



# GREEN HORIZONS

Our Commitment to  
Sustainable Food Production

Version 1.0

# WE UNDERSTAND WHAT FARMERS AND GROWERS NEED TO PRODUCE SAFE, AFFORDABLE AND HEALTHY FOOD.


To prepare for and meet the challenges of tomorrow, whilst ensuring agriculture remains sustainable and profitable, crop creativity and innovation will become even more important. We understand these challenges and are working with our customers and our partners in the industry, towards achieving truly sustainable farming systems.

Whatever complexities the future holds, there has never been a more exciting time for agronomy to thrive.

Our experienced team of agronomists focus on the needs of each customer and farm. With the relevant research and quality products, they can adapt their advice and product choice accordingly – enabling our customers' businesses to become more resilient.

To ensure our business and trusted agronomists continue to support farmers across all aspects of sustainable food production, we have set out a series of objectives and targets on page five as part of our 5-point plan for the future.

**On this page you can see all the ways Agrii can help to support your farm business and changing needs...**



**COST**

Agrii can help to optimise costs per tonne (operations as well as inputs) and better manage cash flow – helping to achieve greater business resilience.




**RISK**

Agrii can help to manage growing risks for the extra resilience required in an increasingly uncertain world.




**OPPORTUNITY**

Agrii can help to make the most of new cropping, rotational changes and innovation to improve the balance and strength of the farming enterprise.



**PERFORMANCE**

Agrii can help to improve crop yield and quality for the most reliable performance whatever the season may bring.



**SIMPLIFICATION**

Agrii can help to simplify management and decision-making to give growers more time to deal with other priorities.



**SUSTAINABILITY**

Agrii can help growers to make a positive contribution towards striking the commercial and environmental balance on farm.

# GREEN HORIZONS

is Agrii's commitment to lead the way in sustainable food production and support our customers in becoming more resilient in an increasingly uncertain world.

## THE EVOLVING FOOD PRODUCTION LANDSCAPE



### The need to reduce food waste

Current estimates suggest 9.5 million tonnes of food is wasted annually in the UK\* and our growing population means demand is increasing. (\*WRAP 2020)

### Protecting natural capital

In the future government support for agriculture will be linked to environmental land management.



### Changing weather patterns

Climate change is causing more extreme weather events, such as flooding and droughts.

### Changing consumer trends

Dietary preferences are evolving towards making healthier and more sustainable lifestyle choices.











### Acronyms used in this section:

**AFP: Agrii Farm Partnership** | **PPP: Plant Protection Products** | **VSR: Variety Sustainability Rating**

# OUR COMMITMENT TO TACKLING FARMING CHALLENGES

CHALLENGE

 <p><b>Reduced profitability</b></p> <p>Uncertainty over the future of subsidies Increasing import competition</p>	 <p><b>Lack of access to new breeding technology</b></p> <p>Lack of access to new breeding developments Global technologies not yet available in the UK</p>	 <p><b>Pest, weed &amp; disease resistance</b></p> <p>Increasing resistance to plant protection products</p>	 <p><b>Loss of crop protection products</b></p> <p>Products removed from the market and the cost of replacing them is increasing</p>	 <p><b>Climate change</b></p> <p>Increased rainfall events Prolonged droughts Growing policy response to help mitigate climate change</p>	 <p><b>Loss of biodiversity</b></p> <p>Habitat and species decline – how do we reverse this?</p>	 <p><b>Legislation</b></p> <p>Restrictions on fertiliser use “Public money for public goods”</p>	 <p><b>Public perception of food production</b></p> <p>Lack of understanding of where food comes from Impact of regulation on crop agronomy</p>
---	--	---	--	--	---	---	--

AIMS

 <p><b>Increasing farm productivity and viability</b></p>	 <p><b>Providing integrated whole farm solutions</b></p>	 <p><b>Improving soil resilience</b></p>	 <p><b>Enhancing the environment</b></p>	 <p><b>Extending stakeholder engagement</b></p>
--	---	---	---	--

# OUR 5-POINT PLAN

Our aim is to help farmers contribute towards several relevant Sustainable Development Goals (SDGs). These goals, set by the United Nations, are to be achieved by 2030 and address many of the most urgent global, economic, environmental and social challenges.



## AIMS

## AMBITIONS

## RELEVANT SDGs

<p><b>Increasing farm productivity and viability</b></p> 	<ul style="list-style-type: none"> <li>✓ Maximise productivity in food production.</li> <li>✓ Embrace high impact research and modelling technologies to facilitate sustainable research and development with a low environmental impact.</li> <li>✓ Leading the way in creation and adoption of new technologies, to fast-track climate and consumer benefits.</li> <li>✓ Encourage creative thinking with an annual Agrii-Innovation award.</li> <li>✓ Develop a new way to reward excellence in integrated crop production through the AFP*</li> </ul>	 
<p><b>Providing integrated whole farm solutions</b></p> 	<ul style="list-style-type: none"> <li>✓ Advise on more resilient genetics through Variety Sustainability metrics.</li> <li>✓ Develop climate tolerant break crops and associated agronomy advice.</li> <li>✓ Ensure all research is driven by Integrated Pest Management principles.</li> <li>✓ Employ laboratory screening methods to fast track biosolutions.</li> <li>✓ Establish recognised metrics on PPP* use to reduce negative impacts whilst maintaining productivity.</li> </ul>	 
<p><b>Improving soil resilience</b></p> 	<ul style="list-style-type: none"> <li>✓ Develop and adopt independently validated measurements of soil health.</li> <li>✓ Improve soil health through value chain and scientific collaborations.</li> <li>✓ Expand range and use of fertilisers with a low carbon footprint.</li> <li>✓ Increase adoption of tailored nutrition programmes through soil / tissue / fruit sampling and using RHIZA digital.</li> </ul>	  
<p><b>Enhancing the environment</b></p> 	<ul style="list-style-type: none"> <li>✓ Collaborate with customers to learn how to achieve net zero greenhouse gas emissions by 2040.</li> <li>✓ Develop accredited Agrii Environmental training programme – “public money for public goods”.</li> <li>✓ “Green Horizons Challenge” – reduced PPP* inputs supported by biosolutions.</li> <li>✓ Launch virtual Sprayer Operator Workshop to maximise best practice.</li> </ul>	 
<p><b>Extending stakeholder engagement</b></p> 	<ul style="list-style-type: none"> <li>✓ Increase engagement with NGOs, food processors, government and science.</li> <li>✓ Digitally enable all customers via integrated personalised portal including technical information.</li> <li>✓ Expansion of virtual iFarm events and trial tours.</li> <li>✓ Create crowd sourcing programme for innovation sharing with customers.</li> <li>✓ Develop a ‘Green Horizons Network’ to enable knowledge exchange among our customers and between Agrii and our customers.</li> </ul>	 

\*Acronyms used: AFP - Agrii Farm Partnership, PPP - Plant Protection Products



# INCREASING FARM PRODUCTIVITY & VIABILITY

Improving farm productivity is core to both business viability and reducing GHG emissions. A variety of measures are required to boost productivity, identified by the UK Government's Committee on Climate Change (CCC).

## These include:

- ✦ Increasing efficient use of nitrogen through controlled release fertilisers and inhibitors.
- ✦ Precision farming.
- ✦ Preventing soil compaction, in cropland and pasture, reducing the need for cultivation which will minimise N<sub>2</sub>O emissions.

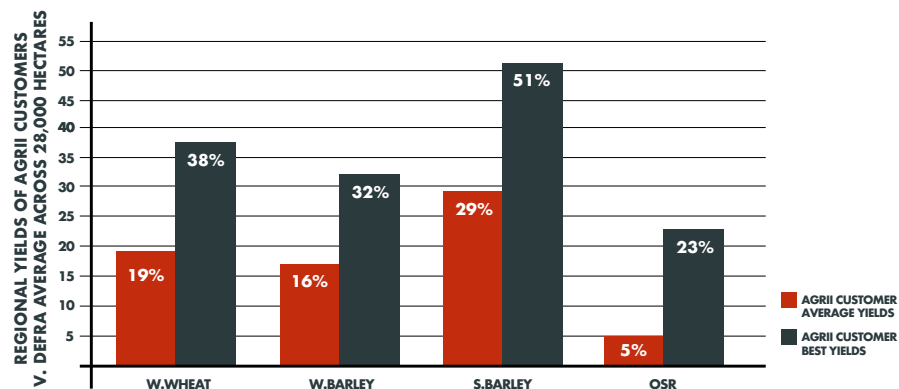
Targeting areas of improvement through the adoption of new technologies will help to reduce the cost of production and minimise the risk of environmental harm.

Our R&D efforts combined with agronomists' capability to adapt scientific information to each farm's needs and circumstances has produced substantial yield achievements, surpassing the DEFRA (UK Department for Environment, Food and Rural Affairs) average from similar geographies over the years.



## CROP YIELD DATA 2014-2018 Regional data covering 28,000 hectares

Agrii's MAP project is a consolidation of farm gross margin data based on measured yields and standardised output prices, applied according to crop quality.



Source: Data observatory monitoring framework. Agrii customer data from a similar geography.

## OUR RESPONSE

### Horizon scanning

We are actively searching out new developments and have an innovation team devoted to horizon scanning. Should new crop technologies become available in the UK, we will welcome them subject to necessary safety evaluations. For farmers, new technologies have the potential to boost productivity, efficiency and combat pests and diseases.

### Encouraging innovation

Agrii welcomes new innovative and creative ideas from agronomists and farmers. When deciding new projects to take forward, we always consider three core questions:

- Is it providing a solution to one of many agronomic challenges?
- Will it increase productivity in a sustainable way?
- Will it improve farmer profitability?

### Excellence in agronomy

We will develop a new way to reward excellence in agronomy advice through a novel profit share with customers, AFP.

### Healthy crop development

We will continue to search for and trial new crops that have improved health benefits or satisfy the demand for evolving diets.



"Through the use of crop data analysis and satellite imagery, we can work alongside biodiversity to maximise every hectare."

Charlie Catto. Agrii Agronomist, 2020 Farmers Weekly Award Finalist for Arable Advisor of the year

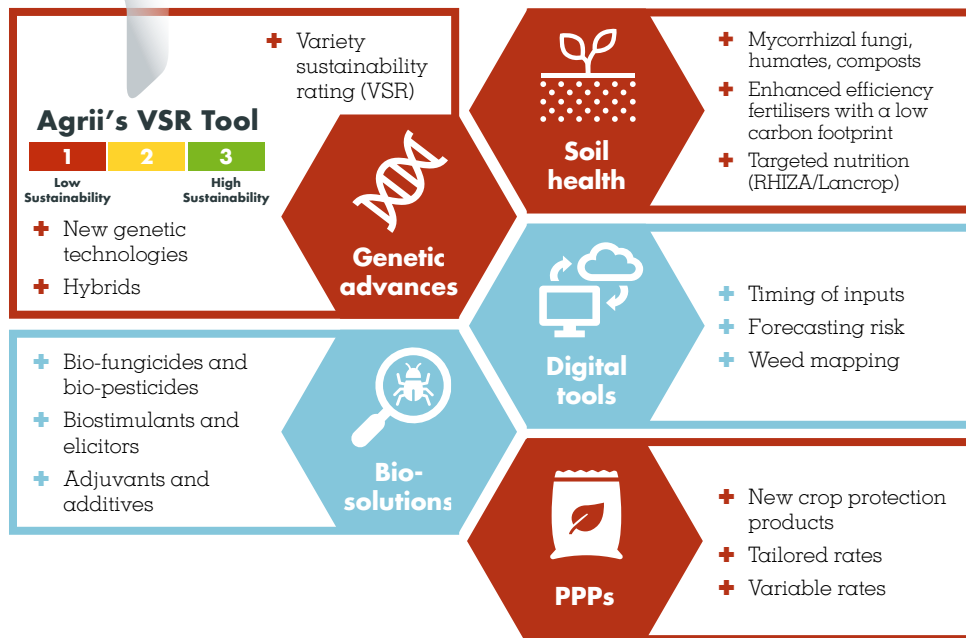
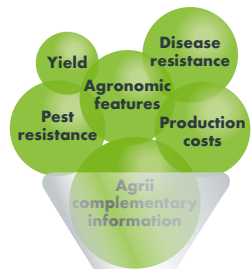


# PROVIDING INTEGRATED WHOLE FARM SOLUTIONS

**Plant Protection Products (PPPs) are key for growing profitable and healthy food. However, their availability and efficacy are gradually declining, posing a threat to the future of food production.**

We recognise that to maximise yields efficiently, the industry needs to reduce the reliance on PPPs for controlling weeds, pests and diseases.

A future with less reliance on these products is one with increasing adoption of integrated whole farm solutions. Based on a range of cultural and biological methods, Integrated Pest Management (IPM) works to prevent, monitor and control damaging organisms. Agrii has always supported IPM principles, which are now rising up the political agenda, becoming the heart of sustainable food production.



## OUR RESPONSE

### IPM focussed research trials

Currently, 85% of the trials we carry out include an element of IPM. We aim to ensure all our R&D is IPM driven over the coming years. This will enable our agronomists to advise the best approaches for crop management.

### Variety Sustainability Ratings

Our greatest single R&D investment is in variety development. We have recently translated information from our advisory list into a "Variety Sustainability Rating" or VSR. This score ranges from 1\* (low sustainability) to 3\* (highly sustainable) and considers many factors such as disease resistance, yield stability and pest resistance. Our VSR score will simplify variety choice for farmers, ensuring the most efficient option is recommended.

### Agronomy advice

We will work towards being able to offer climate tolerant break crops and associated agronomy advice by 2023, to help boost farm sustainability and productivity.

### The role of biosolutions

Biological solutions with a low environmental impact, that complement crop production, such as biostimulants, have been extensively researched for over 20 years. The products show some promise, and laboratory screening methods will now be used widely to fast track them to the market. Once available, biosolutions will provide farmers with a range of alternatives to PPPs.

### Establish recognised metrics on PPP use

We will work with a range of stakeholders to establish a set of metrics on the use pattern of PPPs, in order to validate and confirm the widespread adoption of IPM.



**"We should put Integrated Pest Management at the heart of an in-the-round approach"**  
The UK Government's 25-year Environment Plan (2018)



# IMPROVING SOIL RESILIENCE

Soil is fundamental for crop production, supporting delivery of 95% of the UK's food, and storing around 80 years' worth of GHG emissions in the form of carbon.<sup>1</sup>

However, our soil is at risk of further compaction and erosion, which will reduce fertility and increase the risk of flooding. Conversely our soils also face the challenge of more drought episodes, with 40% of the fields in which we grow crops being at risk of drought, even under current climatic conditions. It is therefore vital that we protect such a fundamental resource to maintain food production and protect the environment.

Cultivation methods can also affect soil health, disrupting mycorrhizal fungi that provide the connection between soil nutrients and plants. Disrupting beneficial ecosystems can have negative impacts on long term productivity and the environment.

When we ask our customers which areas of their production systems require advice and guidance, improving soil health comes out as number one. For this reason, we have placed it at the top of our priority list.



Agrii was one of founding partners of the Harper Adams Soil and Water Management Centre.

Soil is fundamental for crop production supporting delivery of 95% of the UK's food



44% of arable land at risk of erosion<sup>2</sup>

1: Environment Agency, 2019. 2: Parliament, 2006.

## OUR RESPONSE

Since recognising the importance of improving soil health to our customers, we have invested heavily in soil research. Measuring what makes a healthy soil, together with the impact of cover crops, has been a specific focus.

### Understanding soil health

We have invested in ways to improve soil health through collaborative partnerships. A better understanding of improvement methods will increase ecosystem efficiency, enabling farmers to boost productivity.

### Measuring soil health

We are working to develop a programme that measures soil health so benchmarks can be established and improvement measures developed. A simplified measurement tool will allow farmers and growers to easily measure soil health and recognise potential areas of improvement.

### Tailored nutrition programmes

Expanding our unique nutrition programme for crops, Origin **NUTRI-MATCH** prescription fertiliser is formulated to match soil and crop requirements. Through soil and tissue testing and the RHIZA precision offer, applications can be tailored to crop need, thus avoiding waste and negative environmental impacts.

### Reducing carbon footprint

We will continue to develop and promote fertilisers which have a proven low carbon footprint and increased Nutrient Use Efficiency, such as Agrii-Start. By making changes we will allow farmers to reduce their footprint on farm.



Working alongside 25 partners as part of an £8 million project, we are developing a protocol that will contribute towards a 50% reduction in EU food waste by 2030.



Nutri-Cool is a carbon footprint calculator, developed by Origin Fertilisers and independently verified by ADAS.

### The Agrii-Start fertiliser range, formulated based on Agrii trials results







# ENHANCING THE ENVIRONMENT

**Agriculture relies on healthy natural ecosystems to produce profitable food. However, despite efforts to improve the environment, the UK Government's 2018 biodiversity indicators show that the decline in priority species continues.**

Loss of habitat is recognised as a major reason for species decline and although climate change and development have undoubtedly played a part in this, there is more that agriculture in the UK can do to increase biodiversity.

Agrii sees quality habitat creation as a key element for improved delivery. Working with our extensive client base, creating and managing habitats is like managing a new crop, and would open up a meaningful way to improve the environment and enhance pollinator numbers.

Protection of water resources is also essential. Climate change intensifies

the water cycle, resulting in more extreme flooding and droughts. This can have a massive impact on soil moisture, and therefore crop yield and quality.

RHIZA's soil moisture monitoring service can provide multi-depth soil moisture information, enabling efficient use of water to help optimise yield on farm.

Agrii is also heavily invested in following a conservation, or regenerative, agriculture approach.

Please get in touch for more information.



**"Adopting practices that improve public goods is beneficial to both the farming business and the wider environment."**

Paul Pickford, Agrii Farm Business Consultant

## OUR RESPONSE

### Environmental awareness training

We will expand our Agrii Environmental training programme for all agronomists and customers to ensure "public money for public goods" is fully embraced. We are also committed to continuing the courses that we have run over the last 10 years with our University partners, on agriculture and the sustainable management of both crops and environment.

### Launch "Green Horizons"

By launching our "Green Horizons" research challenge, we aim to grow a profitable crop with reduced crop protection inputs, bolstered by green technologies.

### Environmental services

Our tailored environmental advice services, and variety in seed supply for different agri-environment land options, can provide farmers with the support they need to improve a range of environmental resources on farm.

### Reducing emissions

Through Origin Enhanced-N products and additives, we can help to reduce nitrous oxide and ammonia emissions by increasing N use efficiency.

### Achieving net zero

We will work with farmers to learn together how best to achieve net zero greenhouse gas emissions by 2040. Our new net zero iFarm will also be launched with the aim of reducing carbon footprint on farm and throughout our business.

The NFU has set the goal of reaching net zero greenhouse gas (GHG) emissions across the whole of agriculture in England and Wales by 2040.

Net zero refers to the balance between the amount of greenhouse gases produced and the amount removed from the atmosphere. We will reach net zero when the amount we add is no more than the amount taken away.

### Virtual training

Alongside our physical events, we will launch virtual training for farmers to help spread best application practice more efficiently. This will help increase safety on farm and reduce the risk of PPPs impacting non-target organisms or polluting water resources.



# POLLINATION

**is a primary focus in delivering public goods, and is estimated to be worth around £690 million a year to the economy.**

(The Centre for Food Security)



# EXTENDING STAKEHOLDER ENGAGEMENT

**There is an increasing focus on the environment and climate across all sectors of society and it's no different on farm. Helping farmers to make the right choices for their farming businesses, is crucial if we as an industry are to deliver on our commitments.**

There's lots of chat, lots of documentaries and lots of reports. Agrii's priority however is making change happen. We are looking to have greater consultation, collaboration and partnerships with a broader representation of agriculture, horticulture, amenity, forestry and ornamental stakeholders.

Our customers are increasingly asking for and are open to discussion and advice on how to regenerate soils, improve ecosystems and create a more balanced and sustainable farmed environment. Our partnerships and collaboration start on farm. We are a vital link in the chain, but consultation with many stakeholders has been challenging as we are often seen as part of the problem rather than an integral part of the solution, providing practical research and development, on-farm advice and innovative greener inputs.

As an integral part of our 5-point plan, we want this to change. We are actively seeking a dialogue, collaboration and partnership with those looking to connect with the farming community; listening to their needs alongside those of stakeholders, to develop a common understanding and ultimately effect sustainable strategies on-farm.

As a national company working across both crop and livestock sectors, we are uniquely positioned to tap into the voice of the farmer, provide farm feedback to various initiatives and concepts, helping partners to avoid pitfalls, test solutions and support implementation with our customers.

Agrii already works with a number of valued partners on a variety of initiatives, and under the Green Horizons initiative we are looking to extend this engagement to additional interested parties.

## External participation and collaboration



We will continue to collaborate with valued partners, as well as find new ones to work with on a variety of initiatives in support of our 5-point plan.

## OUR RESPONSE

### Expanding engagement

Shift communication and engagement towards Government, NGOs, food packers, processors, retailers and scientific institutions.

### Digitally enabling growers

All growers are to be digitally enabled via free introductory access to RHIZA services and location/farm specific technological information by 2021. These technologies will enable farmers to target areas of improvement, producing an optimum yield in every field.

### Crowd sourcing programme

Creating a crowd sourcing programme for customer feedback and innovation. This will help to ensure we continue to provide services in the best interest of farmers.

### Virtual iFarms

Expanding our virtual iFarm events and trial tours will ensure key technical messages are easy to access. Improving iFarm accessibility will expand our engagement with farmers and other stakeholders.



# RHIZA



**Agrii's RHIZA team provide a precision and digital service information platform with a complete suite of farm monitoring tools.**

Providing valuable soil data and crop analytics from anywhere, both on and offline, farmers and agronomists can highlight over 260 pests, diseases, weeds and other problems within the mobile app.

# INTEGRATED, INNOVATIVE, ENGAGING

The sustainability of our work depends on our people, who are at the heart of our business.

We have **191** agronomists, **77** of whom have been with the company for **20+ years**.

Our agronomists work with more than **23,000** growers from across the UK.

## RECRUIT

**We recruit the finest talent across the industry, in a diverse range of careers, harmonising attitude and behaviour with capability and experience.**

**We embrace and celebrate diversity in our workforce.**

We run a series of **scholarship programmes** in conjunction with our University partners, seeking to engage and develop the next generation.

## RESPOND

**We respond to individuals' needs for personal development, helping our people to grow their career and flourish at what they do.**

**Our Agrii IQ umbrella for learning and development has enabled our employees to grow within the business.**

Since 2016, a total of **47 colleagues** have passed their **BASIS qualification**, and 41 have passed **FACTS**.

This will enable our workforce to deliver expert advice on farm.

## RETAIN

**Employees stay because Agrii is a great place to work, forward thinking and rewarding.**

**The wellbeing of our employees is vitally important to Agrii.**

In 2020, we have introduced a **'Wellbeing calendar'**, and are expanding a number of initiatives to engage with our employees.

**40% of our people** have been with the company for **over 10 years**, with the longest serving employee with 52 years' service.

“ Technically driven, encouraging innovation, educating the next generation ”

Employee comment from our 2020 employee survey



## ENSURING THE HIGHEST STANDARDS OF BUSINESS CONDUCT

Agrii is a part of the Origin Group, and being an employee of Origin means striving towards the highest possible standards of behaviour and ethical business conduct.

With people, customers and partnerships at our core, we all have a part to play in making Origin a great company to do business with and a rewarding place to work.

Our values define who we are as an organisation and are our guiding principles for how we should all interact in our daily business.



## OUR HEALTH, SAFETY AND WELLBEING STRATEGY (2020-2025)

Built on partnerships and community, we have designed a comprehensive strategy on how we plan to achieve high standards of health and safety.

This strategy is unique to Agrii and prioritises safe and healthy workplaces and activities, creating a culture that will have a positive impact on our employees, our customers and the agricultural community we work within.

As part of this strategy we support industry bodies and charities including the Farming Community Network (FCN) – a voluntary organisation that supports farmers and families within the farming community through difficult times.



[www.agrii.co.uk](http://www.agrii.co.uk)

For more information on anything in this document, please email [info@agrii.co.uk](mailto:info@agrii.co.uk).

Printed using vegetable inks on paper made from FSC® certified and traceable pulp sources. Manufactured in accordance with ISO certified standards for environmental, quality and energy management. A Carbon Balanced product with World Land Trust certificates.

**Agrii**™