent reporting in line with 1.5°C climate targets and specifying a new heard inventory method to reduce user input error.



DevOps

The purpose of the DevOps Working Group is to strategise how best to deliver robust science to users. It is the purview of this team, in partnership with the software delivery providers, to deliver well-designed, robust, accurate, intuitive software that is user-friendly. This year, this working group has guided and supported many of the new development processes and management decisions that are bringing more order and discipline to the delivery including:

- The creation of the Agile Portfolio Management process helping to collect and bring members' voices into the prioritisation process for new Cool Farm Tool features.
- The major release of CFT 1.0 and soon CFT 2.0.
- The stage-gate process defining how new features move from idea to software.
- Budgets and project management.

Dutch

Companies and cooperatives implementing the Cool Farm Tool in Dutch arable agriculture have continued to meet every quarter for over three years. In addition to collecting a prioritised 'wishlist' for the tool that is now integrated into the new Agile Portfolio Management process, the meetings serve as a place to discuss and understand:

- How the Cool Farm Tool quantifications can be used in rewarding good practice.
- Updates to the Cool Farm Tool methodology - especially around soil carbon sequestration.
- Designing a local training workshop with members and their farmers.

Technology

The Technical Partners Working Group was dormant most of 2022 but will be starting up again in 2023. The purpose is to provide independent guidance on the technical development of the Cool Farm Tool in relation to interoperability. The group should provide a framework for collaboration and guide the:

- Development of the APIs including input on data standards and data ethics.
- Technical and financial aspects of having a commercial model for technology partners.

The Soil Consortium

This exists to strengthen the representation of soils in the Cool Farm Tool. This includes soil greenhouse gas fluxes, soil performance and other indicators of soil function in agroecosystems. The Soil Consortium consolidates member requirements and centralises engagement on soils to focus and catalyse progress in the development of updated soil methods. Due to an abundance of interest and activity, the "Soil Consortium". There are four main Working Groups in the Consortium, with each Consortium member contributing to at least one:

- Soil Health focusing on methods and science for assessing functioning, resilient and sustainable soils.
- Soil C under Annual Crops, Grasslands and Grazing focusing on the science and methods for soil carbon estimation in these systems.
- Soil C under Perennials focusing on science and methods for soil carbon estimation in perennial systems.
- Select Standard Alignment focusing on aligning the Cool Farm Tool methods to external assessment standards.

Perennials Crop Module

This group is comprised of ten Cool Farm Alliance members that are co-funding the development of the new perennials module. As such, this group has the narrow and focused remit to oversee the software implementation to translate the pioneering methodology developed in 2021. This methodology was developed in partnership with Quantis, and captured in a prototype tool, and will now be built as a module within the Cool Farm Tool webapp and API, thus making it a robust scalable state-of-the-art solution for carbon accounting (GHG and C-sequestration) in perennial cropping systems. There are many interesting topics for discussion that relate to perennial crops that go beyond this software implementation/translation project. To accommodate these discussions Cool Farm Alliance staff are launching a new/additional perennials focused working group in 2023.

Regenerative Agriculture

The Regenerative Agriculture Working Group is a precompetitive, cross industry collaboration facilitated and funded by PepsiCo, to consider how the multiple benefits of regenerative agriculture may be quantified and expressed in the Cool Farm Tool and the activities, initiatives, projects, and impact collaborations of Cool Farm Alliance members. The Regenerative Agriculture Working Group has divided into five subgroups (below). The first task for each group is to review and collect scientific evidence for practices considered "regenerative." A subsequent step will be to determine how and where in the tool capture each robust practice and/or principle. The subgroups are:

- Watershed Health
- Soil
- Biodiversity
- Carbon
- Livestock and Animal Welfare

N₂O

The working group on nitrous oxide has completed its work and will now disband until further need. The group's work informed the updated N₂O emission model and will be deployed into CFT version 2.0.

Poultry and other livestock

The next phase of development for poultry and other livestock involves updating the methodology based on IPCC 2019 so there is no need for a working group. Members may be interested in more functional refinements for these modules and may form a working group for this in the future.

We would like more of our members to participate in our working groups. If you would like to participate please get in touch with support@coolfarmtool.org







Perennials Working Group update

Showing a commitment to sustainable agriculture

Ten members of the Cool Farm community demonstrated their commitment to sustainable agriculture, by sponsoring the development of a new perennial crop pathway in the Cool Farm Tool. This puts research from the past years into practice, which modelled carbon sequestration and GHG emissions in perennial systems.

After years of work by Cool Farm Alliance members and the Cool Farm team, it is hugely gratifying to see the final stages of implementing a perennials pathway onto the Cool Farm Tool. With the science and methods work nearly complete, thanks to previous membersponsored project work, this project is focused on tool functionality and user experience. The project will see the translation of the methodology and prototype tool into a robust scalable solution for carbon accounting (GHG and C-sequestration) in perennial cropping systems.

The new perennial crop module will have all the functionality of the existing crop pathway in the Cool Farm Tool, with the addition of:

- enhanced residue options
- multiple residue types
- multiple management options per type
- provides new intercrop species
- provides new shade species
- calculates land use change to/from agroforestry and orchard monocrop
- amortizes the establishment period

The initial release will include seven typologies (2x coffee, 2x cocoa, almonds, citrus and apples) and car be extended to additional typologies and crops as and when the necessary data and resources are available.

We are so grateful to all the members who have supported this work over the years and are committed to its continued development.

Sponsors of the perennial crop module formed a working group in September 2022 to consult on the development work and a small number of methods enhancements, and the working group convened four times in 2022. As such, this group has 'sense-checked' some elements of the methods behind the new perennial crop module and sought to align the method with newly released (in draft form) GHG Protocol requirements. This has involved discussions around 'additionality' (of carbon in the cropping system), characterisation factors, intercrop emissions and uncertainty.

The primary focus of the working group is on functionality of the new perennial crop module, which has involved several working group meetings to explore 'user personalities', 'user stories' and overall user experience. This work will continue in 2023 with a small number of working group meetings to review the work as our development partner produces work.

To date, the perennials' working group has operated as a closed group for sponsoring members, but the group will be open to all members in 2023 at the <u>Cool Farm</u> <u>Annual Event</u>; sponsoring members will continue to meet as a closed group to consult on the perennial crop module.

We are so grateful to all the members who have supported this work over the years and are committed to its continued development. Finally, the perennial crop module (version 1.0) is on target to go live at the end of 2023 and we look forward to keeping you updated on the progress.



Regenerative Agriculture Working Group update

Aiming to bring industry alignment

The Cool Farm Alliance initiated a pre-competitive cross industry collaboration to build momentum behind the topic of Regenerative Agriculture, with the aim to bring industry alignment on the practices to promote within supply chains and the metrics to measure, monitor and report against and consider how the multiple benefits of regenerative agriculture may be quantified and expressed in the Cool Farm Tool.

As the momentum for sustainability grows amongst the food and beverage sector, an increasing number of member companies are stepping into strategies that incorporate regenerative agriculture to help deliver their net zero and broader sustainability goals.

Regenerative agriculture is an approach to food and farming systems that seeks to conserve, regenerate, and strengthen the soil and ecology across all farming systems. It focuses on topsoil regeneration, increasing biodiversity, improving the water cycle and water retention, enhancing ecosystem services, supporting sequestration, all of which in turn increases resilience to climate change and strengthens the health and vitality of farm soil.

As soil health improves, input requirements may decrease, and crop yields may increase as soils are more resilient against extreme weather and harbour fewer pests and pathogens. As Charles Kellogg once said, 'Essentially all life depends upon soil'. Yet a third of the planet's land is severely degraded and fertile soil is being lost at the rate of 24bn tonnes a year, according to a new United Nations backed study that calls for a shift away from destructively intensive agriculture and is more regenerative.

For a producer, knowing where to start and how to measure is too often a barrier to getting started. Confusion over what activities to do, how to monitor and measure, and fear of negative outcomes has seen many farmers hesitant to make this shift.

With its global reach, it became apparent that the Cool Farm Tool can provide this support; a place to input this information, to make it easier for our members and their farmers and producers to collate all their information into one place. In a tool that they trust. That by developing a working group that features every actor within the supply chain, alongside specialists, we can take this pressure away from the farming sector and instead support them by working with them and together to deliver a solution. It is essential that transitioning to regenerative agriculture practises is not just seen as a tick box exercise but one that the farmers see real value in. It is a complex challenge, but it is not complicated.

The announcement that we were looking to create this working group saw over 400 expressions of interest from a range of specialisms and expertise which was fantastic, and we have been able to sign up a range of stakeholders from across the industry to ensure the project leverages appropriate insight at every stage of production.

Emily Durrant, CFA Secretariat, undertook some research in the first meeting to help understand the user story - it came as no surprise that the majority of people who signed up to be in the Working Group have joined to help deliver a tool that captures Regen Ag- which was a great reminder that we are trying to create something new and something useful.

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By developing a working group that features every actor within the supply chain, alongside specialists, we can take this pressure away from the farming sector and instead support them by working with them and together to deliver a solution."

Due to the size (both in participants and size of the challenge!), the working group has split into five subgroups with a single pilar to focus on; Watershed Health, Soil, Carbon, Livestock and Animal Welfare, and Biodiversity.

Each subgroup has been able to contain representation from Academia, Corporate, Manufacturing, Technology solutions and Farming – and in the case of Livestock, a vet!

The first task of the subgroup is to review all published and known practices/activities that industries worldwide consider to be 'regenerative' and connect each with we can provide rigorous and robust data.





Training and consultancy programme

Ensuring every user has access to the learning they require

For 15 years we have worked to further the understanding of greenhouse gas emissions in agriculture. The Cool Farm Tool is a tool to help measure impact with farmers to inspire action on-the-ground, however sometimes completing the tool requires some additional support. Our new training programme has been developed to continue this work and ensure every user has access to the learning they require.

The Cool Farm Tool has a range of users who have requested There are three options: some form of training on the tool – be it data entry, clarification of results to understanding the science that sits behind the tool. Often, we are asked where the data is sourced and how it is interpreted into the Cool Farm Tool. From speaking to Alliance members and understanding the types of people who complete the Cool Farm Tool, from Farm Level to Corporate Office we were able to develop a training offer that suits all.

The Cool Farm Alliance Secretariat is proud to be able to offer the following:

Live sessions – online and in person training

An opportunity to have face time with the Cool Farm Alliance training team who guide the attendees through an assessment that fits their specific farming system. Premeeting questions are sent on before the session so that every nuance or query is captured during this time. We have both an online and in person offer (where attendance is possible). When hosted online, the sessions are recorded and shared with the attendees.

Beginner: A course aimed at new starters or those who have had very little experience with the Cool Farm Tool. A demonstration account is used to guide the participants through each module, showing what data is required to complete a full assessment from start to finish.

User: Many of our members have completed assessments and want support and guidance to ensure the data entered is correct. This User session provides the opportunity for the user to have their assessment reviewed by an expert and be there to respond to any questions that have arisen during the data entry.



Advanced: The advanced session is available for individuals or teams who wish to 'get under the bonnet' of the Cool Farm Tool and understand what factors, equations and sources are used to create the Cool Farm Tool.



The online live training sessions held so far have been great - the training team has been able to get close to users from across our membership and guide them through inputting their assessments, supporting on any farming system queries, appreciating that every farm is different.

Certified Advisor – training super users worldwide

As a global tool covering multiple types of farming and cropping systems, we believe that there was a need to train up a legion of super users worldwide, who know the Cool Farm Tool inside and out and can be available to any user, no matter where they are located.

The Certified Advisor Programme consists of six hours training, followed by an exam. If passed the successful candidate can be listed on the Cool Farm Alliance website along with their location and contact details, so that users worldwide know who to approach when needing further support and guidance in completing the Cool Farm Tool.

After the initial training, the Certified Advisor will be required to undertake 'top up' trainings each year to maintain their

Advisor status – this top up will include any updates to the Cool Farm Alliance working groups, the tool and future development work.

Learning portal – in collaboration with Future **Food Movement**

The training team is committed to providing our members with a unique learning experience and building a community of collaboration. That is why we are working on a membersonly learning portal with the aim of gathering training resources and knowledge in one place. Videos, articles, topic-specific events, and a forum will provide answers to recurring questions and encourage mutual support among the community. And there is more! The portal is developed in an exciting collaboration with the Future Food Movement, a community dedicated to accelerating climate action. Selected members will get access to the Movement's extensive learning pool and events to upskill and become a climate literate.





Straus Family Creamery case study

Paving the way to a carbon neutral dairy supply by 2030

Earlier this year, Straus Family Creamery piloted the Cool Farm Tool on its founder's Albert Straus' farm, using data between 2000 and 2021.

Founded in 1994, Straus Family Creamery is a mission-driven, family-business dedicated to making premium organic dairy products with minimal processing. The Straus Dairy Farm and Creamery, located on the Northern California Coast, was the first certified organic dairy farm west of the Mississippi River and the first 100% certified organic creamery in the United States. In addition to its own milk, Straus Family Creamery processes organic milk from eleven other nearby family farms.

Here, we talk to Joseph Button, the company's VP, Sustainability & Strategic Impact about their experience using the Cool Farm Tool.

Why did you start using the Cool Farm Tool?

Joseph: "It's quite simple. We needed a quality third party tool to show the emissions from the dairy farms that supply our Creamery with milk. The challenge was finding a GHG tool that was a good fit for dairy, that wasn't overly complicated from a data entry standpoint and captured the uniqueness of the dairy farmscape. Cool Farm Tool does a very good job at that. After a thorough review of the available options, Cool Farm Tool was the best fit tool for our purposes as a brand manufacturer.

Our original goal was to generate a baseline inventory of our CEO's, Albert Straus', dairy farm and then measure the impact of management changes he had made over a twenty-year time period. Cool Farm Tool enabled us to achieve this task and provided us with great information along the way to help guide our strategy toward net carbon neutrality for our dairy supply chain."

When you started, what was the Cool Farm **Tool like?**

Joseph: "The Cool Farm Tool was immediately intuitive and well informed from a farmer-based point of view. The dairy sector module asked for all the appropriate inputs and had an appropriate level of requested detail that kept the farmer engaged without being overly burdensome."

Why is regenerative and sustainable agriculture important to you?

Joseph: "As a certified organic dairy processor, with a 27year history, sustainable organic agriculture is a central tenant of our organisation. Organic agriculture has transformed the landscape for the rural agricultural communities in our region over the past 25 years. We understand its critical importance in creating a food economy of the future that sustains the livelihoods of farmers, is good for the environment, and provides nutritious and quality food for our communities. Soil health and carbon sequestration is an essential element in the global fight against climate change and also a supportive contributor to sustaining regional farmers amidst the challenges we're already facing due to climate change such as prolonged and more frequent periods of drought."

By using the Cool Farm Tool, did you achieve any GHG reductions?

Joseph: "Cool Farm Tool helped us confirm our previous modelling of the impacts of installing an anaerobic methane biodigester at one of our network dairy farms. Cool Farm Tool shows that an annual reduction of 783 tonnes

of CO₂e from this practice. It also raised our awareness of certain GHG emission sources that we've subsequently addressed through targeted solutions, such as organic manure management."

Did you encounter any limitations to model the impacts of different practices?

Joseph: "Cool Farm Tool doesn't currently have the ability to estimate carbon sequestration or reduction values for many of the carbon farming or regenerative farming practices that we are implementing at many of the pasture-based organic dairy farms that supply our Creamery with milk. It's not surprising given that the science and measurement behind these practices is still relatively new and researchers and ecologists are still learning new things every day. That said, for the core dairy operations or management of animals, pastureland, feed supply, and manure, the Cool Farm Tool provides decisive and helpful analysis that we can trust and feel strongly about as it helps us push for solutions in these areas."

How has using the Cool Farm Tool informed what you are doing today?

Joseph: "Cool Farm Tool helps us easily communicate our embedded third-party agricultural emissions for company executives, which helps us align on future strategy and funding allocations for climate action. At the end of the day, it helps us show why certain climate action strategies like manure management and enteric emission reduction should be priorities due to their outsized climate impact on a dairy farm."

What are your plans for the future?

Joseph: "We have an ambitious goal of working with the our network of dairy suppliers to create a net carbon neutral, on-farm, milk supply by 2030. We have created a model of solutions that we call the Climate Positive Dairy Farming Model. We hope to influence all of the farms in our network to adopt these strategies by creating cost-beneficial climate solutions that will benefit their dairy operation and the climate. We're also incentivising the farms who adopt these practices. Cool Farm Tool will help us establish our baseline emissions profile and over time, help us model, the reductions we achieved through climate positive dairy farming practices."

How do you gain buy-in from your partner farmers?

Joseph: "We will be requiring our partner dairy farms to work with our staff to create a GHG baseline proposal for their farms and we will incentivise them for their efforts.

Our current approach is to use Cool Farm Tool to create a baseline emissions profile for the farm. This creates a great opportunity to sit down with the dairy farmers to gather more information and learn about how they manage their land and animals. Farmers are very interested to know what their emissions inventory will look like, so it creates a bit of excitement amidst the data collection to fill out the tool. In addition to filling out the Cool Farm Tool, we are also working with local ecologists and rangeland scientists to quantify reduction potential of carbon farming or regenerative farming practices that could be implemented on farms to sequester greater amounts of above and below ground carbon."

Following your experience, what advice do you have for others?

Joseph: "The best path forward is to partner with farmers to help them use the tool and understand why we are using it. From there, I think it's critical that the brands with available resources engage with the Cool Farm Alliance to help strengthen the tool over time so that we can have a more robust and trustworthy tool for the future that enables successful climate action and farmer engagement."











Cool Fapm Tool



Showcase project

A pioneering development adding Feed Additives to the Cool Farm Tool

The Cool Farm Tool has been updated with Feed Additives, a new methodology for modelling reduction in methane emissions in livestock farming.

This is a stand-out project because it models three important aspects of effective Cool Farm Tool product innovation:



scientifically sound product enhancement



close alliance collaboration

3 impactful change at a local and global level.

The Cool Farm Tool is the first carbon accounting tool to integrate this new research into estimating emissions for the dairy sector.

Acting now to reduce methane emissions will provide immediate benefits to the climate that carbon dioxide reductions cannot achieve on their own. For this reason, over 150 countries came together in 2021 and signed the Global Methane Pledge, agreeing to reduce methane emissions by 30% by 2030.

Dairy and beef can play a meaningful role in reducing methane. Methane emissions from agriculture and livestock make up approximately 40% of global methane emissions, with roughly 32% come from livestock activities and 8% from rice cultivation.

....3-NOPs inclusion in the Cool Farm Tool will make it much easier for farmers and processors to get recognised for the methane reductions they achieve."

Mark van Nieuwland, the Vice President of Bovaer®, DSM Nutritional Products Ltd.

The impact of feed additives such as Nitrate and 3-Nitrooxypropanol (3NOP) were implemented in the



Cool Farm Tool in October 2022 as options in the feed method to calculate the reduction in enteric fermentation and production of methane from use of such additives.

Interest in the potential of feed additives has increased over recent years. While some feed additives such as Nitrate and 3NOP show high scientific evidence for their positive effect in lab trials as well in-vivo trials, others are still under scientific review. Cool Farm Tool is now accounting for these effects where there is a strong scientific case to do so.

"The effect of using Nitrate and 3NOP in livestock management can be calculated based on the methane reduction formulas from the latest meta-analysis publications" explains Profedssor Ermias Kebreab, Associate Dean at the College of Agriculture and Environmental Sciences and Director at the World Food Center at the University of California, Davis.

Benefits of the new feed additives methods

From farmers to large agribusinesses, the new feed additives are beneficial to dairy operations. For example: Anco Van Schaik, Head of Regenerative Agriculture at Danone believes that the future of dairy comes hand in hand with methane reduction to reach 1.5°C Pathways. "Our recent pilot using 3-NOP at a dairy farm in Belgium – first major scale study and the longest commercial trial ever conducted – is showing promising results, with more than 18% reduction in methane enteric emissions. We are glad to see this solution integrated in the Cool Farm Tool to answer the global challenge of reducing GHG emissions in the dairy sector".

The Cool Farm Tool feed additives update specifically includes:

- New estimates of methane mitigation by using Nitrate on enteric fermentation to disrupt the methanogenesis process of the microbes in ruminant animals.
- New estimates of methane mitigation on enteric fermentation by using 3NOP, a compound that inhibits a microbial enzyme from producing methane (methanogenesis) in the stomach of ruminant animals such as cattle.
- The impact of feed additive for both 3NOP and Nitrate. For example, their dose dependence, as per the metaanalysis for Dairy and the interaction between 3NOP, crude fat and NDF for the Dairy pathway.

This showcase project is a stand-out example of how the Cool Farm Alliance seeks to be a champion of change in sustainable and regenerative agriculture through scientifically sound product enhancements mediated by close alliance collaboration between members and Secretariat resulting in impactful change at local and global levels leading to better farming for all.

Showcase project - adding Feed Additives to the Cool Farm Tool 22







Development activities

Delivering our first major change to the tool

The Cool Farm Tool had two major releases in 2022 that brought significant improvements to the tool. The team's hard work on these upgrades, combined with new team members, led to new approaches and enhanced productivity.

In 2022, we made significant progress with the Cool Farm tool, delivering our ambitious upgrade to CFT1.0, the first major change to the calculations in the tool since its inception as a spreadsheet. This upgrade saw the introduction of 9 method updates and 22 bug fixes, both of which brought the tool more closely in line with IPCC 2019 and corrected long-standing bugs that had been present in the tool since its evolution into a web app.

66

We invested time in comprehensively understanding the work before beginning development."

The release of CFT1.0 was ambitious and complicated, but despite this, we achieved our objectives and successfully delivered the upgrades without any major issues or loss of service. During this process, there were a lot of lessons

learnt, and we took the opportunity to develop improved ways of working, including the introduction of Dr Megan McKercher and Adam Slate.

During the last guarter of 2022, our team focused on preparing for the upcoming major release of CFT 2.0. With an emphasis on the discovery phase of new methods, we invested time in comprehensively understanding the work before beginning development. Our work structure was also reorganised, with smaller, specialised sub teams created to complete discrete pieces of work using an iterative delivery approach before moving onto the next item.

Thanks to the additional administration and planning efforts, we have managed to break our work into smaller "tickets" that can be completed within a two-week "sprint". This has made it much easier for us to track our progress, accurately measure the value we deliver, and manage billing. Although we have not made any radical changes in our ways of working, many smaller, incremental improvements have been implemented, making the entire process more productive and efficient. We intend to continue iterating on this process throughout 2023 and anticipate even more improvements with the delivery of CFT 2.0.





Megan McKerchar Science & Methods Manager

Dr Megan McKerchar, our full time methods manager has given us greater access to dedicated expert guidance on scientific matters and shortened the lines of communications between our science and development teams. Megan introduced a new Science/Devops process which hinges on the production of three key artifacts before we start development, these are:

- Framing document
- Evidence model (in python where appropriate)
- Updated technical description





Adam Slate Technical Manager

In September 2022, Adam Slate started as a dedicated technical manager, which gave our Product Manager, David McMahon time to focus on the strategic elements of product management. Adam has further developed and established elements of agile methodology based on prior initiatives.









Features and improvements The driving engine of the Alliance

2022 began with the successful delivery of CFT 1.0 and finished with the preparation for CFT 2.0, but we did not sit still in the intervening period.

two weeks.

for 2022:

Enhancements

- Emissions and removals Delivered within our aggregation and updated data format. report, this function allows us to reveal the sum of • Enhanced monitoring and usage statistics for API greenhouse gas removals separate from gross emissions. to support the API business model. This is one of the first steps on the pathway to closer alignment with GHG protocol reporting.
- Multiple farms in beta Delivered via the group codes, members that can access this function, now have the • Improvements to the API Error messaging to give more capability to have multiple farms associated to one account information regarding the reason for call failure. with separate assessment lists for each farm. Multiple Farms II is scheduled for 2023 and will allow users to move assessments and user accounts between farms.

- Changes which impact methods calculations and emissions results are delivered in major releases which only happen once a year. CFT 1.0 was delivered in January 2022 and preparation for CFT 2.0 started in November 2022. Between major releases the Cool Farm Tool development process operates on a fortnightly release schedule with updates fixes and enhancements being delivered every
- A full list of releases, features and improvements can always be found on our release notes website page here.
- Here is a summary of some of the development highlights

- Multiple farms API Gives members with access to the multiple farms the capability to specify which farm they want to associate an API call to for Calculate and post API calls.
- Technical description on Cool Farm Tool Migrated the technical description, which documents the science and methods behind the tool to the navigation bar of the tool itself, for ease of reference.
- Feed additives A pioneering development which allows the inclusion of feed additives in beef and dairy assessments in order to model the associated reductions in enteric fermentation (see key project section)
- **Biodiversity rewrite** Complete rewrite of the front end of the biodiversity app in our standard Cool Farm Tool languages and architecture, including UI enhancements
- Addition of a new API endpoint users to retrieve results of all of the assessments shared within a given share code.

2022 began with the successful delivery of....

Interim releases

Support tickets

 $\mathbf{128}$ **Tickets related** to improvements

and enhancements.





Science & Methods update

A productive and forward-thinking year

The Cool Farm Alliance had a productive year, welcoming a full-time scientist, developing methodology for CFT 2.0 and planning for CFT 3.0. Another noteworthy accomplishment has been the establishment of the Science Advisory Council (see page 7 for more information). Finally, we have facilitated member engagement through the Biodiversity Working Group and Soil Consortium, which provides valuable insight and guidance to our team.

Methods activities

Cool Farm Tool software development starts with formalising the latest evolving science and translating this into calculation methods that allows users to quantify the benefits of agriculture and environmental practices.

Our forward-thinking approach has led to the development of new methodology developed for CFT 2.0, set to be released in 2023. This includes; feed additives for 3NOP and Nitrate, with a focus on the latest science for 3NOP in dairy cattle. Additionally, our team has refined the latest IPCC 2019 N₂O Tier 1 method, with refinements [details in technical description.], and updated dairy and beef to IPCC 2019 and meat allocation method in the dairy pathway to IDF 2022.

In 2022, we made significant strides in our method developments. Our technical description is now available on the Cool Farm Tool and has been completely refurbished with a full review of factors and methods to source material. We have also introduced a technical description for the new perennials module, and a new method development process that includes; a technical description, Evidence Model, and

Framing Document. These requirements are built before being handed over to DevOps to ensure a good knowledge exchange and allow testing. Our team has also developed draft controlled environment methodology.

Looking forward to 2023, we are planning interim method development releases that include out of crop biomass changes, uncertainty, and potentially refrigerants to support improved consistency with GHG Protocol guidance. Additionally, we are excited to announce that CFT 3.0 is planned for 2024, which will include other livestock to IPCC 2019, a Tier 3 SOC model including uncertainty for consistency. Our team is also committed to supporting perennial implementation to benefit farmers.

Science activities

The development of the Cool Farm Tool starts with science activities, which are subsequently transformed into methods and ultimately culminate in software. This streamlined approach is illustrated in the diagram to the right.

Science development

Ley Systems Project

Ley systems grow grass or legumes in rotation with crops, often with the aim of conserving soil C. This project focused on methods to estimate the impact of ley on soil organic carbon (SOC), relying and building on an existing dataset developed by Dr P Gottschalk. The compiled data set - based on a comprehensive literature review - comprises data on SOC concentration (%) dynamics + ancillary data of 47 long-term ley-arable treatments from 10 mainly UK and Scandinavian sites with a broad coverage of SOC levels, climates and management. This was a collaboration between University of Edinburgh, GFZ and CFA through the University of Edinburgh student summer project with Nick Wren. We investigated the applicability of the RothC model (Coleman and Jenkinson, 1987) as an example of a widely used and accepted process-based approach to model the impact of ley systems, as well as statistical empirical approaches.

Methane emissions from rice paddies globally Marta Nikolaisen PhD

Rice productionis a significant source of methane emissions, but current models used to estimate emissions are inadequate in capturing the magnitude of emissions. Existing models, which rely on empirical data and commonly used input variables, show limitations in accurately predicting emissions due to the lack of consideration for key site-

specific variables. While these models are useful for predicting emission trends and management impacts, they do not reliably estimate emission magnitudes. Further research is needed to develop more sensitive models that consider additional site-specific variables to better estimate methane emissions from rice production. This research is expected to be published in 2023.

Ongoing research projects

• Building a processed based model for SOC in perennial systems - funded by the Dutch Postcode Lottery Dreamfund Project in collaboration with Solidaridad.

Modelling soil carbon in annual cropping systems

- Helen Hughes' PhD research focuses on modelling soil carbon in annual cropping systems, including developing new empirical models and investigating the impact of data quality on model output. Helen's focus is on farmerfeasible methods with reasonable data requirements that are applicable at the field scale.
- Jordi Buckley Paules' PhD Dr Thanos Paschalis has developed a sophisticated hydrological, hydrochemical based model including 'biology' and topography for water. Jordi, one of our PhDs is researching the nutrient flows and losses modelled with field topography for enhancements to the water module (slope factor for runoff/percolation vectors).













Cool Farm



For the first time since its founding, Cool Farm is in a position to complete all available scientific and methodological updates.

At the same time, with new guidance from the GHG Protocol and Science Based Targets, more attention than ever is turning to how quantification of greenhouse gas emissions and other sustainability indicators can encourage and reward good practice.

There will always be more to reach for in the aspiration for the Cool Farm Tool to be user-friendly, scientifically robust, globally applicable, action oriented, empowering to farmers and scalable. The Cool Farm Tool has reached a milestone but there is much more ahead. Here is a glimpse of what is on the immediate horizon.

Certified Advisor Programme and Learning Portal

Building on the success of the training programme started in 2022, Cool Farm staff are launching a Certified Advisor Programme and a Learning Platform, as mentioned on page <u>19</u>. The Cool Farm Learning Portal is designed to be a safe space for members to upskill, be inspired and connect. Members will be able to access training videos and resources on the Cool Farm Tool, register for upcoming events, view recordings of past events, read the latest articles and case studies, and engage with other members in the forum.

Greenhouse Gas Protocol

In 2023, following the release of CFT 2.0, we will focus on upgrading the Cool Farm Tool to be consistent with the new GHG Protocol guidance, and help to position the Tool to be an integral part of supply chain data reporting. This will include further reporting granularity for emission sources and soil carbon removal modelling upgrades for CFT 3.0. We are working with 3Keel to chart the right path forward.

CFT 3.0

The second half of 2023 will see much of the work to complete alignment with the IPCC 2019 Refinement with the enhancement of the Other Livestock Pathway for delivery with CFT 3.0 in 2024.

Cool Farm Platform

The Cool Farm Tool in its current form continues to be the tool of choice for many farmers and of course Cool Farm Alliance members in carbon emission calculation and other critical metrics. It was built in 2014 as a simple but effective webapp calculator and since then has had many additional capabilities added, e.g. aggregation reporting and API access. To support farmers and members to meet the challenges of the decade of action the product must evolve further and faster. In Q1 2023 this year we initiated the Cool Farm Platform project. This project gives the Cool Farm Tool a future facing architecture, component-based design, and modular approach this work will to help unlock the Cool Farm Alliance capacity to deliver impactful change with increased breadth and depth of scope, stronger partner and member engagement and powerful technical capability.

Perennials

The Perennials Pathway will be the first delivery on the Cool Farm Platform and is scheduled to land in Q4 2023. This will be the first carbon accounting framework for perennial crops cultivation systems, and it will be global.

Looking further on to 2024 we plan to start to migrate current Cool Farm Tool Pathways to the Platform solution.



Multiple Farms II

The ability for a Cool Farm Tool user to have more than one farm was created as part of the Multiple Farms 1 enhancement (delivered in Beta form late 2022).

Next up, is extending the functionality to allow the transfer of assessments between farms and farms between users (within appropriate relational boundaries, most likely under a common group code). This will benefit those members that are managing data collection on behalf of their farmer suppliers through regional representatives. We are keen to engage with members who may wish to help fund the work.

Controlled Environments

Building a Controlled Environments Pathway has been in our sights for some time. We have made significant progress in

defining the science and methods for this capability and are keen to engage with members who may wish to help fund the work.

Biodiversity

Great work by the Biodiversity working group has identified key requirements for improving the capability of the tool in this area – API, results contextualisation, and the addition of the Tropical biome. We are keen to engage with members who may wish to help fund the work.

Beef API

A number of members have expressed interest in having API's for the Beef pathway. This has been scoped, and we are keen to engage with members who may wish to help fund the work.













Contact

Stay up to date

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