

# MAKE AGRI- CULTURE PART OF THE SOLUTION



2020 Annual Report

**Shake supports Entrepreneurs and Start-ups who are combating climate change through development of innovative solutions in agriculture and food production.**

## **What is Shake Climate Change?**

Founded in 2019, Shake Climate Change supports and invests in entrepreneurs with bright ideas.

We're helping their early-stage businesses shake up the world of agriculture – and specifically the climate change it causes.

Led by Rothamsted Research in a consortium with three leading universities – Cranfield University, The University of Hertfordshire, and University College London (UCL), these four institutions offer unrivalled technical expertise in a wide range of sciences relevant to agriculture and climate change, with sponsorship provided by the Societe Generale UK Foundation.

## **What's so special about Shake?**

We're not a typical fund. Imagine us more like a family – nurturing collective potential to create something truly amazing, by leveraging world class expertise in science, tech, and business.

We have a shared passion and a collective ambition to tackle climate change, and we have the drive, determination, and courage to push the boundaries of the food and farming industry.

We support Entrepreneurs and their bright ideas, providing them with access to technical specialists, entrepreneur mentorship and tailored advice well beyond the initial funding to help them turn their ventures into a reality.



# ABOUT

# EXECUTIVE SUMMARY

## Making agriculture part of the solution.

In true entrepreneurial spirit, Shake Climate Change pivoted its programme during 2021 in response to the unforeseen challenges of the global pandemic.

The Covid-19 crisis demonstrates the ongoing need for science and innovation – and the importance of sustainable, agile, and resilient food systems as a key pillar in maintaining our societal stability.

The response of our programme to the restrictions associated with the pandemic was rapid. The Shake Climate Change Management team re-invented the support programme so as to provide it virtually. The ventures within the Shake portfolio were equally quick to adapt, and as a result they too were able to continue their business, albeit with revised business plans and adjusted timetables.

In delivering the programme online, we needed to be sure that entrepreneur satisfaction remained high and we are delighted that the feedback we've received reflects just that.

Indeed, there were even some advantages.

The increased flexibility of when to meet was highly valued by participants, all busy trying to adapt their own business plans due to the impact of Covid-19. With no requirement to travel, it saved time – and certainly saved some CO<sub>2</sub> emissions.

On the other hand, networking and making contacts inevitably suffered, despite organising several virtual mingles with that aim in mind. So, whilst we envisage that online delivery will continue to be an integral part of our programme, we also look forward to a time when we can get everyone together in one physical space.



As governments roll out vaccination programmes and start to ease restrictions, we must return our focus with some urgency to combating climate change. Presently, agriculture (i.e. the farming, forestry, and land use sectors) is responsible for 24% of all greenhouse gas emissions – just one percentage less than electricity.

Shake will continue to support exciting business ideas with real potential to reduce emissions. Last year five more ventures were selected to enter negotiations over receiving the convertible loan support. Three have already come aboard and we are pleased to introduce these in the pages that follow, together with some updates on the four announced last year.

For our part, it has been a great pleasure to be able to meet so many new innovators and hear about their ideas. The value we receive from working with these visionaries is irreplaceable and it's great to see these companies growing.

Personally, I wish to thank everyone for their support during this most challenging year, and to our sponsor for agreeing to continue with the programme, despite the significant challenges posed by the pandemic.

With the UK hosting the COP26 in Glasgow later this year, there could not be a better time year for the Shake Programme to showcase the ventures in its portfolio and share their innovative solutions with the world.

**ANGELA  
KARP**

Shake Climate Change  
Programme Director

Agriculture is  
responsible for

**24%**

of all greenhouse  
emissions

# 2020

## A YEAR IN NUMBERS

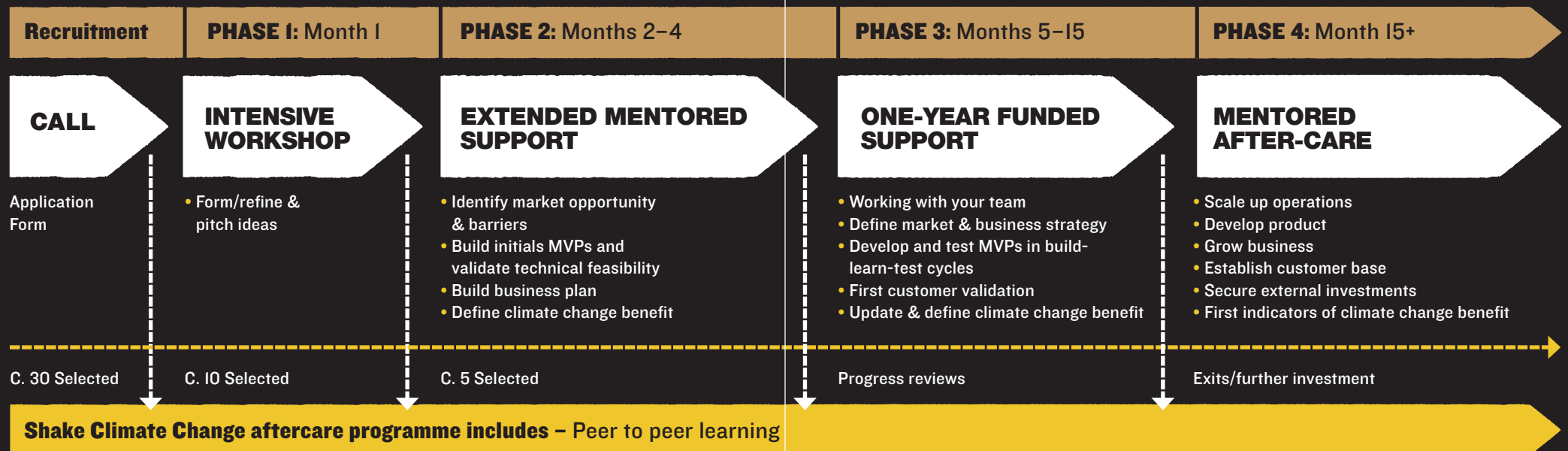
- We received **40 applications** by the May deadline.
- The Programme Steering Group selected 15 ventures to enter Phase 1.
- Phase 1 of the Programme was successfully completed, following which 10 ventures were selected to enter Phase 2.
- **Nine ventures** significantly improved their business proposition during Phase 2, with some pivoting during this time frame. Climate change impact was also rigorously developed, with support of life cycle experts.



- Sadly, two ventures had to pull out of the programme due to constraints imposed by the Covid-19 situation, but by the end of Phase 2, eight ventures pitched to the Investment Panel.
- The Panel selected five ventures for consideration of the convertible loan funding.
- All five selected ventures started their due diligence process and by the end of the year one venture, Climate Edge, had completed their due diligence process and received their investment from Shake.
- The four ventures selected in 2019 all received their investment from Shake in 2020 and have mostly been able to follow their business plan, despite the pandemic.

# HOW IT WORKS

Whether it's business advice, technical support or coaching in how to pitch, our aim is that all Entrepreneurs will gain value from being involved in Shake – even if they don't progress through each phase.



Like everything else in 2020, we did it online!

## WHAT, COHORT 2 HAD TO SAY ABOUT US

Our Entrepreneurs are our best ambassadors and say they will recommend, or have recommended, Shake to others.

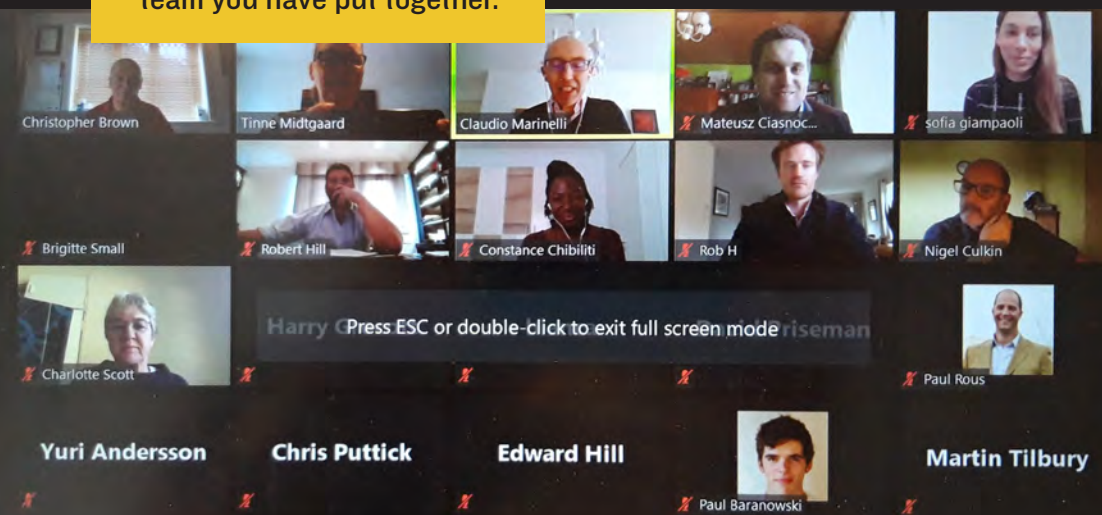
“Phase I was excellent, despite the last-minute switch to online format. The timetable was good, as were each of the presentations.”

“I genuinely had an excellent experience. The mentors and experts of Shake’s network were and are very helpful. They challenged my project and that allowed for a huge improvement in a very short time.”

“My pitching skills improved, from deck design to clarifying the message yet still being technical.”

“Transformative in terms of how I understand and explain my business, and the strength of the case I can now make. An excellent programme!”

“I will and have already recommended Shake CC to others, it’s because of the team you have put together.”



# DELIVERY

Shake Climate Change has to date received 61 applications to enter the programme from high quality early stage ventures. Of these, 34 entrepreneurs participated in Phase 1’s 10 day workshop.

Out of these, 21 were selected to continue to Phase 2, which included mentoring, meeting with science experts and workshops.

Seven ventures have received an investment of £140k each and are all now participating in Phase 3.

# 61

full applications received

# 34

entrepreneurs worked within Phase 1

# 70%

conversion rate from interest to application

# 21

entrepreneurs continued to Phase 2

# 95%

Entrepreneur attendance

# 7

ventures selected for investment and are now in Phase 3 of the programme

## IN SUMMARY

- **Seven** companies formed
- **25.5** jobs created

- Companies have raised **£808k** in co-funding
- Shake have invested **£980k**



# SO FAR...

## 2019

32 expressions of interest received

21 full applications

16 ventures participated in Phase I, intensive workshop

11 ventures selected to continue into Phase 2 tailored support

Four ventures received investment of £140k

Total of **48 days of mentoring**  
**70 meetings with experts**

## 2020

50 expressions of interest received

40 full applications

15 ventures participated in Phase I, intensive workshop

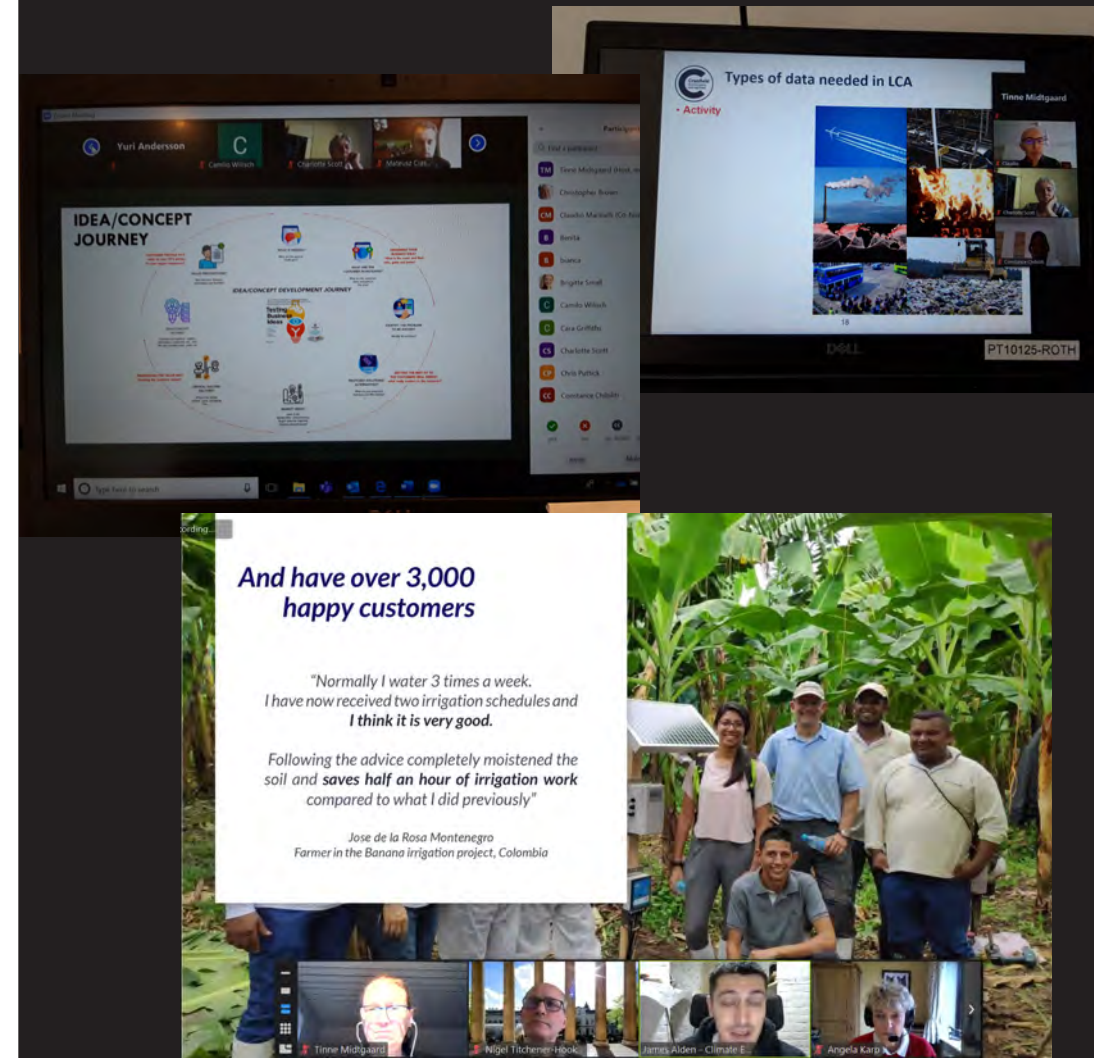
10 ventures selected to continue into Phase 2 tailored support

Three ventures received investment of £140k

Total of **178 days of mentoring**  
**109 meetings with experts**

**BY INVESTING IN BRILLIANT IDEAS, WE HOPE TO ATTRACT OTHERS TO DO THE SAME.**

In December 2020, Shake CC held its very first showcase event where the companies we've invested in showcased their businesses to a select audience of potential investors.



**And have over 3,000 happy customers**

*"Normally I water 3 times a week. I have now received two irrigation schedules and I think it is very good."*

*Following the advice completely moistened the soil and saves half an hour of irrigation work compared to what I did previously"*

Jose de la Rosa Montenegro  
Farmer in the Banana irrigation project, Colombia





**SHAKE**  
**CLIMATE CHANGE**

**SHAKE**  
**PORTFOLIO**  
**2019/2020**

2019 Cohort

## **BIG CHALLENGE WITH A SMALL SOLUTION**

**Idea:** EcoNomad's proprietary technology is bringing biogases to the masses.

The economy of scale has always limited the financial opportunities to be had from farm waste to just the big players. Which is a shame, because apart from the much-needed savings it brings, this waste could be turned into renewable energy and fertilisers.

In the EU alone, 1.4 billion tonnes of farmyard manure are produced each year and only 8% of that amount is being processed – which by anyone's standards, is a lot of potential.

EcoNomad's biogas and nutrient recovery systems are especially designed for small farms and whilst bio-digestion is nothing new, the reason Shake Climate Change has funded EcoNomad is because their proprietary technology has cracked the scale issue – offering a viable option for smaller businesses looking to cut both their carbon footprint, and their running costs.

By EcoNomad's own estimates, a farmer with 50 cows – or equivalent – could save around £4–5k per annum by using their solution.

**Founders:** Dr. Ilan Adler and Alexander Demenko

[economad.co.uk](http://economad.co.uk)

**ECONOMAD**



## GREATER RETURNS

**Idea:** Rather than tackle greenhouse gases head on, Glaia have found a clever way to get more crop from the same carbon.

Many climate friendly technologies tackle the issue of emissions directly – but Bristol based duo Imke and David decided to approach the problem from the other direction: what if we could improve current productivity without increasing the carbon footprint?

Glaia's clever carbon-based nanotech improves the efficiency of photosynthesis – the energy producing process by which plants use carbon dioxide, water, and energy from the sun to fuel their growth. You might think billions of years of evolution had fine-tuned this to the max – but in fact, less than 1% of the sun's rays absorbed by plants are commonly turned into biomass.

By increasing a crop's potential, it will produce the same yield with less inputs, which also means less emissions – in their case, a whopping 20% less.

Adding Glaia's water soluble 'sugar dots' to the roots or leaves gives photosynthesis a much-needed boost. The technology could revolutionise the production of staple and horticultural crops, but for now the team is focusing on hydroponic tomatoes and strawberries, where they estimate the added value could initially result in a fivefold return on investment.

**Founders:** Dr. David Benito-Alifonso and Dr. Imke Sittle

[glaia.co.uk](http://glaia.co.uk)



## A TASTY NEST EGG?

**Idea:** Profits from this newly hatched idea certainly won't be chicken feed.

Soya beans have become a battleground of sorts in the ongoing war over the climate impacts of our food, given that – directly and indirectly – it feeds vegan and meat eater alike.

Soya cultivation is responsible for mass deforestation, particularly in places like Brazil and every year the EU imports 39 million tonnes of soya, of which 35 million is destined for animal feed.

TV pictures of pristine tropical forest being destroyed provides a very graphic illustration of how our eating habits are impacting the planet, and it's just such images that drove Scottish poultry farmer Gordon Whiteford to come up with a completely new way to feed his own free-range hens.

As a Nuffield scholar, Gordon studied animal welfare across the world and saw the potential to develop a different system of feeding hens to reduce the reliance on soya.

The HE Feed system will be perfect for free range and organic systems, where about 23 million free range hens are reared every year.

**Founder:** Gordon Whiteford

# HE FEEDS



# PHEROSYN

2019 Cohort

## FATAL ATTRACTION

**Idea:** Sex, death and food are all in play when it comes to cutting the climate footprint of pest management.

Of the oft-cited concerns over pesticides, climate change isn't usually high on the list. However, when you factor in fossil fuel consumption during its manufacture and application, its considerable – the annual fuel used spraying pesticides on UK wheat farms is the same as about 80,000 cars.

Scale that up globally, and less pesticide use is clearly a desirable outcome – but we need alternatives.

Insect pheromones – the information rich, chemical scents that warn, inform, or attract other members of the same species – have been targeted as crucial tools for use in the next generation of pest management strategies to minimise pesticide use.

If these new strategies can hijack pheromone communication channels, they can either attract insect pests somewhere else with the promise of sex, or can literally scare the pests out of a field – resulting in a sticky end in a pheromone scented trap.

PheroSyn Ltd comprises a world-leading team of scientists with over 40 years' collective experience of researching and developing insect pheromone baits.

By focusing initially on destructive midge pests that are not currently catered for by the other market players, the spin-out hopes to have sales of their market ready pheromones at the £10 million mark within five years.

**Founders:** Mike Birkett, John Caulfield, David Withall and Daniel Bahia

[pherosyn.com](http://pherosyn.com)



**Presentation of the five ventures Shake Climate Change did invest in, in 2020 and will continue to work with throughout 2021. Each of the five ventures have received an investment of £140k.**

# CLIMATE EDGE

Valued at \$5bn annually, there is a fast-growing market in delivering such digital services to areas such as East Africa, Latin America and India.

The major hurdle to this, though, is getting the information – based on a wealth of complex scientific research – into the hands of the growers in a form they can both understand and use.

Scientists generally lack the expertise needed to build scalable digital products and consequently, the vast majority of their knowledge goes uncommercialised.

Social-enterprise Climate Edge's digital platform solves this problem by bridging the gap between scientific research and scalable services.

By automating the key product development steps, such as turning mathematical models into operational code, hosting services on a scalable infrastructure, and making services available to farmers through an intuitive SMS interface, they are making once inaccessible information available to farmers directly through their local agribusinesses.

The Climate Edge team say scaling up just two services – irrigation scheduling and late blight sprays – within Kenya will save up to 70,000 tonnes of CO<sub>2</sub> annually, with the company hoping to achieve revenues of £20k a month by the end of 2021.

**Founders:** Paul Baranowski, James Alden and Gabriel Brueckner

**[climate-edge.com](https://climate-edge.com)**

2020 Cohort

## BRIDGING THE KNOWLEDGE GAP

**Idea:** Climate Edge New digital platform turns scientific knowledge into farmer (and climate) friendly advice.

Knowledge, as they say, is power. Advisory services that provide farmers with real time information such as pest, disease or weather forecasts are proven in helping them make the right decisions at the right time – increasing yields and profits and driving down unnecessary additions of water or chemicals to their crops.



2020 Cohort

## RUBBISH IN, FOOD OUT

**Idea:** In the war on waste, it's time to send in the tiny troops.

How much of our refuse goes to landfill versus recycling is still a big issue in the UK – but imagine how big of a problem it is for developing countries that don't have sufficient waste management infrastructure.

It's a shame because a lot of biodegradable waste that could be put to good use elsewhere is just being dumped, either legally or illegally. Apart from all the other environmental costs, as this material rots, it produces potent greenhouse gases.

In these situations, a low-cost intelligent technology that is easily employed without the need for extensive waste removal and disposal services would do well.

London based Entio Ltd think they have found just such a solution – albeit with assistance from an army of voracious little helpers.

The larvae of Black Soldier Flies are great natural composters – readily devouring the sort of plant-based wastes typically produced by farms, whilst (once mother nature takes her course) also producing a nutrient rich fertiliser.

But even better, the little wrigglers soon turn into protein rich adults who can be also turned into ingredients for aquaculture, pet and – dare we say it – human food stuffs.

Founders Rafael Cepeda and Camilo Wilisch say their edible protein and fertiliser production method produces negligible greenhouse gases, is low cost and easily employed across rural areas where biodegradable waste production is high – which can be as much as 80% of the refuse in some cocoa farming areas.

**Founders:** Rafael Cepeda and Camilo Wilisch.

**[ent-io.com](http://ent-io.com)**



ENTIO



2020 Cohort

## SOLUTION IN A SOLUTION

**Idea:** A spray controlling the botanical equivalent of blood sugar massively boosts yields.

It's oft reported that with a population approaching 9 billion, feeding the world will be a big ask come 2050.

The climate and land use impacts of all this extra agriculture will be enormous, and amongst the many changes humanity must make, crop yields are going to need a huge hike.

Luckily, start-up SugaROx might just have the solution. Which also, incidentally, comes in the form of a solution.

Based on two decades of research into the T6P (trehalose 6 phosphate) signalling pathway – the means by which plants control their own version of 'blood sugar' – SugaROx are now developing a spray that will increase wheat yields by a whopping 15%.

The impact on food production could be profound, because as well as controlling grain size, the T6P pathway also impacts a myriad of traits including drought tolerance, and time of flowering.

SugaROx's proprietary technology consists of a modified form of T6P that can cross cell membranes, and the first product in the pipeline will be able to increase wheat yields without further input of water or fertiliser – a finding first published in Nature by Dr Cara Griffiths.



Aside from the impact on farm outputs, this also increases land use efficiency and leads to a carbon-emissions saving of 11% per loaf of bread – and a staggering 21% carbon emission saving per cropping season.

The investment from Shake will accelerate SugaROx's development work and field trials programme. The company will soon be looking for partners with whom to test its first formulation.

**Founders:** Dr Matthew Paul, Dr Cara Griffiths and Prof Ben Davis

SUGAROX



When life gives you lemons...

Despite the twin challenges of Brexit and the coronavirus, our first cohort of ventures began 2020 boldly building their businesses with an investment from Shake.

Their stories demonstrate not only great resilience, but great ingenuity in their responses.



## ECONOMAD

“One of key team members, Ilan, had Covid at the start of pandemic. Further, lockdown and travel restrictions contributed to the delays in installations as well as impacted our IUK project

in Ethiopia. But despite the limitations, the team started field trials of the BioNomad waste-to-energy platform with three units installed and first feedback and data coming in from the farmers. We are on track to launch product commercially in Q3 2020. We also added four new team members and managed to win a number of grants.”

## GLAIA

“Lab space that a year earlier seemed so easy to come by all of a sudden was a rarity, but we managed to find a temporary solution which allowed us to develop the scale-up of the lab production to multi-kg per year scale. We were able to produce enough material for the 2020 & 2021 trials. With the synthesised material, we completed our first validation of the hydroponics for the first two crops – strawberries and tomatoes – which showed that our technology is working not only in the lab but also under commercial conditions.”

# COHORT 1



## HE FEEDS

“The key priority last year was getting our new poultry shed up and running. This was a challenge as lockdown delayed the start date by about two months. Ordering young hens is a long process and is done 6–24 months in advance. Our supplier managed

to hold on to the birds for an extra 2 weeks and that just gave us enough time to complete the build works. Most of our extra equipment has now been installed and our main project should be underway in the next couple of months. We have also had to deal with Avian Influenza with a national housing order for free-range birds. This has meant we’ve had to increase our farm bio-security and keep visitors to a minimum.”

## PHEROSYN

“The initial lockdown led to PheroSyn being unable to access laboratory facilities for a total of four months, but instead we used the time to drive focus towards customer and commercial discussions, embracing Zoom calls to expand meetings from the UK to global companies in Europe, Canada, Asia. We secured a £100k Innovate UK grant as part of the post-Covid economic recovery strategy for companies affected by the global pandemic. As a result, we caught up on the original technical plan, recruited a full-time development chemist, and planned the launch of two, new pear midge products for field trial validation planned in 2021.”





**SHAKE**  
**CLIMATE CHANGE**

**OUR IMPACT  
AND FUTURE**

## CLIMATE CHANGE IMPACT

Shake Climate Change invest in and support entrepreneurs with new and innovative businesses idea to combat climate change in agriculture and the food supply chain.

**We expect positive climate change impact from our investments and, Shake's portfolio is targeting markets with the full potential for an overall CO<sub>2</sub>e reduction of 3 million tonnes pa. at their medium term market share – equivalent of 6.5% of GHG emissions from UK agriculture (46.3 Mt/yr.) in comparison the original target for the government's Greenhouse Gas Action Plan (2008) was a 4.5 Mt/year reduction by 2022 Or equivalent to the emissions of 600,000 passenger cars.**

How it is done – the Shake Ventures – Potential Climate Change impacts.



### **Sustainable Development Goal No. 13 Climate action**

**“Take urgent action to combat climate change and its impacts” (UN, 2015)**

The ventures in Shake CC address their Greenhouse gasses emissions (GHGs) in their busines models and work during the programme on their climate change impact proposition.

The Ventures work on a Life Cycle analysis of their business and supply chain and work on estimating their business GHGs emissions and GHGs reduction compared with business as usual. On top of this, the ventures have 1-2-1 meeting with climate change experts and in 2020 our ventures were offered four meetings.

Climate Change impact is an integrated part of the programme and each venture selected for investment will have shown to the investment panel that their busines can impact climate change and be part of the solution to get to net-zero emissions by 2050, as well as being part of achieving Sustainable Development Goal No 13 Climate Action.



We expect positive climate change impact from these investments by:

## ECONOMAD

A typical smallholder farm of about 50 cows will save around 0.5m tonnes of CO<sub>2</sub> equivalent per year by converting their manure using Economad's bio generator. This is through reduction in CH<sub>4</sub> and N<sub>2</sub>O emissions from manure treatment and conversion into bioenergy and fertilizers plus, reduction of energy and emissions associated with the nitrogen fertilizer manufacture process. Further impact and benefits include improvements in long-term soil health from biofertilizer application.

## GLAIA

About 50,000 tons CO<sub>2</sub> equivalent per year will be saved during tomato production due to yield increases from using Glaia's sugar dots. This is due to the potential yield increase impact of decreased pressure on natural resources and land, reducing food miles and decreasing greenhouse gas output per ton of produce.

## HE FEEDS

The optimized HE Feeds system and adaptation to more localized animal Feed will decrease import soy and have an impact on GHGs by reducing energy and emissions associated with transportation, and deforestation for soy production in other parts of the world.

## PHEROSYN

Using pheromones will have an impact on GHGs through a reduction in energy and emissions associated with pesticide manufacture, transportation, and application on farms and estimated potential of 500 CO<sub>2</sub> equivalent Saving per unit cereal (kg CO<sub>2</sub> equivalent) in the UK.

## CLIMATE EDGES

Optimizing irrigation will reduce emissions to 7.8 kg CO<sub>2</sub> equivalent per tonne from 26 kg/t. Optimizing pest management will result in 167 kg CO<sub>2</sub> equivalent per tonne, from 251 kg/t. Further impacts include 70% less water use and 50% yield increase.

## ENTIO

Reduced CO<sub>2</sub> equivalent emission from 400 kg from landfill to 30 kg. Further impacts include carbon credits (avoided CO<sub>2</sub> equivalent productions), 430 kg less CO<sub>2</sub> equivalent emissions from fertilizer and 30% less CO<sub>2</sub> equivalent emissions than commercial fish feed.

## SUGAROX

SugaROx An estimated 11% reduction of CO<sub>2</sub> equivalent per loaf of bread produced with UK wheat. At 10% market share for UK wheat farming, this is 115k tonnes CO<sub>2</sub> equivalent savings. This is due to the potential yield increase of major stable such as Wheat impact of decreased pressure on natural resources and land, reducing food miles and decreasing greenhouse gas output per ton of produce.

The following summary table illustrates global greenhouse gas emissions by sector and the contribution by Shake CC's ventures emissions reduction (Global GHGs emissions adapted from Ritchie, 2020).

GHGs emissions	Agriculture forestry and land use Total 18.3%							Waste Total 3.2%		Energy Total 73.2%		
	Livestock and manure	Agricultural soils	Rice Cultivation	Crop burning	Deforestation	Cropland	Grassland	Landfill	Wastewater	Energy in agriculture and fishing	Energy use in industry <sup>1</sup>	Energy use in transport <sup>2</sup>
%	5.8	4.1	1.3	3.5	2.2	1.4	0.1	1.9	1.3	1.7	16.2	24.2
Economad	●	●								●	●	●
Glaia		●			●	●					●	
HE Feeds		●			●	●						●
PheroSyn		●				●				●	●	
Climate Edges		●			●	●					●	
Entio					●	●		●			●	
SugaROx		●			●	●					●	

<sup>1</sup> Includes: Chemical and Petrochemicals, food, tobacco, paper and pulp, machinery, and other industry.

<sup>2</sup> Includes: roads transport, aviation, shipping, rail, pipeline. Furthermore, Energy not shown in matrix which are part of the Global Greenhouse gas emissions are, energy use in buildings (Commercial and residential) (17.5%), Fugitive emissions from energy production (5.8%), Unallocated fuel combustion (7.8%) and Industry (Chemicals and Cement) (5.25).

### 17 Sustainable Development Goals (SDGs) were established by the United Nations in 2015.

SDG No 13 appeals to stakeholders to **“Take urgent action to combat climate change and its impacts”**.

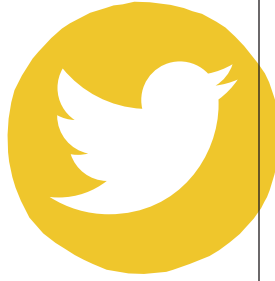
The SDGs targets must be achieved by 2030.

### Commitment to net zero emission by 2050.

A number of countries have committed to net zero emissions economies to halt the effect of climate change. The UK government has also approved a draft legislation that targets all sectors and pursues a national net zero target by 2050.

Our online presence became even more important due to the pandemic. Our application process is online directly from our webpage [shakeclimate.org](http://shakeclimate.org).

Whilst with news updates via the Shake [LinkedIn page](#).



# 52,830

Social Media views



# 324

LinkedIn followers

# GETTING THE WORD OUT



## PODCAST APPEARANCES



### 39 ways to save the planet – Phenomenal Photosynthesis

Glaia were featured in “39 Ways to Save the Planet – a BBC series made in partnership with the Royal Geographical Society. Can we improve nature’s engine room – the amazing process of photosynthesis?”



### Small-scale Farmers Developing Resilience to Covid-19 – Episode 18

Climate Edge were featured in “Small-scale Farmers Developing Resilience to Covid-19 – IFAD investing in rural people podcast series, episode 18 at 20.40 into the podcast.



### The outlook for food and Agri-tech investment in 2021

Steering Group member and mentor, Paul Rous featured in round table discussion along with host Stefan Gates and Roger Pieterse, Managing Director, PYMWYMIC.

### The Education of an Angel Investor podcast.

Paul Rous also featured on Matthew Stafford’s The Education of an Angel Investor podcast, Episode 5.

[Listen here](#)



# PEOPLE

We've recruited a range of top experts who we can call on.

**Shake Climate Change is delivered by a network of leading scientists and experts sourced from within the consortium partners and occasionally through external contacts.**

## Programme Steering Committee

The Programme Steering Group (PSG) consists of one member from each consortium partner with a funder representative. The PSG works closely with all partners, overseeing the whole programme and its strategic direction.

In 2020 the PSG held 11 meetings. The PSG primarily focus in 2020 was to adapt the programme to the Covid-19 situation and ensure participating in a fully virtual programme would still be purposeful and of high quality for the entrepreneurs participating.

The members of the PSG are as follows:

### Programme Management



**Programme Director (PD)**  
**Prof. Angela Karp**  
Director & Chief Executive  
Rothamsted Research



**Programme Manager (PM)**  
**Tinne Midtgaard**  
Shake Climate Change,  
Rothamsted Research

### Science Champions (SC)



**Prof. Jim Harris**  
Chair in Environmental  
Technology Cranfield University



**Dr. Nigel Culkin**  
Past-President, Chair in Enterprise  
& Entrepreneurial Development  
University of Hertfordshire



**Prof. Nigel Titchener-Hooker**  
Dean of UCL Engineering

### Business Advisors and mentor to Entrepreneurs (ME)



**Dr Claudio Marinelli**  
CEO (PhD, MBA), Cambridge  
Photon Technology, Cambridge



**Paul Rous**  
(MBA, PhD Candidate)  
Director Yara International,  
Investment and Venture Funds

### Societe Generale UK Foundation Representative



**Kate Ashworth**  
Societe Generale UK  
Foundation Manager  
(Observer)

## Investment Panel



**Jackie Hunter**  
(Chair), Board director  
BenevolentAI



**Prof. Leon Terry**  
Director of Environment and  
Agrifood, Cranfield University.  
Consortium Partner representative



**Martin Carr**  
Hertfordshire University.  
Consortium Partner representative



**Prof. Eli Keshavarz-Moore**  
Bioprocess Science & Enterprise,  
Dept of Biochemical Engineering,  
UCL. Consortium Partner  
representative



**Ben Higgins**  
Head of HR for the United  
Kingdom and Ireland, Societe  
Generale and Societe Generale UK  
Foundation (SGUKF) Trustee



**Dr. Andrew (Andy) Muir**  
Director, Midven



**Tom Ritchie**  
Investment Director, Rabo  
Food and Agri Innovation Fund,  
Rabobank



**Prof. Angela Karp  
(PD) (non-voting)**  
Director & Chief Executive  
Rothamsted Research



**Louise Warren  
(Secretary) (non-voting)**  
Company Secretary  
Rothamsted Research

## The team of Mentors working to support the Entrepreneurs



**David Priseman**  
Business Mentor, Business  
School, University of Hertfordshire  
(Phase 1, 2 and 3)



**Claudio Marinelli**  
CEO Cambridge Photon  
Technology Ltd  
(Phase 1, 2 and 3)



**Paul Rous**  
(MBA, PhD Candidate),  
Director Yara International,  
Investment and Venture Funds  
(Phase 1, 2 and 3)



**Rob Hill**  
Business and Social  
Enterprise investor and mentor  
(Phase 1, 2 and 3)



**Yuri Andersson**  
Founder and CEO of Nabra  
Ventures (Phase 1, 2 and 3)

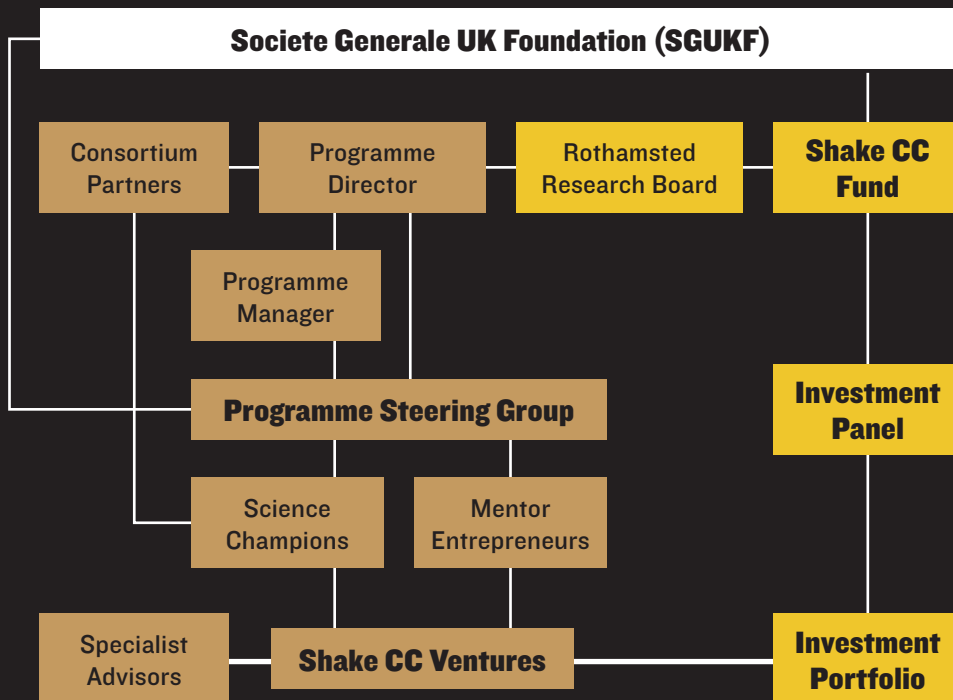
## Specialist Advisors working with Shake Climate Change

Shake has an incredible network of specialist scientific advisers coming from a range of fields, and during the programme we also connect entrepreneurs with experts who can provide very situation-specific help to their business, such as validation and pilot testing. Presently, Shake has engaged with 40 specialist advisers and during the programme lifetime entrepreneurs have held a total of 154 meetings with specialist advisers. We also held two thematic workshops and one showcase event with our entrepreneurs from both cohorts.

**Shake Climate Change is a consortium-based programme lead by Rothamsted Research in collaboration with Cranfield University, University of Hertfordshire and University College London and funded by Societe Generale UK Foundation.**

We have a strong governance framework drawing on structures laid out in a grant agreement between Societe Generale UK Foundation (SGUKF) and Rothamsted Research (RRes) and between RRes and the consortium partners. This includes regular meetings and check-ins to ensure progress is being managed. Furthermore, there is structured reporting and meetings between the Trustees at SGUKF and the Shake management team.

Shake Climate Change operates dual management, so that entrepreneur support is separated from decisions made as to the investments of the fund.



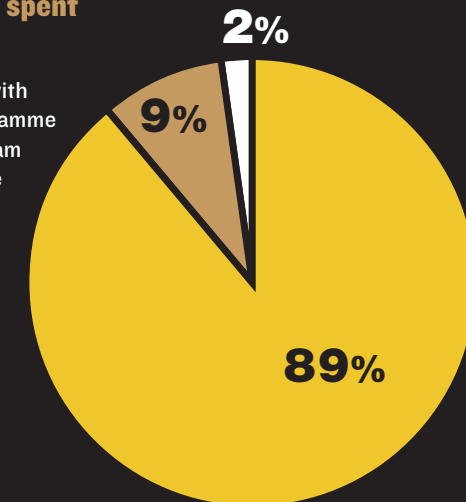
### Programme budget overview

- £143,112 carried over from last year (2019) for a total amount to £1,191,152
- A total of £420,000 was given directly to ventures (three ventures in 2020) to spend on building their business
- On top of this, the programme provides free workshops, meetings with science experts and business mentoring
- 89% of the programme spending goes to support our entrepreneurs

Budget 2020	(UK Sterling)
Transferred from last year 2019	143,112
Grant instalment 1, 2020	250,460
Grant instalment 2, 2020	797,580
<b>Sub total</b>	<b>1,191,152</b>
<b>Total spending 2020</b>	<b>1,125,308</b>
<b>Transferring to next year 2021 budget</b>	<b>65,845</b>

### This is how the budget was spent

Support to the entrepreneurs 89% (investment, mentoring, meeting with science experts, workshop); Programme management 9% (Management team and consumables) and Programme Set-up 2% (legal, communication and marketing).



# STRUCTURE

# FINANCE



# OUR FUTURE



**Increased communication about Shake Climate Change to attract the best ideas and applicants to Cohort 3 of the programme.**

**2**

**Focusing on delivering an exceptional experience for our entrepreneurs, improving the programme content where possible and maintaining a key focus on the climate change impact of Shake.**



**3**

**Continue engagement with investors through investors showcases.**

**4**

**Welcome our first ventures to Shake Climate Change Alumni network.**



**5**

**Seeking funds to continue programme.**