



abagriTM

Impact Report 2025

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AB Agri is an international animal nutrition and farm performance business. We employ more than 3,000 people globally, selling products and services to farmers, feed and food manufacturers, processors and retailers in over 100 countries.

We develop speciality feed ingredients for livestock, horses and pets, and seed treatments for crops.

Our dairy business provides products and data insights to major food processors, retailers and directly with farmers, enabling them to produce high-yielding and nutritious dairy products. We are also one of the UK's largest compound feed businesses for pig and poultry customers, with international manufacturing capabilities extending into Europe and China.

Chief Executive's message



José Nobre
Chief Executive Officer

“As an industry we need to be open in our thinking and collaborative in our approach.”

José Nobre

Our agriculture industry undertakes the vital work of feeding eight billion people with safe, nutritious food.

Although macro challenges such as population growth and climate change are increasing the pressure on our global supply chains, this pressure presents clear opportunities to those who are resilient, flexible and bold. But we cannot work in silos. As an industry we need to be open in our thinking and collaborative in our approach.

We have created this report to share our perspective and impact in the areas of human dietary trends, environment and nutrient conservation, animal health and welfare and agricultural supply chains.

We are deeply proud of the capability we have within our teams, supported by our talent development, innovation, data and analytics. This report also explains how we intend to harness that capability for the future of our industry.

It is a new approach for us to report on the risks and opportunities facing our industry in this way. Change is a constant and, as such, we recognise that the work to build resilience will never be completed. What matters is to continuously evolve and adapt as the context in which our businesses operate changes, and to remain fully focused on what our customers need.

I hope this report provides an insight into our business, our plans for the future, and the way we're engaging with – and embracing – the changes facing our whole industry. I welcome challenge and conversations on any of the topics we discuss here.

José Nobre
CEO

AB Agri at a glance

3,000+

employees in eight
business groups

35

manufacturing
sites

11

laboratories and
research centres



expertise across
livestock, equine,
pet and seed
technology

100+

products and services
to more than 100
countries worldwide

£1,650m

2023/24 revenue

£41m

2023/24 profit

Our roots in agriculture span more than 100 years. As a supplier of animal nutrition and farm performance services to the agri-food supply chain, we are proud of the contribution our businesses have made, during that time, to improving how food is produced.

Today, the need for responsible, affordable nutrition for people and animals is as relevant as it has ever been. And as we look to the future, we recognise our role in supporting the long-term sustainability of our industry.

This report identifies the key trends affecting our industry and examines how AB Agri businesses are embracing them.

We have structured these trends into four themes:

1.

**Human dietary
trends**



→ [see pages 12 to 19](#)

2.

**Environment and
nutrient conservation**



→ [see pages 20 to 26](#)

3.

**Animal health
and welfare**



→ [see pages 27 to 30](#)

4.

**Agricultural
supply chains**



→ [see pages 31 to 35](#)

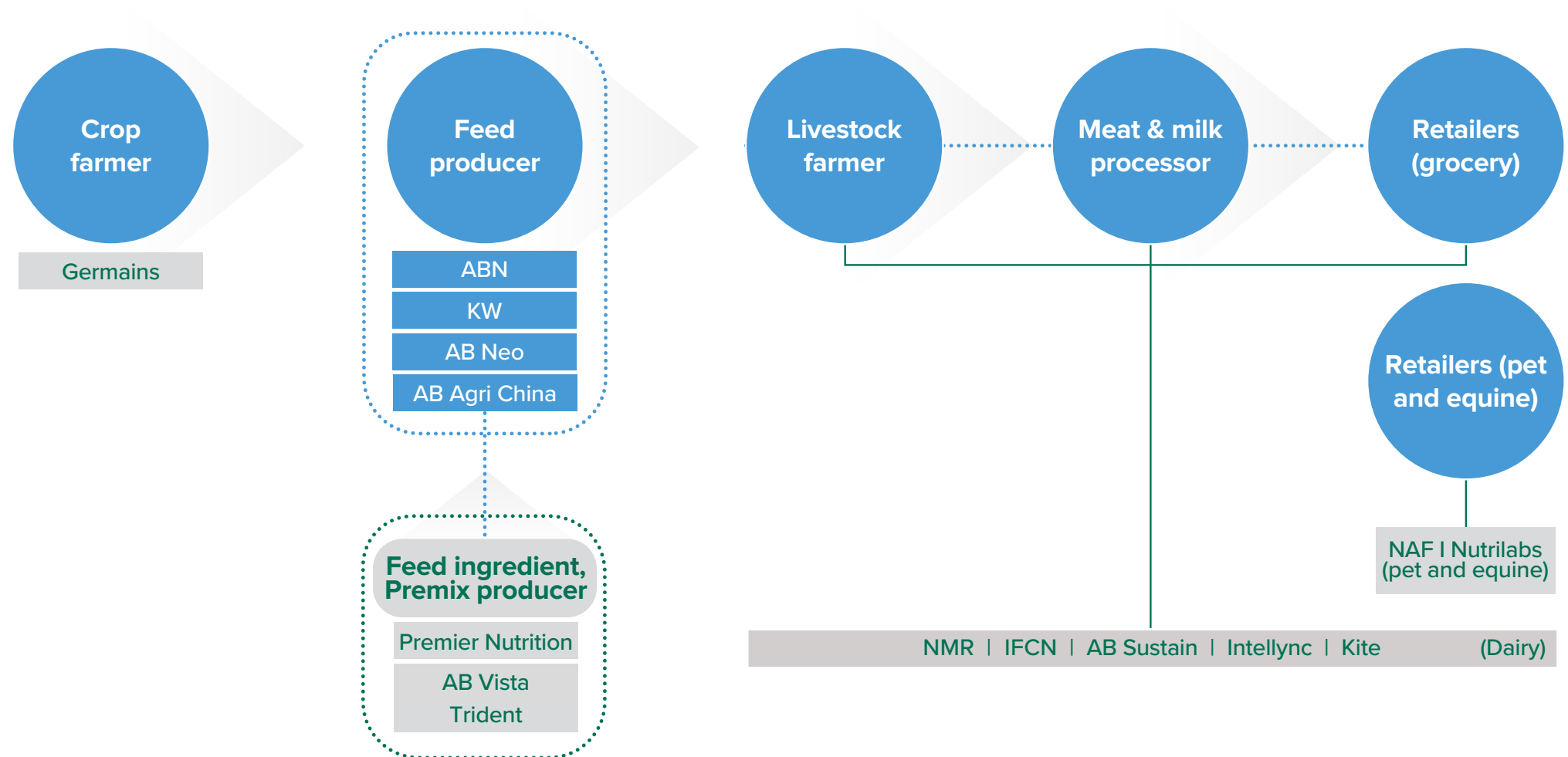
As an industry, our capacity to address these themes is critical and as such we have considered 'building capability' separately, in addition to our four themes.

Often the trends we have identified connect in multiple ways which are not always linear. For example, climate change is both a consequence of emissions produced through food production and a driver of increased risk in agricultural supply chains. Human dietary preferences are, to some extent, shaped by opinions – not always facts – about the environment and animal health and welfare.

Against these inevitable complexities, we have aimed to describe the world as we see it in our framework, to provide value and clarity for our stakeholders.

AB Agri businesses across the agri-food supply chain

Our ability to span the entire supply chain gives us a unique position



Establishing our framework

In 2022, AB Agri completed a materiality assessment to identify the factors that are most important to our stakeholders and where we have the greatest opportunity to act.

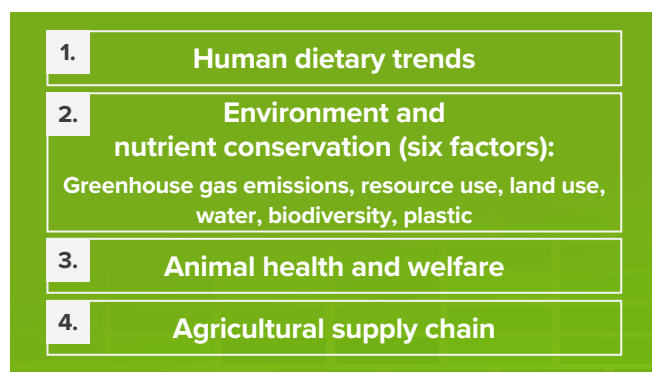
The assessment was supported by independent consumer surveys in four markets:



Additional research from Kantar focused on future trends in retailer demand and government policy direction.

We also reviewed the evidence behind government policy and consumer perception, and weighted our focus towards areas where we consider the scientific evidence is most robust.

Through this process we identified nine care factors across four themes:



The following year we established a Managing Directors' Responsibility Forum, attended by managing directors (or their delegates) for each of our businesses, which meets at least quarterly.

The forum enables our senior managers to work closely together on delivering our responsibility objectives and to connect our objectives to business decision-making. It works alongside AB Agri's senior leadership team (SLT), which is made up of all the statutory directors of our businesses and is responsible for overall governance of our business, with several of the members sitting in both groups.

Through forum meetings, we identified a broader set of trends, influences and impacts material to the industry, some of which sit outside the current 'responsibility' space, but all of which relate to our industry's long-term ability to produce responsible food. While our businesses operate in diverse sectors and markets, the concept of resilience emerged from these forum meetings as fundamental to the long-term sustainability of our agri-food industry.

That ongoing connection between our AB Agri responsibility goals, our reporting requirements and commercial environments helps to make sure the goals and actions we set are aligned to industry priorities and are delivered to the best effect for the sector's long-term health.

While AB Agri is focused on making progress against our goals, our businesses are each encouraged to assess their individual needs and priorities, and act on those that are most relevant.

Our framework is further supported by steering groups for climate, responsible sourcing, and animal health and welfare. Led by the Director of Responsibility, these groups meet monthly to govern those areas and monitor associated metrics and actions, whilst also enabling our businesses to share best practice and identify potential areas for collaboration.

AB Agri has a [Responsibility Policy](#) and the following supplementary policies and statements which can all be accessed online from our website [abagri.com](#):

- [Animal Health and Welfare Policy](#)
- [Antimicrobial Resistance in Agriculture Positioning Statement](#)
- [Deforestation Statement](#)
- [Environmental Management Policy](#)
- [Equality, Diversity and Inclusion Policy](#)
- [Feed Safety Policy](#)
- [Responsible Sourcing Policy](#)

About this report

This report captures the trends and themes our Managing Directors' Responsibility Forum identified as most material to the long-term health of our business and industry.

Data for our report have been drawn from 1:1 interviews with forum members and industry specialists, and have been supported by industry and consumer trend information. AB Agri ESG data have been taken from our ABF Annual Report 2024 and ABF corporate responsibility website, with additional data referenced separately. Business results relate to our most recent business year, 1 September 2023 to 31 August 2024, unless otherwise stated.

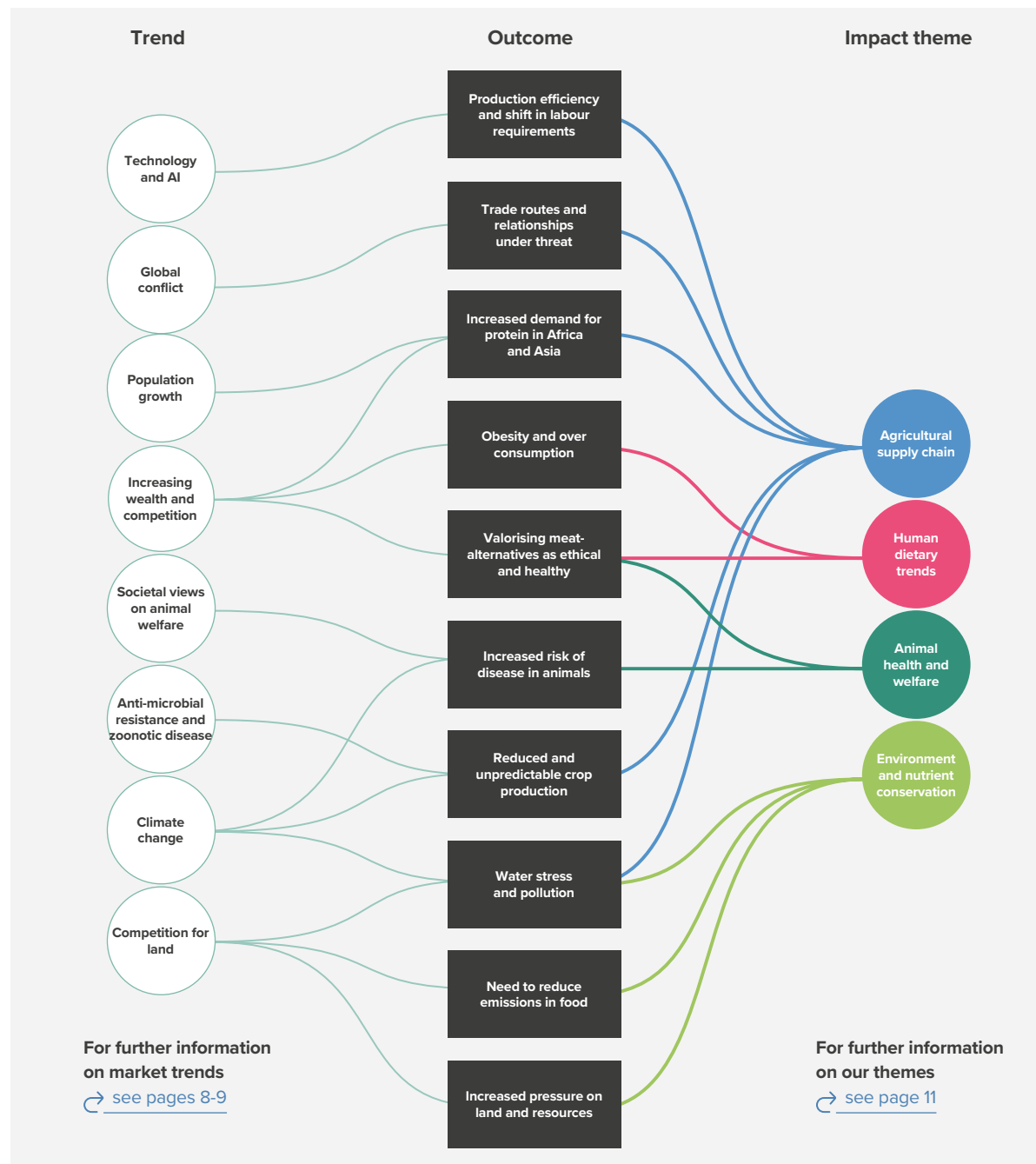
Situational analysis – what's driving change?

Our situational analysis sought to capture what is changing in the world and how that might impact food production. We considered this in terms of:

- Trends – what are the underlying factors that are driving change for our industry?
- Impacts – what does that mean for the industry? What is the challenge?

We categorise these impacts into the four core themes:

- Human dietary trends
- Environment and nutrient conservation
- Animal health and welfare
- Agricultural supply chain.



Engaging with our stakeholders

Our key stakeholders’ needs underpin everything we do and have been important in shaping our framework. Here we explain who our stakeholders are, how we engage with them and how we have accounted for their priorities in our work.

Consumers	Customers	Suppliers	Associated British Foods PLC
<p>The agriculture industry supplies the world’s population with food. For us, ‘consumers’ are those who are fed by agricultural supply chains worldwide, or could be fed by agricultural supply chains in future.</p> <p>AB Agri businesses do not generally engage directly with consumers. We use market research and industry data, including data produced by our global dairy data business IFCN, to update our knowledge on global consumption trends.</p> <p>AB Agri also produces ingredients and nutritional supplements for pets and equine. Our Global Supplements business, including our NAF and Nutrilabs brands, engages directly with consumers through social media and in-person at events.</p>	<p>AB Agri customers span a broad cross-section of the agricultural supply chain, from feed and seed producers to retailers, food service businesses, farm businesses and food processors.</p> <p>We strive to build lasting, strategic relationships with our customers and work together to raise the capability and standards of the industry. We do this through on-farm advisory services, production and distribution of industry data, and thought leadership partnerships. In many cases, our customer engagement is on a direct and individual basis, through phone calls and email or visits to customer sites.</p> <p>This provides our businesses with a rich understanding of our customers’ needs today and emerging needs for the future, which our Managing Directors’ Responsibility Forum members have fed into our framework development.</p>	<p>AB Agri businesses use around 3,000 raw materials from more than 1,400 suppliers, including bulk commodity suppliers and ingredient manufacturers.</p> <p>Our data, consultancy, technology and manufacturing businesses are also supported by a wide range of partners from many other sectors, such as software, academia, engineering and haulage.</p> <p>We value diversity in supply chains and seek to support our suppliers in meeting and upholding our standards, particularly small and mid-sized suppliers who may need more support.</p> <p>Where we need to implement new standards or data collection requirements, we aim to work in partnership with our suppliers and engage them directly as early as possible.</p>	<p>AB Agri is the agricultural division of Associated British Foods PLC (ABF), a FTSE-listed company.</p> <p>This gives AB Agri and our businesses access to groupwide expertise and investment, providing people-development opportunities and thriving communities of practice across retail and food production with a wide global reach.</p> <p>ABF sets groupwide policy and governance frameworks where it is appropriate to do so, and we are accountable to ABF and its investors in our business activity, including quarterly management account reporting and annual statutory reporting.</p>

Industry organisations	Universities and research centres	Government and regulators
<p>Industry groups and bodies play an important role in agriculture, helping to raise standards in food production and engaging on behalf of agricultural businesses with audiences such as consumers and government.</p> <p>AB Agri businesses and employees contribute to our industry’s organisations, at national and international level, including representation on the Agriculture Industries Confederation (AIC), The European Feed Manufacturers’ Federation (FEFAC), the International Feed Industry Federation (IFIF), Global Feed LCA Institute (GFLI), Global Dairy Platform (GDP) and British Equestrian Trade Association (BETA).</p>	<p>Our research and development teams work closely with university-based researchers to support the future of the industry and make sure our products are robustly trialled.</p> <p>We have more than 146 third-party listed academic and commercial trial sites, and support 11 PhD students.</p>	<p>While many of the standards the agriculture industry adheres to have been led by the sector, regulatory bodies and government policy have significant effect on both food safety and competitiveness within each market.</p> <p>We engage with government and regulatory bodies directly, in response to consultations and through advisory body participation. For example, in relation to climate change agreements (CCA), extended producer responsibility (EPR) and a call for evidence on methane-suppressing feed products.</p>

Research collaboration: AB Vista and Katholieke Universiteit Leuven in Belgium

A long-term collaboration between AB Vista and Katholieke Universiteit Leuven in Belgium is helping to deepen knowledge into how a chicken’s intestines function. The collaboration has provided significant insights into which types of fibre are fermented in the intestines, which helps to improve diet formulation and intestinal health.

“We used to think both soluble and insoluble fibre entered the caeca, which is the fermentation powerhouse of the chicken, and correspondingly that both insoluble and soluble fibre contributed to gut health. But after finding that very little particulate matter enters the caeca through the caecal “sieves”, and that which does is mostly less than 50 microns across, this work turns that assumption on its head. We now know that for the chicken, fermentable fibre is soluble fibre, so a better strategy would be to try to turn as much insoluble fibre into soluble so the bird can use it.

“This knowledge has implications for new product developments such as enzymes, where the race is on to discover candidates that can create soluble fibre from ingredients which up to now have not responded well to current feed enzymes – e.g. maize and sorghum. Since maize is by far the most commonly used cereal in animal feeds in the world, the opportunities are huge.”

Dr. Mike Bedford
Research and Technical Product Launch Director, AB Vista

Trends and impacts

In building our framework we identified the trends we believe will have the biggest material impact on our industry. This section summarises our headline findings in each of those eight areas.

Population growth

According to the UN's revised predictions, the world's population growth is now expected to slow in the mid-to-long term, peaking at 10.4 billion during the 2080s.¹

From 2017 to 2050, it is expected that half of the world's population growth will be concentrated in just nine countries:

- India
- Nigeria
- The Democratic Republic of the Congo
- Pakistan
- Ethiopia
- The United Republic of Tanzania
- The United States of America
- Uganda
- Indonesia²

In response to population change we have increased our footprint and investment outside the UK, with more than 50% of AB Agri revenue now coming from non-UK markets.

Technology and artificial intelligence

We see progress in many areas that could drive change and opportunity in agriculture. This includes new and upcoming capability to automate a range of tasks, from analytical work to on-farm labour. This can, and already is, enabling step-changes in efficiency, from precision application of fertiliser to health testing and assessment.

Global conflict

The 2020s have seen an intensification in active conflict and a once-globalised world has become more protectionist.

Brexit has impacted our UK market specifically, while direct conflict has affected commodity prices and availability, such as the reduced availability of wheat during the Russia-Ukraine war.

Increasing wealth and competition

The balance of wealth distribution worldwide has already shifted, and this trend is predicted to continue. According to Swiss bank UBS, global wealth will rise by 38% between 2022 and 2027, reaching \$629tn (US dollars) by 2027. Growth by middle-income markets will be the primary driver of global trends.³

Where there is finite land available for crop production, supply of the raw materials our industry depends on, such as soybean meal, may be more constrained. We therefore anticipate increased competition for those commodities.

Societal views on animal welfare

Societal interest in how animals are reared has contributed to rising standards of care in agriculture, particularly the UK, EU and US. Potential for reduction in meat, eggs and dairy consumption has been widely documented.

However, compelling evidence for a sharp decline in future demand is lacking. A study by the European Parliamentary Research Service (EPRS) assesses the current state and future prospects of protein production globally and in the EU up to 2050. It estimates that alternatives to meat will reach 22 million metric tonnes globally by 2035, accounting for 2.5% of the global protein market for meat and meat alternatives.⁴

Antimicrobial resistance and zoonotic disease

Antimicrobial resistance is recognised as a threat to human health and as a result, the animal agriculture industry has committed to reducing its use of antibiotics. This is leading to an increasing need for livestock producers to support health in alternative ways and take proactive measures to prevent disease, avoiding the need for antibiotics.

As diseases such as Avian Influenza (AI) have been observed transferring from livestock to humans, there is increasing concern regarding the potential for zoonotic disease to lead to human epidemic.

Climate change

The evidence for climate change is robust, with global land and ocean temperatures consistently rising over the past century.⁵ The impact on agriculture includes increased heat, drought, flooding and more volatile weather conditions, with a resulting imperative to act on reducing emissions and to make more efficient use of resources.

1. <https://www.un.org/en/global-issues/population>

2. <https://www.un.org/en/desa/world-population-projected-reach-98-billion-2050-and-112-billion-2100>

3. Global Wealth Report 2023 – global wealth set to rise by 38% over the next five years | UBS Global

4. EPRS_STU(2024)757806_EN.pdf (europa.eu)

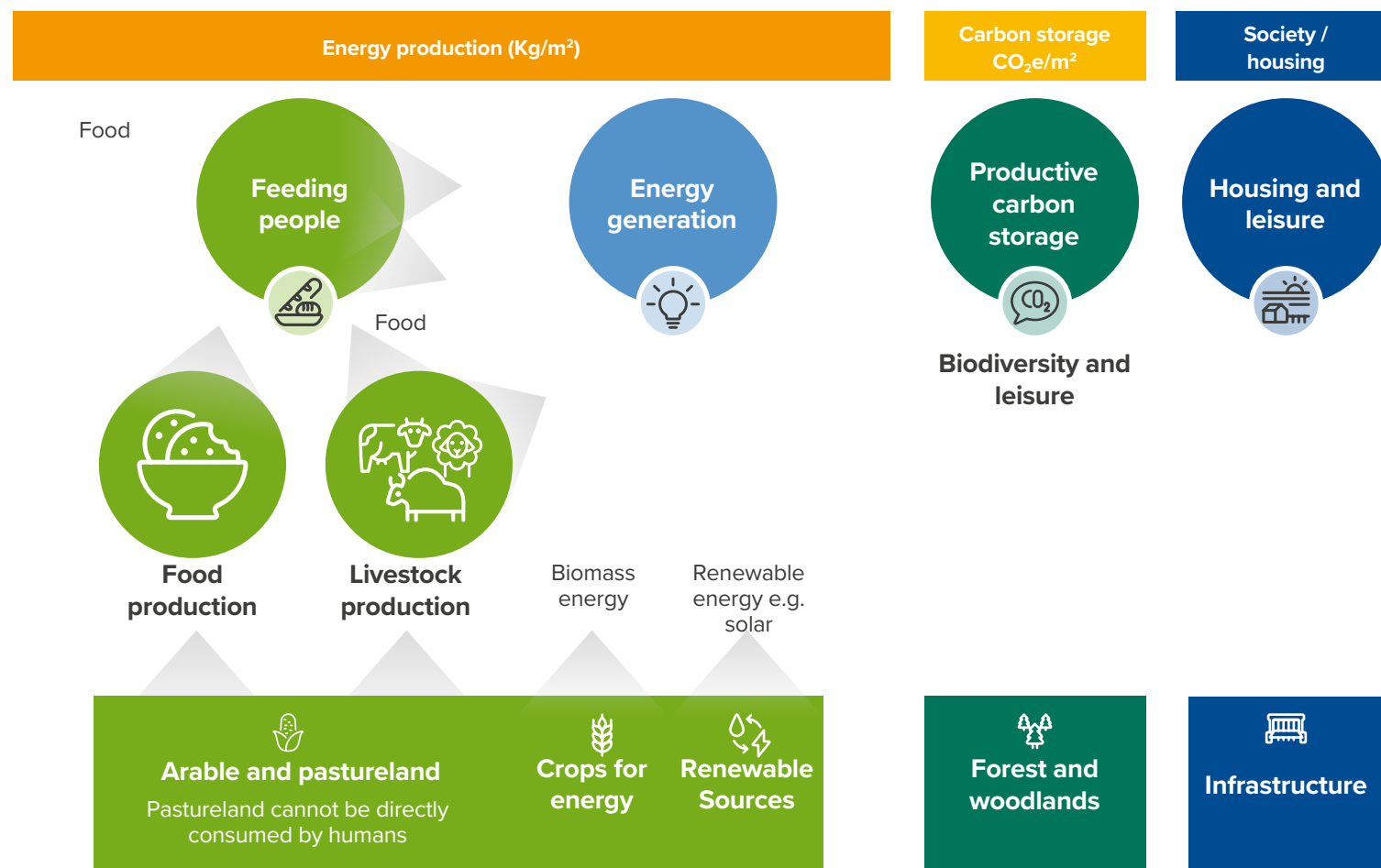
5. Evidence – NASA Science

Competition for land

Historically, land has been needed for housing, leisure and food. Today, land is in more demand than ever, with an array of competing interests jostling for precedence.

As underground fossil fuels, such as oil and gas, become scarce – or less acceptable – alternative energy sources such as solar and wind power are increasingly preferred choices. But these sources often need land for production. Equally, we need green spaces, peatland, trees and areas that support thriving biodiversity and capture carbon. Meanwhile, climate events such as flooding, drought or fire are making food production less reliable. Deciding how to maximise land use for these competing interests is critical for our industry.

How should we use our land?





Our four themes

Our framework identifies trends and impacts – some interconnected and others more differentiated. We have grouped our factors into four broad themes.



1. Human dietary trends

This considers the nutritional challenges that will need to be addressed in the coming years as a consequence of population change, wealth and behavioural trends. It therefore anticipates what we will need to produce as an industry and where that demand will come from.



2. Environment and nutrient conservation

As an industry, we are custodians of the land, with a responsibility to protect it for future generations.

Our priority action areas in this section support our vision of sustainable farming practices, which underpin both our commercial proposition and our operational activities.



3. Animal health and welfare

The reputation of our industry is underwritten by the trust that consumers place in us to care for livestock animals farmed for food production, and to make sure standards of animal health and welfare are met worldwide.

This imperative is no less important in pet and equine care, where owners take individual responsibility for health and care of their animals.

Our core expertise in animal nutrition and farm performance informs activity across our operation, such as the standards we set ourselves for producing safe feed and new product development to support immune system defence.



4. Agricultural supply chain

As the world has globalised, agricultural supply chains have become increasingly complex. The impacts and opportunities identified in this area apply to our ability to produce and deliver agricultural products and keep food on retailers' shelves and – ultimately – on dinner tables.

It also takes into account how supply chains may need to adapt to address challenges and opportunities highlighted by other themes.

Theme

1.

Human dietary trends



Human dietary trends

Dietary trends over the previous century suggest that, as wealth increases, individuals seek to increase consumption of protein, along with other macronutrients such as carbohydrates and fat.⁶

As population growth rates slow towards 2050, much of the change in demand for nutrition is therefore expected to result from increasing wealth in low- and middle-income countries, leading to a greater ability to consume protein.

For markets such as Europe, the UK and the US, while affordability remains the driving factor for many parts of the demographic, preferences may also be influenced by criteria such as environmental or animal health and welfare and a desire for better human nutrition.

“The challenge of improving human nutrition affects both developing and developed markets, as protein and micronutrient deficiencies can be found across all income levels. Increasing availability of meat, eggs and dairy can help to tackle this challenge but for food production to thrive in any market, a number of factors need to come together. As a minimum, access to quality arable and grazing land, significant logistics capability, access to energy, access to hard currency are all needed to underpin the professionalisation of agriculture.”

Malcolm Beaton
M&A and Strategic Alliances Director, AB Agri

Developing markets

The dietary priorities to address include micronutrient accessibility, macronutrient accessibility and safety.



**Micronutrient
accessibility**



**Macronutrient
accessibility**



Safety

According to World Health Organization data, hundreds of millions of people are classified as ‘food insecure’ today⁷. In 2020, 22% of under-fives worldwide suffered from stunting due to dietary deficiency⁸, which has been linked to low levels of meat⁹ and dairy¹⁰ consumption.

Food safety remains a global concern, with an estimated 600 million people falling ill after eating contaminated food, leading to 420,000 deaths each year.¹¹ Global efforts to improve food safety standards, such as the implementation of the Codex Alimentarius (an international collection of standards, guidelines and codes of practice), can be expected to have an impact. However, the agriculture industry can support the pace of adoption and change in practice.

Developing markets therefore present an important opportunity for the agriculture industry to address the need for greater availability of micro- and macro-nutrients, produced safely and affordably. Demand for proteins that are lower cost, more flexible and easier to cook, such as chicken, milk and eggs, is growing in developing markets ahead of pork, lamb and beef.¹²

6. FAOSTAT

7. The state of food security and nutrition in the world 2023 (who.int)

8. UNICEF/WHO/World Bank Group – Joint Child Malnutrition Estimates 2021 edition

9. Meat consumption per capita and stunting rate estimates in different countries (Adapted from OECD (2018) and UNICEF-WHO-World Bank (2017), cited in Adegbola T. Adesogan, Arie H. Havelaar, Sarah L. McKune, Marjatta Eilittä, Geoffrey E. Dahl,

10. Beliyu Haile, Derek Headey, Growth in milk consumption and reductions in child stunting: Historical evidence from cross-country panel data, Food Policy, Volume 118, 2023 <https://doi.org/10.1016/j.foodpol.2023.102485>

11. World Health Organisation: <https://www.who.int/news-room/fact-sheets/detail/food-safety>

12. FAOSTAT

Developed markets**Priorities to address:**

Micronutrients	Environment
Welfare credentials	Taste

Research conducted for AB Agri in 2022 found that price was the primary factor in determining food choices for the majority of consumers in the UK, US, China and Germany.

Animal health and welfare features as an important secondary consideration, which, in focus groups, was connected to a consumer belief that higher-welfare meat, eggs and dairy improves taste¹³.

Although AB Agri consumer data did not show widespread interest in environmental considerations when making food choices, concerns around the environmental impact of food production, combined with animal health and welfare views, are linked to the growth in plant-based alternative proteins. Boston Consulting Group has predicted the alternative protein market could grow to 9% of the protein market by 2035. However, recent studies¹⁴ have demonstrated that diets deficient in meat, eggs and dairy lead to sub-optimal nutritional outcomes in growth¹⁵.

With obesity an increasing concern, and evidence of micronutrient deficiency still affecting even the most affluent groups, this is driving demand for foods linked to healthier lifestyles.

Our Germain's seed technology business is experiencing growth in salad and vegetable-related sales, consistent with industry expectations that the health and wellness food industry will grow from \$939.9bn (US dollars) in 2022 to reach around \$1.4tn (US dollars) by 2027¹⁶.

Meat, eggs and dairy remain a mainstay of recommended diets in developed countries. In the UK, the NHS recommends milk and dairy foods as good sources of protein and calcium, and meat as a good source of protein, vitamins and minerals, including iron, zinc and B vitamins¹⁷.



13. Savanta, 2022

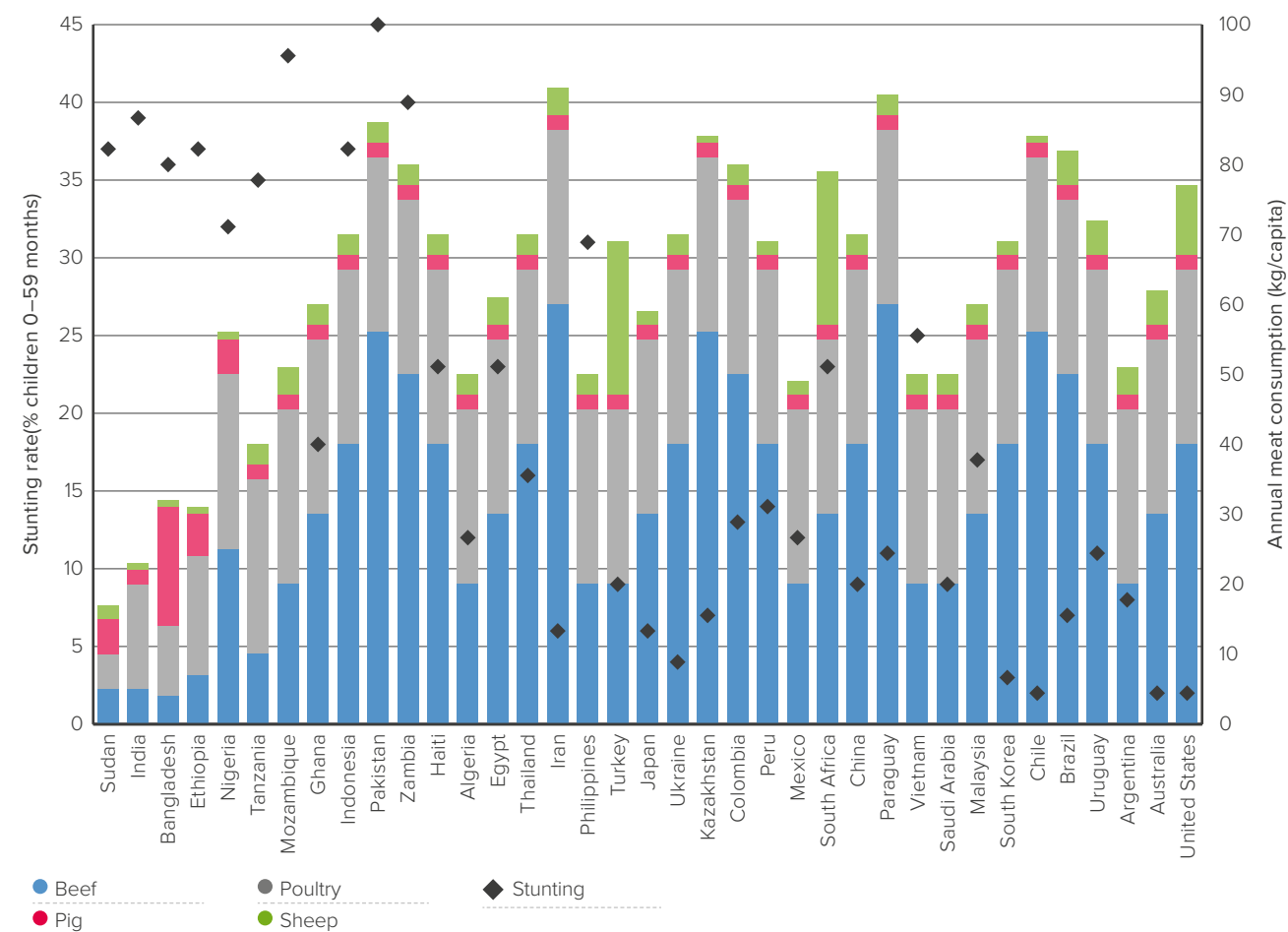
14. <https://www.foodstandards.gov.scot/publications-and-research/publications/modelling-the-impact-of-reductions-in-meat-and-dairy-consumption-on-nutrient-intakes-and-disease-risk>

15. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8210981/>; <https://www.gatesfoundation.org/our-work/programs/global-growth-and-opportunity/agricultural-development#:~:text=We%20invest%20in%20crop%20research,to%20sustainably%20increase%20their%20productivity.>

16. Health and Wellness Food Industry Trends | Food & Beverage Investment Banking (<https://www.bglco.com/insights/health-and-wellness-food-industry-market-drivers-in-2023/>)

17. Eating a balanced diet – NHS (<https://www.nhs.uk/live-well/eat-well/how-to-eat-a-balanced-diet/eating-a-balanced-diet/>)

Meat consumption per capita and stunting rate estimates in different countries¹⁸



18. Meat consumption per capita and stunting rate estimates in different countries (Adapted from OECD (2018) and UNICEF-WHO-World Bank (2017), cited in Adegbola T. Adesogan, Arie H. Havelaar, Sarah L. McKune, Marjatta Eilittä, Geoffrey E. Dahl, Animal source foods: Sustainability problem or malnutrition and sustainability solution? Perspective matters, Global Food Security, Volume 25, 2020. Animal source foods: Sustainability problem or malnutrition and sustainability solution? Perspective matters – ScienceDirect

Dairy and the world's nutritional needs

Human nutrition is often understood in terms of macronutrients, such as proteins, fats and carbohydrates, and micronutrients, like iron, zinc, and calcium – but the reality is more complex. While all proteins appear equal, some are more nutritionally valuable than others.

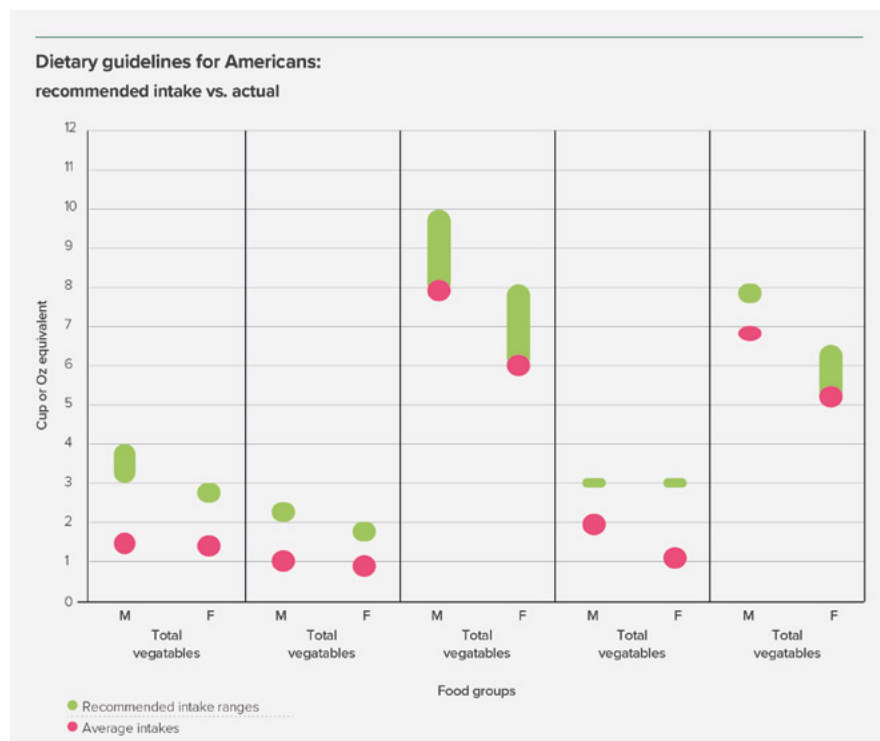
Proteins contain amino acids, which are required in a balanced human diet. We can make, or synthesise, some amino acids for ourselves, while others can only be gathered through the food we eat.

The most valuable proteins are therefore those that provide the nine essential amino acids that the human body is not able to synthesise for itself.

In this respect, dairy is powerful, with a 16oz (488g) glass of milk containing all nine essential amino acids, with inclusion levels at 50%-90% of an adult's recommended daily allowance.

This useful mix of amino acids, combined with high protein quality scores (known as digestible indispensable amino acid scores, or DIAASs) sets dairy protein apart from plant-based alternatives.

It is widely known that dairy products contain important vitamins and minerals, most notably calcium. However, more recent advances in nutritional science have demonstrated that the health effects of food are more complex than the individual nutrients it contains.



“Over the last few years, nutritional scientists have developed a more sophisticated understanding of how nutrients within foods are absorbed and processed in the body...

We don’t eat nutrients in isolation – a spoonful of calcium or a gram of fat. We eat them as part of whole foods, and some foods perform better than others because of the unique way nutrients interact. Milk and dairy products are great example of foods that are greater than the sum of their nutrient parts.”

Dr Judith Bryans PhD, CEO, Dairy UK

These health effects are a function of both a food’s structure and its nutrient composition, and how they interact with each other.

This unique combination is known as a food’s matrix – and our ability to obtain nutrients depends on each food’s unique matrix.

There is increasing evidence that the health benefits of dairy matrices are more than the sum of their parts, particularly when it comes to cardiometabolic disease risk, body weight and bone health.

Together, the widely evidenced nutritional effects of milk and dairy products have informed the EU decision to award Nutrilabel A status to skimmed milk, putting it on an equal footing with fruit and vegetables.

Similarly, the US Dietary Guidelines for Americans (USDA) recommends increasing dairy consumption from current levels – less than two servings per day – to three servings per day.¹⁹

Furthermore, the Food and Agriculture Organization (FAO) of the United Nations designates milk and dairy as ‘vital in meeting the global nutrition targets for 2025 endorsed by the World Health Assembly and the Sustainable Development Goals (SDGs) that aim to reduce stunting among children under five years, low birthweight, anaemia in women of reproductive age (15–49 years), overweight among children under five years, and obesity and diet-related non-communicable diseases (NCDs) in adults’.²⁰

19. Dietary Guidelines for Americans, 2020-2025

20. Contribution of terrestrial animal source food to healthy diets for improved nutrition and health outcomes (fao.org)

Effective land use

With only 10% of the world's land suitable for arable crops, the ability to continue producing food from permanent pasture and meadowland – which covers a further 20% of the Earth's land – is important for meeting global food production requirements. The majority of that land²¹ is used for feeding cattle.

As ruminant animals, dairy cows can eat grass – enabling grassland to become productive by transferring nutrients into a usable form for human consumption.

Ruminants also play an important role as part of wider circular food systems, thanks to their unique ability to consume nutrients discarded from human food production.

Overall,

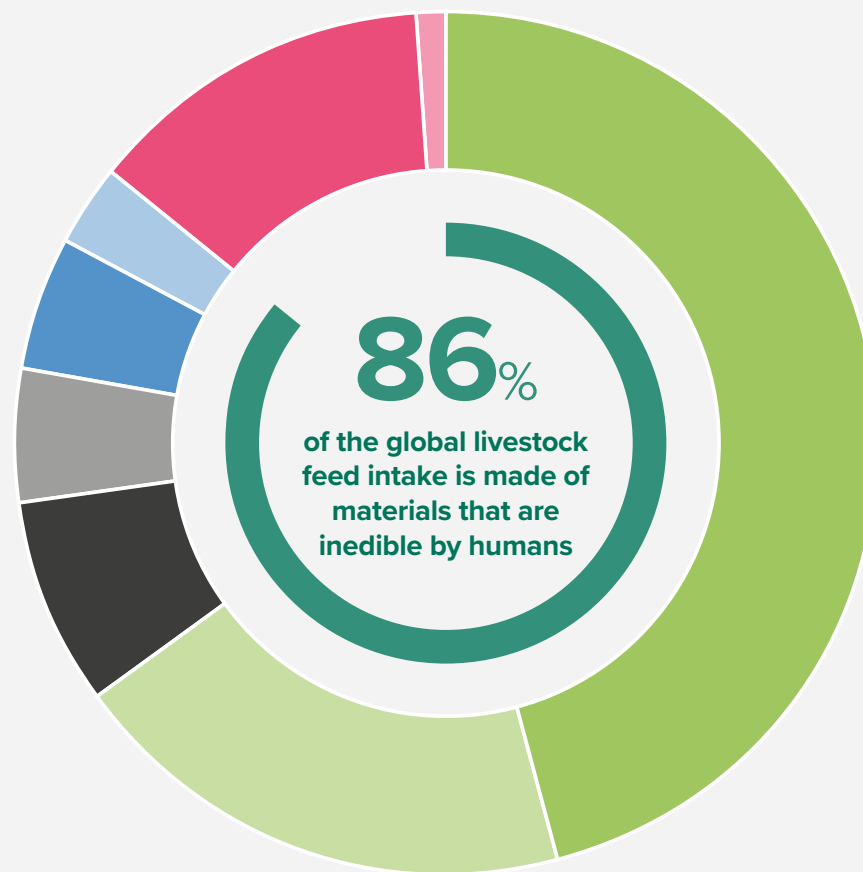
86%

of the food that dairy cows consume is unsuitable for human consumption

Livestock turn nutrition we can't eat into protein

Grass and leaves	46%
Crop residues	19%
Fodder crops	8%
Oil seed cakes	5%
By-products	5%
Other non-edibles	3%
Grains	13%
Other edibles	1%

Only
14%
edible by humans



<https://www.sciencedirect.com/science/article/abs/pii/S2211912416300013>

21. Food and Agriculture Organization of the United Nations (via World Bank) (2025)

Affordability

As dairy supply chains have professionalised over the past few decades to make improvements in genetics, nutritional strategies and farm management, dairy proteins have become relatively more affordable (corrected for inflation).²²

In response, and with rising global wealth, dairy consumption globally continues to increase more rapidly than global population growth, with the greatest increases in Asia, Africa and Latin America.

According to projections by our global dairy data and insights business, IFCN, this trend is set to continue. Demand from Asia is expected to grow by 56.1%, or US\$127.6bn between 2023 and 2038²³, and this increasing affordability could be an important contributor to better health outcomes for the world's undernourished populations.

Reducing emissions in dairy value chains

Today's global dairy value chain contributes about 4% of global greenhouse gas emissions, with the majority relating to:



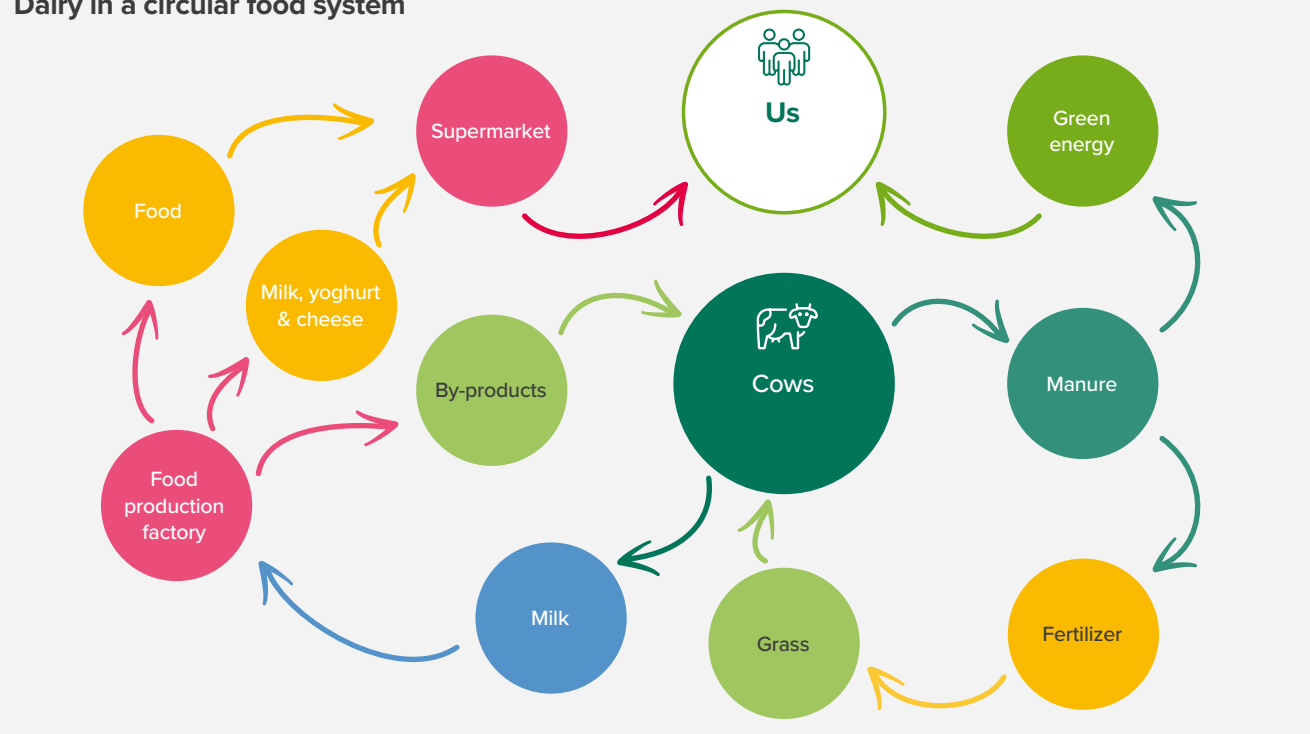
But global averages obscure a substantial gap between low and high performance. If all the world's dairy production matched the best-performing farms, global greenhouse gas emissions attributable to dairy could drop by as much as 70%²⁴. And those leading the way in lower emissions continue to improve.

22. Kite-Project-Apollo-FINAL.pdf (kiteconsulting.com); RPI :Ave price – Milk: Pasteurised, per pint – Office for National Statistics (ons.gov.uk); U.S. Bureau of Labor Statistics: Annual Average for Milk, fresh, whole, fortified, per gal. (3.8 lit) in U.S. city average, average price, not seasonally adjusted. CPI Average Price Data

23. Internal AB Agri data (IFCN)

24. AB Agri internal data (IFCN, 2023). See also: <https://ifcndairy.org/dairy-share-on-global-ghg-emissions>

Dairy in a circular food system



Rising to the challenge

So, the challenge is to increase global dairy production to meet human nutritional needs, while also reducing the industry's global emissions. These goals can be delivered hand-in-hand.

We recognise that no two dairy farms are the same. Factors such as herd genomics, available co-products, farm-grown silage, climate and farming methods have a considerable effect on the approach needed for each farm to make progress.

This is strikingly different from many other food production systems, where identical production practices can be applied the world over in fully-controlled environments.

Although dairy food production is more complex, it can be synchronised with local food systems, where dairy cows play an invaluable upcycling role.

Our work for a thriving dairy industry

No matter where a farm is located, or which farming system is used, our approach is to start with data.

This includes both output data to monitor production volumes, milk quality, on-farm carbon emissions and health indicators, and input data, such as genomics testing, silage testing and machine-controlled feed mixing.

Taken together, these data can be interpreted intelligently, in a way that is both objectively benchmarked and sensitive to each farm's individual context. By combining this elevated understanding of what is going on in the farm system, with specialist knowledge such as nutrition, genomics and products that can help, farm business owners can achieve a better view of how a farm is performing and where the biggest gains can be made.

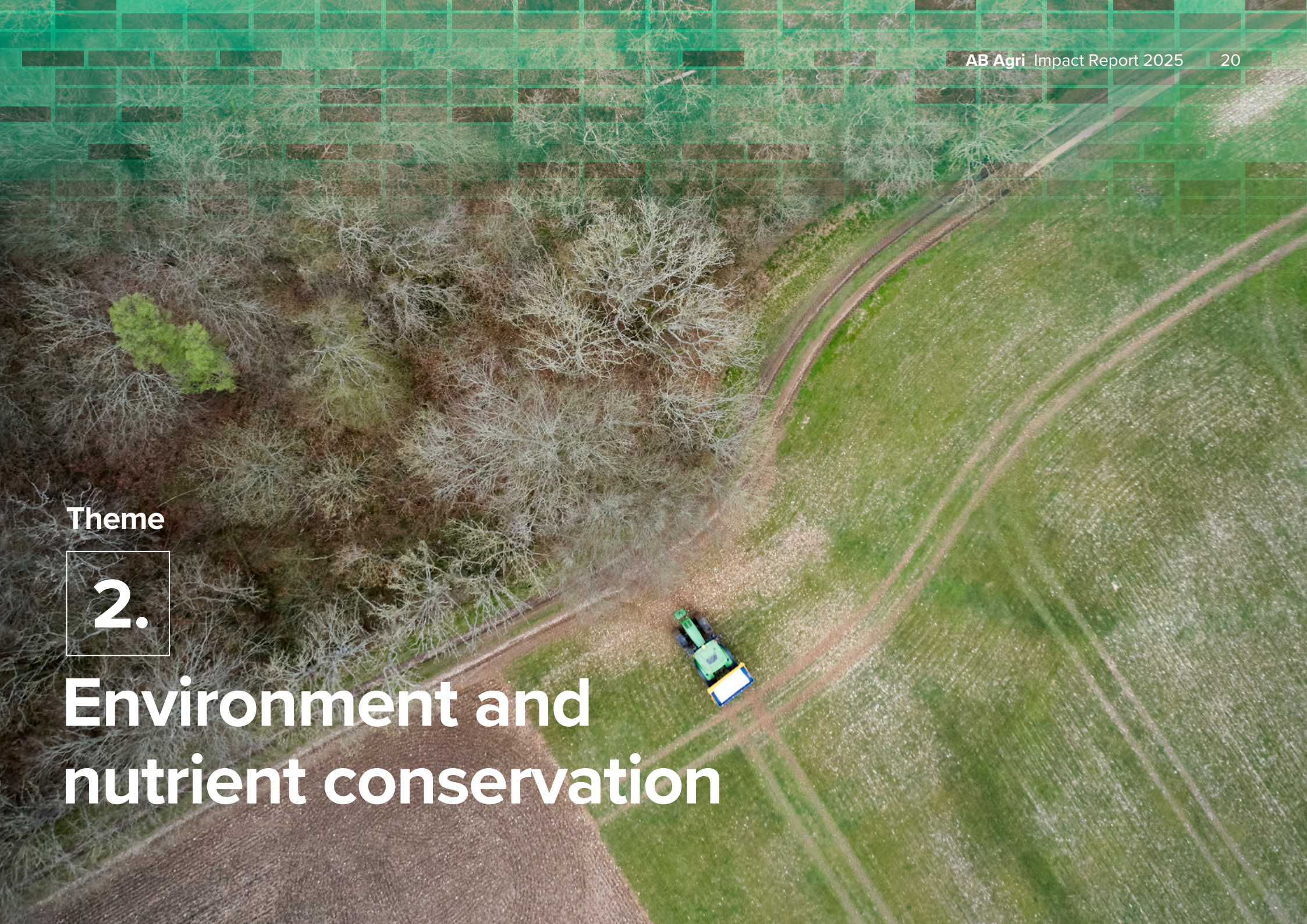
Together, our dairy businesses aim to address these needs, helping to create a more responsible and productive industry that contributes to the wellbeing of the world's population, while making resourceful use of finite land and materials.



Theme

2.

Environment and nutrient conservation



Environment and nutrient conservation

With nutrient conservation particularly important in agriculture, we take into account the whole farm ecosystem and wider agri-food supply chain – considering how these systems work together to produce responsible food.

Nutrient conservation in sustainable farm ecosystems

The gases that are normally considered the unwanted drivers of climate change – known as greenhouse gases – can, in agriculture, also be seen as the nutrients that form the building blocks of life. For example, CO₂ is a feedstock for plants and algae, and nitrogen is a core building block of proteins that are used to feed livestock.

What is known to many industries as simply ‘emissions’, also means lost nutrients from farming systems.

And this principle is not limited to greenhouse gases. Materials such as phosphorus, considered pollutants if they enter waterways, are vital for animal nutrition.

We therefore prioritise our activity by assessing whole farming ecosystems to identify and act on the biggest opportunities for improvement. In many cases, these improvements not only reduce CO₂e emissions in the end consumer product, such as a kilo of chicken, or litre of milk, but also help keep food affordable by making optimal use of nutrients and reducing waste.

Sustainable ecosystems relate both to individual farms and to whole food systems, where land is optimised for food production, carbon storage, energy generation and human use. Nutrients are retained within the agri-food ecosystem and distributed within the system to wherever they can have the greatest value.

This leads us to three interconnected principles that underpin our priorities for action:

- conserving and elevating nutrients within our farming ecosystems – reducing biogenic emissions and pollution;
- reducing use of fossil fuel (thermogenic emissions) and fossil-derived products (plastics); and
- removing links to deforestation from our supply chain.

Supporting food and farm ecosystems

Supporting customers in achieving more sustainable farm ecosystems has become increasingly central to our offering across our businesses.

Our specialist supply chain management company, AB Sustain’s Farm Footprints tool, the world’s first on-farm carbon footprint assessment, is used by well-known international food producers to measure and report Scope 3 emissions within their supply chains. Our dairy consultancy business, Kite, provides practical emissions reduction and nutrient-conservation advice to individual farm businesses.

Carbon footprinting our products

We have committed to calculating product environmental footprints for all branded animal nutrition products by 2027.

This initiative leverages diverse data sources, including primary production data, Global Feed Lifecycle Assessment Institute (GFLI) information and suitable proxies for unlisted materials. The tool and its methodology have been peer-reviewed and validated by University College London.

In 2023, we completed the collection of carbon emission values for all the raw materials used in our compound feeds globally and are now collecting carbon values for our speciality feed ingredients, where data is often scarce or hard to obtain. Our technical teams, suppliers and carbon footprint specialists are working together to complete this work by 2025, with all remaining products completed by 2027.

“When it comes to emissions in food production, consumer perceptions don’t always align with the science. For example, consumers may believe that animals reared on low-input, extensive farms are better for the environment, but in many cases, the data do not support this view. As retailers and food service businesses increase their demands for data, and with new legislation requiring that food businesses back up their claims with evidence, we hope this will lead to better clarity for consumers in future.”

Angela Booth
Responsibility Director, AB Agri

Elevating the food-waste hierarchy

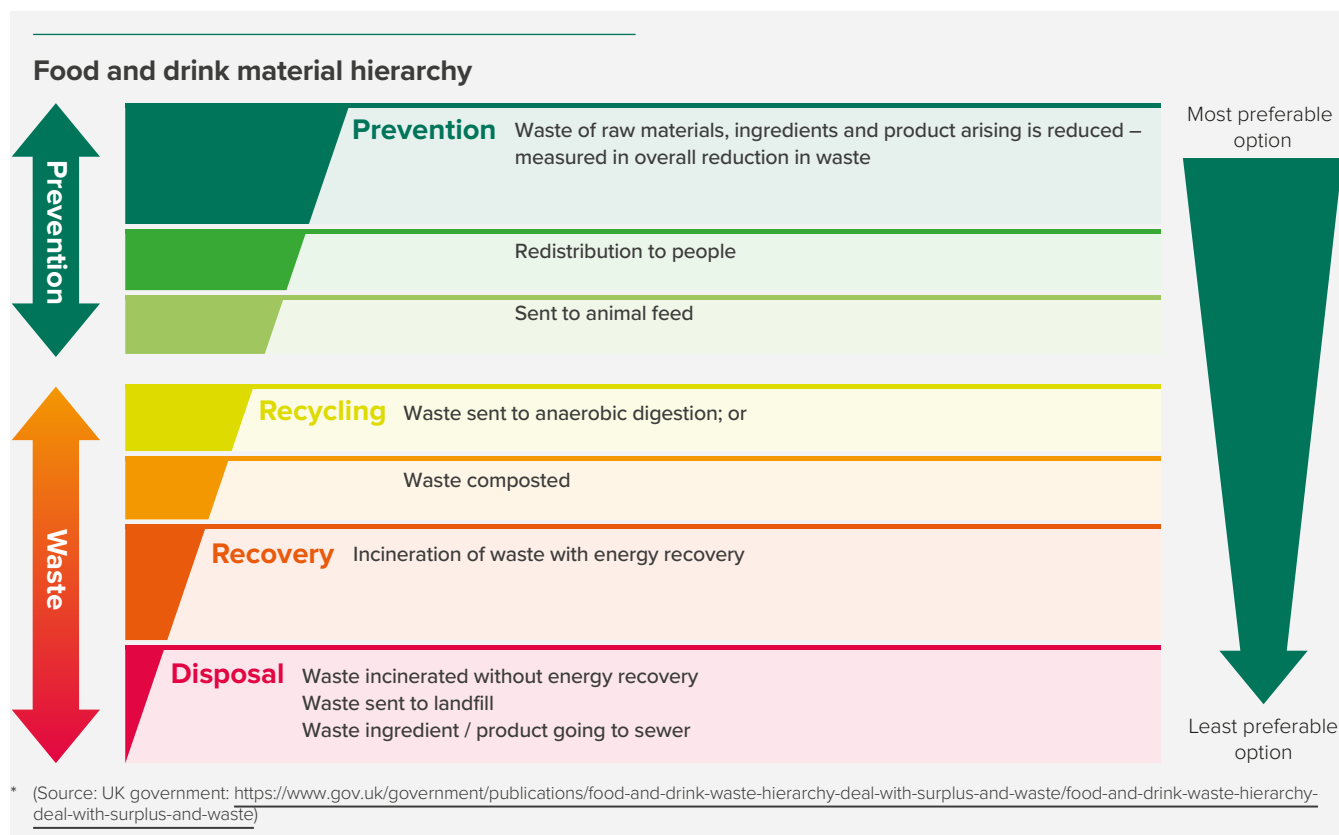
The food-waste hierarchy encourages the direction of nutrients to their most valuable use. For example, the co-products from food manufacture should be fed to livestock where possible, or, if not, used in anaerobic digestion for energy production.

Making the most of co-products

We are proud of our heritage as a leading supplier of co-products sourced from food manufacture processes. These include the high-fibre pulp that's left over from sugar beet production or spent grains from the brewing process.

In 2018 we launched NovaPro, a high protein alternative to soya, produced from British-grown rapeseed once the oil has been extracted for human consumption.

A full lifecycle analysis for NovaPro was performed in 2022 by agri-food sustainability specialists Mérieux NutriSciences Blonk, providing validated CO₂e numbers for this product. More than 40,000 tonnes of NovaPro are now supplied to UK farms per year, saving more than 130,000 tonnes CO₂e, compared with an equivalent South American soya-based diet.



Amur turning waste into energy

AB Agri's anaerobic digestion (AD) business, Amur, helps AD operators increase biogas production through performance products, feedstocks and technical advice. By maximising value from raw materials that would otherwise go to waste, Amur contributes to waste reduction and reuse, as well as reducing reliance on fossil fuels.

Amur uses AB Agri's AD facility in Yorkshire as a test site for its research and development. The site produces biogas from materials, including locally sourced food waste and material from animal feed mill sites that have failed to meet quality control standards. In the past year, the AD facility has produced 3.6 GWh of electricity and 30.8 GWh of biogas, which has been exported to the UK national grid. Due to the lack of available feedstock during the reporting period, the amount of biogas exported this year has decreased by 19%.

Amur continues to invest in developing new products to increase biogas production and replace currently used minerals and additives with materials that have a reduced environmental footprint.

One example is the ADFe additive, an iron hydroxide-rich material sourced from disused coal mines in partnership with the British Coal Authority. ADFe is a recovered material and has a lower carbon footprint compared to other similar dry materials, as it is dried naturally in the sun rather than through energy-intensive methods. Iron hydroxide is an essential additive to manage hydrogen sulphide levels in biogas facilities. In trials, ADFe has shown to be 30% more effective than conventional products.

Waste and recycling

In 2024, there was a 19% increase in the total waste generated by AB Agri from 5.8 kt in 2023 to 6.3 kt this year. Of this waste, 87% or 5.5 kt was recycled, with under 1 kt being sent to landfill. This increase is partly as a result of two sites cleaning large on-site equipment in the reporting year.

Total waste generated (kt) vs proportion of total waste sent for recycling or other beneficial use (%) – Agri segment data

	2024	2023	2022	2021	2020
Total waste generated (kt)	6.3	5.3	5.7	7.3	6.4
Proportion of total waste sent for recycling or other beneficial use (%)	87%	92%	88%	90%	84%

Measuring our Scope 3 impact

We have aligned to the Science Based Targets initiative (SBTi) to reduce our Scope 3 emissions by 25% by 2030 (absolute) and have determined three material categories:

- Category 1 – Purchased Goods and Services
- Category 4 – Upstream Transportation and Distribution
- Category 11 – Product in Use.

More than 80% of our Scope 3 emissions relate to our raw materials within Category 1.

This year we completed a project to calculate our Scope 3 emissions in accordance with the GHG Protocol. In preparation for public disclosure in the next financial year, a pre-assessment assurance audit is being conducted on our Scope 3 data. Transition plans based on this data will also be developed in the next financial year.

Emissions within our business (Scope 1 and 2)

We are working to improve energy efficiency and reduce the fossil fuel reliance of our sites globally. We have set a roadmap for reduction, with ‘energy used in manufacturing’ and ‘distribution operations’ as our priority focus areas.

Our total energy use in 2024 was 198 GWh, a decrease of 1% compared to 2023. Of that total energy consumption, 9% came from a renewable source. During 2024, we exported 35 GWh of energy to the national grid.

Scope 1 and 2 emissions reduced by 14% from 69 ktCO₂e in 2023 to 59 ktCO₂e in 2024. This reduction is partly driven by one site in the UK operating at reduced capacity because one of its compressors was not operational for over half of the reporting year. Additionally, efforts across the business were put in place to improve process efficiencies, investments were made in technology, and fuel sources were changed, including the installation of solar panels.

We continue to make progress in transitioning to lower emission sources across our estate, with solar panels installed at nine sites globally. Additionally, our anaerobic digestion plant in Yorkshire, UK, produces renewable gas from food waste.

Total energy consumed and proportion from a renewable source (GWh); location-based data.

	2024	2023	2022	2021	2020
Total energy consumption (GWh)	198	199	211	223	225
Proportion of RE (GWh)	18	12	25	13	11

Scope 1 and 2 GHG emissions (000 tonnes CO₂e); location-based data

	2024	2023	2022	2021	2020
Scope 1 and 2 GHG emissions (000 tonnes CO ₂ e)	59	69	63	69	70

Plastic and packaging

We are committed to eliminating, reducing and redesigning the packaging we use for our products. We have conducted trials aimed at transitioning towards using recycled-content plastic packaging. Changes have been implemented across some of our UK businesses, such as using recycled materials in shrink wrap, tote bags, and plastic tubs within Premier Nutrition’s equine range.

We have mapped our packaging data to gain a precise understanding of our usage, enabling the identification of opportunities for improvement. This analysis has helped us to set internal targets at business unit level aimed at reducing overall packaging use and increasing the volume of recycled plastic content.

In 2024, we used 6 kt of packaging across all AB Agri businesses, a 20% increase compared to 2023. This increase is in line with the higher production output, improvements in the internal reporting of packaging volumes and weights, as well as the introduction of new product lines requiring different packaging materials.

In 2024, we measured our packaging usages across our UK businesses and are now building packaging usage data to incorporate all our non-UK businesses to establish a global view of the packaging used.

Premier Nutrition implementing more sustainable packaging solutions

Premier Nutrition takes a continuous improvement approach to identifying and implementing more sustainable packaging solutions for its equine product range, using its largest equine customer as a pilot.

During a comprehensive review of all packaging product lines, it was discovered that 40% of the plastic packaging used was in the form of plastic tubs and lids. We worked

with our supplier to successfully trial and implement an alternative with 30% recycled plastic content, leading to a significant reduction in the use of new plastic.

The success of this project led the business to explore other opportunities for improvement, resulting in 30% recycled content now being used in other types of packaging, such as tote bags and shrink wrap.

This positive change extended beyond our Premier Nutrition business, benefiting other AB Agri businesses as well. The knowledge and experience gained from this initiative have led to ongoing trials on plastic bags, which is currently the most widely used packaging format across AB Agri.



Quantity of packaging used (000 tonnes) – Agri segment data

	2024	2023	2022	2021	2020
Quantity of packaging used (000 tonnes)	6	5	4	4	3

Deforestation and forest risk commodities

As a supplier of soybean meal, soy oil and palm oil, forest risk commodities have been a priority for us for some years and we have made considerable progress.

We have committed that by the end of 2025 all our soya and palm oil usage will be certificated, supporting zero deforestation responsible sourcing schemes.

100% of our palm oil has been RSPO (Roundtable on Sustainable Palm Oil) certificated, supporting sustainable production, using a combination of book and claim, and mass balance.

Soybean meal, in particular, is a material ingredient due to its nutrient-efficient and cost-effective use in poultry feeds. As of the end of 2024, 74% (2022/23: 64%) of the soya products bought worldwide were certificated to schemes meeting the FEFAC benchmark for responsibly sourced soya.

We are an active member of the FEFAC Sustainability Committee, which introduced soya sourcing guidelines in October 2015, as well as of the Agricultural Industries Confederation Sustainability Committee and the UK Roundtable on Sustainable Soy.

The EU Deforestation Regulation, which came into force in June 2023 and will now begin to apply from December 2025, restricts certain forest risk commodities (including palm oil and soya) from being placed on the EU market where they have led to deforestation or forest degradation since 1 January 2021. Similar rules are expected to be introduced in the UK.

Together, these regulations will require updated supply chain practices across global markets especially with respect to traceability and data management. We are working closely with external bodies such as FEFAC, AIC, suppliers and customers, and with our purchasing and commercial teams, to build knowledge, capability and develop enhanced processes across our supply chains to address these requirements.

Since September 2023, all of AB Agri’s South American maize and maize co-products are certificated to a minimum ‘book and claim’ standard. This includes adopting a supplier scheme for sourcing Argentine flint maize, where AB Agri takes the co-product, maize germ. This is a segregated scheme that enables a direct link to the material compared to the ‘book and claim’ standard.



Using data to support responsible pork production

Pilgrim's UK, Britain's biggest farmer and producer of higher welfare pork, uses AB Sustain to perform carbon assessments on each step of its pork supply chain. Through capturing the data, Pilgrim's has been able to evidence economic, as well as environmental benefits resulting from taking a regenerative approach, where outdoor pigs are reared as part of a rotation in arable land.

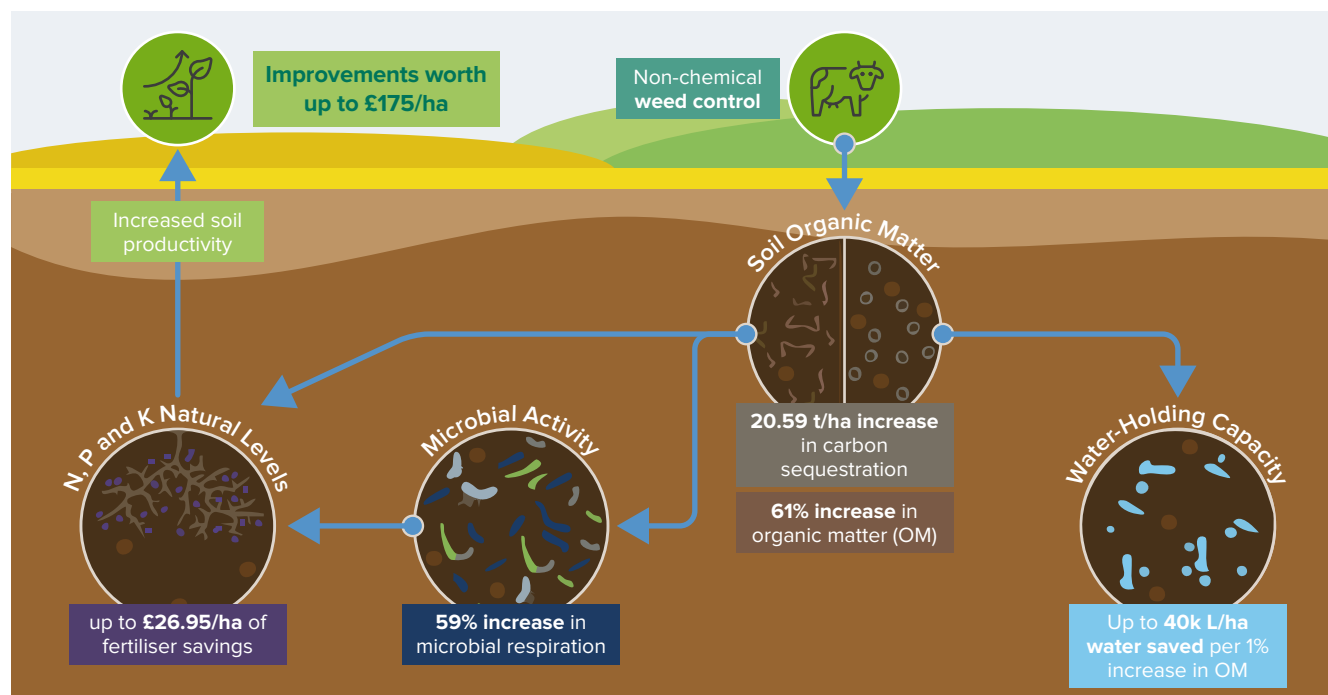
The data has found crop yields and soil organic matter increase, thereby decreasing production costs.

"Innovative businesses such as Pilgrim's are increasingly using data to quantify the environmental impact of new approaches. It means they are better able to join the dots between responsibility-led measures and commercial outcomes."

Simon Phelps

General Manager, AB Sustain

Pilgrim's regenerative approach*



* Pilgrim's UK, internal data

Theme

3.

Animal health and welfare

Animal health and welfare

Animal health and welfare relates to a broad spectrum of considerations, from disease to stocking density and other living condition factors. These are best described by the five domains for animal health and welfare,²⁵ which we align to in our AB Agri Animal Health and Welfare Policy.

From medicine use to health improvement

The livestock sector has worked to reduce antibiotic use since the late twentieth century. More recently, the United Nations Political Declaration on antimicrobial resistance (AMR), in 2016, has supported collaboration with governments to implement responsible antibiotic use strategies and strengthened global cooperation.²⁶

While significant progress has been made in reducing antibiotic use, concerns around ongoing diseases, such as Johne's disease in bovine, and necrotic enteritis in poultry, remain.

Not only may these diseases cause distress, but they also impede an animal's ability to thrive, impacting growth and production rates.

In recent years rapidly spreading diseases, such as African swine fever and avian influenza, have impacted markets including Europe and China. This poses an ongoing financial and animal welfare risk to the industry, as well as reputational risk, given the threat of zoonotic disease spreading to the human population.

Our Animal Health and Welfare Steering Committee, which is responsible for monitoring and responding to animal health challenges, has mapped the top five health and welfare issues across the major species groups that we cover, which are:

- Pig and poultry;
- Ruminant;
- Pet;
- Equine.

These five issues currently cover:

- Prevalent diseases;
- Commercial and economic pressures;
- Product regulatory issues;
- Problems associated with inefficient production; and
- Animal robustness.

We have mapped where our businesses can offer support to livestock farmers, and to equine and pet owners in relation to each of these health and welfare concerns, as well as how we can influence increased welfare for each species group.

We review these five issues every 12 months to make sure that we continue to offer relevant products and services, including technical consultation to improve health and welfare across our industry.

Our businesses support animal health and welfare through a combination of farm management and nutritional strategies, combined with long-term genetic strategies.

Improving health through nutrition

Veterinary medicines can only treat illness once it is already present but research has found immune-supporting feed ingredients can help protect animal health by boosting resilience.

Progres, from AB Agri's feed additives business, AB Vista, is a patented natural feed material derived from coniferous trees. Developed in Finland, where resin has been used as a natural treatment for centuries due to its natural antiviral, antibacterial and anti-inflammatory properties, Progres is the only natural feed material on the market with a proven direct effect on intestinal integrity. Its active ingredients, resin acids, reduce the damage caused by inflammation, with proven application in livestock.

Reduction of antibiotic use is undoubtedly a holistic challenge and AB Vista continues to invest in broadening its animal health offering, including a new gut health service for piglets and broiler chicken producers.

Tiago Tedeschi dos Santos, AB Vista's Global Technical Director, says: "We have extended our product and service offering to support our customers in producing feed and food more responsibly. This has meant building our knowledge of the animal microbiome and bringing new products and services to market with proven effect. Progres is one example, and we look forward to extending our gut health offering in future with more products and services to support our customers."

Building nutritional knowledge to support health

AB Neo, our business focusing on neonatal and maternal stages in animals, uses its Centre of Excellence piglet trial farm facility in Aragon, Spain, to better understand the impact of early nutrition for piglets. "The transition from milk to solid feed is a critical period for piglets, because of the significant changes that happen in their gut, so it's particularly important that the animal's health is protected during this phase", explains Astrid Koppenol, AB Neo Research and Development Manager.

25. The 2020 Five Domains Model: Including Human-Animal Interactions in Assessments of Animal Welfare – PubMed (nih.gov)

26. Global-Trends-in-Animal-Antibiotic-Use-December-2023.pdf (healthforanimals.org)

In the past, zinc oxide was effective in supporting piglet health, but environmental concerns have created a need to find alternative approaches, including more sophisticated nutritional strategies and improved farm management practices. “This challenge has presented an opportunity to use our transition-period expertise, which is a core technical competency for AB Neo”, Astrid adds.

Genetic testing and monitoring

When it comes to dairy, genetic testing is one of the most powerful methods for boosting a broad range of performance outcomes.

“Genomic tests are proven as a more accurate prediction of an animal’s genetic potential, compared to using parent average and ancestral data, which is particularly valuable in younger animals. It allows farmers to identify, rear and breed from heifers and cows, helping to produce a healthier, more resilient herd.”

Richard Miller
Product Strategy Manager, NMR

NMR data that track lifetime daily yield for herds undergoing genetic testing – compared with those without testing – shows the tested herds perform better over time. Lifetime daily yield can be used as a proxy for farm performance.

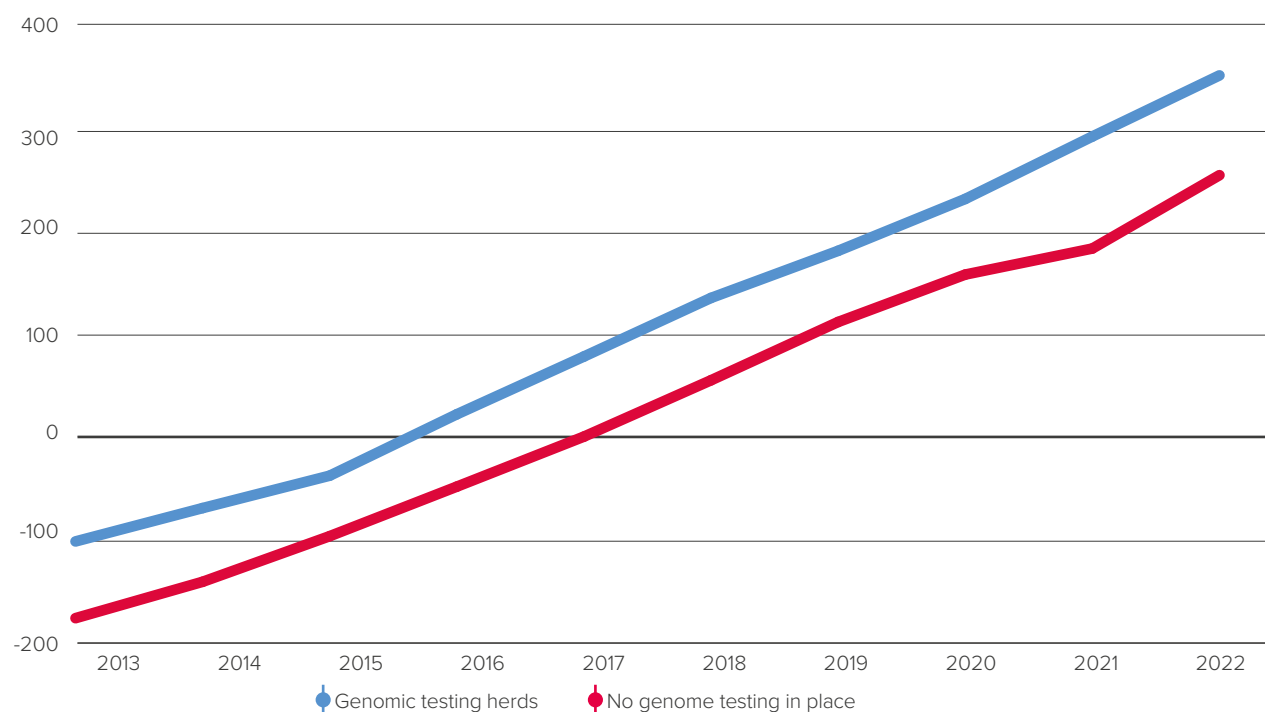
As well as this advantage, genomics testing has also been linked to reduced greenhouse gas emissions²⁷.

Genetic data as a tool for monitoring health

Recently, we’ve seen improvements in the potential for testing and monitoring to detect early, sub-clinical signs of infection.

NMR’s GenoCells, for example, is a next-generation milk test that provides individual cow somatic cell counts (SCC) using a single bulk milk sample. It works by sampling the genetics of all cows in the herd, then if any animal is producing a high SCC when the bulk sample of milk is collected, this can be matched back to the individual animal, helping to detect sub-clinical mastitis, improve milk quality and reduce antimicrobial use.

Profitable lifetime index progress (including genomic vs non genomic tested animals)



27. View of The EnviroCow index and its impact on the UK dairy industry’s carbon footprint (interbull.org)

Animal trials and testing

In 2024, the AB Agri Animal Health and Welfare Steering Committee introduced our Animal Trials Policy covering all business activities related to animal testing, defined as scientific procedures performed on living animals outside of what an animal would expect to experience either in its natural environment, or in a typical domestic or farmed situation.

In the rare situation that any animal testing that is not mandated by product regulatory requirements is proposed as part of research and development, it must first be approved by the business unit's senior leaders and the Animal Health and Welfare Steering Committee, and an external independent reviewer.

To gain approval from the committee, the application must meet these key criteria:

- there is no viable alternative, and delivering a significant benefit to animal or human health, or to global climate change, is essential;
- best practice methodology, 'the three Rs (replace, reduce, refine) must be applied to all trial protocols;
- animals must not be in any chronic pain or severe discomfort;
- trained individuals must conduct all testing in a site approved by AB Agri and all legal approvals must be met; and
- trial protocol must be designed to maximise the animal's welfare wherever possible, including welfare indicator monitoring.

Pet supplement to support psychological wellbeing

A new product from AB Agri's Global Supplements business, 'Zilcalm', was launched in 2024 under the Nutrilabs brand into the European veterinary market to help support calm behaviour in dogs and cats.

The rise in pet ownership during the pandemic, followed by a return to normal working patterns, had left many owners and vets looking for ways to support the mental wellbeing of the animals under their care. Zilcalm is a nutritional supplement that contains a milk protein that is clinically proven to reduce anxiety and stress in dogs and cats. The product also includes herbal actives, amino acids, vitamins, a postbiotic yeast and Omega-3 fatty acids, all carefully formulated to work together to help provide support for both short-term stress and longer-term cognitive health.

"Stress is a well-known precursor to many physiological issues that can challenge a pet's health in many different ways. Being able to offer a science-led nutritional product to complement training and environmental enrichment has been very well received by Nutrilab's customers."

Dr. Andy Richardson

MRCVS, Veterinary Director, Global Supplements



Theme

4.

Agricultural supply chain



Agricultural supply chain

The agricultural value chain is undoubtedly complex. As a business operating right across the chain, we appreciate the value that each participant brings – from those creating micronutrients from animal feed, right through to milk processors.

“People often think of supply chains as linear but we see them more as neurological networks – complex to manage but incredibly powerful together. It makes us better able to handle supply chain shocks by having fewer single points of failure. Of course, as recent geopolitical incidents, volatile weather and COVID-19 have together highlighted, even the best networks have risk but I am optimistic that our agricultural supply chains can adapt in intelligent ways for the future.”

Borja del Rio
Supply Chain Director, AB Neo

Geopolitical risk

Recent conflict has exposed risk on certain commodities, such as wheat and energy, leading to rapid price increases and availability issues. We have assessed our supply chain and mapped specific ingredients where this risk is most critical, for example where a single market supplies >90% of global demand for that ingredient.

We have identified specific B vitamins as ‘at risk’ because they are manufactured in a single market and we are exploring mitigation options for this challenge.

Traceability

“Food safety continues to be an important issue for consumers, where health and safety information about all food products may need to be readily and instantly accessible. This will place more stringent demands on the traceability and safety of any product such as animal feed, raw materials, additives, and livestock farming broadly.”

NK Nie
Managing Director, AB Agri China

We take our supply chain responsibility seriously. That includes our duty to make sure that our products meet safety and quality standards, and that the lives and livelihoods of the people in our supply chains are safeguarded.

Where complexity may be a hindrance to traceability, we believe transparency and good supply chain governance makes control possible today, with the potential for the future to bring even more improvements, thanks to better use of systems.

All our suppliers are required to sign up to the ABF Supplier Code of Conduct, or have their own commitments that we have accepted as appropriately aligned with the code.

Partnering our suppliers to improve data through the supply chain

We recognise that to deliver future data requirements we will need to gather information from our suppliers and provide this to our customers.

We aim to strategically partner with our suppliers to provide early engagement where we expect data will be needed in future.

We have been actively collaborating with our ingredient suppliers to improve data collection and this effort has recently expanded to include non-commodity partners.

As a first step, in 2024, we conducted an assessment of UK engineering suppliers to evaluate their capabilities for collecting emissions data for their products. Out of 27 suppliers surveyed, 13 responded, with seven identifying gaps in integrating climate change considerations in their strategies.

While larger companies had some references to ESG topics, their focus was primarily on reducing their own operational emissions (Scope 1 and 2) with limited plans for addressing broader supply chain emissions (Scope 3). This is an ongoing area of discussion with suppliers.

AB Agri's Target Zero programme

AB Agri's Target Zero programme encompasses feed safety and quality, health and safety, security, and environment.

The programme, currently in its fourth year, ensures all teams are competent to deliver safety and quality responsibilities, by driving collaboration across the businesses and looking for more effective ways of meeting safety and quality challenges, both today and in the future.

Food and feed safety

Delivering feed safety and quality in a continually changing global environment poses significant challenges, particularly with risk related to economic, biological, technological or labour factors. To address these, AB Agri adopts a systematic approach to identifying, assessing and mitigating threats, with a particular focus on where these threats are intentional. Feed safety is essential for food safety and is therefore a critical component of our Target Zero programme.

Working with RQA, a leading provider of risk management services, we conducted a comprehensive review of our Threat Analysis and Critical Control Point (TACCP) programme. In addition to our longstanding HACCP (Hazard Analysis and Critical Control Point) programme, which focuses on unintentional contamination, TACCP complements our overarching Feed Defence Plans by identifying vulnerabilities where intentional threats may be present.

The assessment included a selection of AB Agri sites, based on their different activities, and allowed us to critically assess the comprehensiveness of our existing plans against the latest thinking in this critical area, particularly in risk identification and mitigation.

The work also identified opportunities to refine and enhance our training programmes, ensuring our sites are better supported to meet the standards set by the AB Agri Feed Safety policy. By better understanding and mitigating risks associated with our Feed Defence plans, we enhance our overall approach to feed safety resilience, regulatory compliance, and the integrity of our products and services.

Weather event risk

Climate change and extreme weather events such as flooding, heavy snow, extreme heat and drought have potential to impact all parts of our supply chain, from the crops we source as feed raw materials to our own manufacturing sites and customers' farm businesses.

AB Agri has identified an initial list of potential climate-related physical and transition risks and opportunities in alignment with the Task Force on Climate-related Financial Disclosures (TCFD) framework. These risks are managed within the AB Agri Risk Register.

We use country-specific information to inform our climate risk management, such as the UK Climate Change Risk Assessment (CCRA3) Evidence Report 2021; and itemise these risks as part of our annual ABF TCFD report.

The main risks are associated with an increase in extreme weather events and changes in temperature, which could impact the availability of our critical raw materials or our ability to operate our manufacturing sites.

To manage these risks, we have measures in place to oversee stock requirements and contingency plans for critical raw materials.

We use Maplecroft to monitor weather temperature variations, plus we log any business interruptions resulting from extreme weather events across our global businesses. This is to help build insight into any future challenges, and record the impact of anything that has occurred and support mitigation and adaptation planning.

Since this log was established in September 2023, there has been one event relating to heat/drought, resulting in a minor impact to one raw material which was mitigated by product formulation.

We have also assessed the risk of extreme weather affecting our manufacturing sites. This risk affects sites in multiple markets, particularly the UK and China. We have implemented controls and mitigation plans in the event of snow, flooding and temperature, including when high temperatures could impact our employees' safety at work, and we monitor these through our site auditing processes including ABF's Financial Controls Framework, Audit and ISO (International Organization for Standardization) Audit.

Water availability risk

AB Agri has eight operating sites that have been identified as being in water stress areas: five in China, and one each in Poland, Spain and the UK. This evaluation was completed using the World Resources Institute's (WRI) Aqueduct and the World Wildlife Fund's (WWF) Water Risk Filter tools. These sites have very low water consumption and therefore the overall risk to the business is considered low.

Helping our industry adapt for climate change

Heat and drought are expected to impact the ability to grow crops and rear livestock in markets across our global footprint. For our seed business, Germains, this may impact customers in the US, in particular where there are both heat challenges in addition to water-use restrictions.

The Germains team is seeking to support customers by developing products to tackle issues exacerbated by climate change, for example including a project to trial lettuce seed treatments that can help create good crop performance even if temperatures increase. The business is also commercially reviewing markets that could in future increase crop production due to more favourable climates developing.



Understanding dairy farm risks and resilience in the face of climate change

A report written by AB Agri's dairy business, Kite Consulting, has shone a light on climate-related risks in agriculture and revealed the impacts a changing climate may have on UK dairy production. Published in the UK by ASDA, the report introduces the Task Force on Climate-Related Financial Disclosures (TCFD) reporting approach for a dairy farm and seeks to increase understanding of the risks climate change poses to food production for the wider agri-food industry, retailers and policymakers. It examines why the concept of climate financial disclosure can, and should, be applied at farm level, and addresses the physical and transitional risks to a typical dairy farm, explaining why a climate stress test should become an essential part of the farming toolkit.²⁸

Lives and livelihoods in agricultural supply chains

AB Agri recognises the risk of human rights impacts in its businesses' global supply chains and takes its responsibility to respect human rights very seriously.

Our businesses source around 3,000 raw materials from over 1,400 suppliers, including bulk commodity suppliers and ingredient manufacturers. We are taking steps to introduce due diligence programmes and procedures targeting material and salient issues within these supply chains. We continue to provide information and training on issues relating to human rights and forced labour for new employees as part of our induction process.

The ABF Supplier Code of Conduct is included within our legal terms and conditions of purchase, and the signing and commitment to the code is a mandatory component of our raw material supplier approval process.

We have an internal Responsible Sourcing Policy and have developed Responsible Sourcing Standards which apply to all our businesses.

The policy outlines areas of focus for our businesses, including deforestation and conversion of natural ecosystems, human and labour rights, and efficient and sustainable use of resources. It also explains the roles and responsibilities of our businesses and our employees, as well as the process taken to develop our Responsible Sourcing Standards.

The Responsible Sourcing Standards, which are based on the Group Supplier Code of Conduct and the Ethical Trading Initiative Base Code, describe the sourcing approach and processes required for different sourcing categories.

We have started to implement the requirements for our raw material sourcing category, and longer term, we have committed that all procurement categories will meet defined responsible sourcing standards by 2030.

Human and labour rights risks for certain raw materials are identified and monitored using the Maplecroft global risk analysis tool and the online Sedex assessment. We also work collaboratively with our suppliers to understand the country of origin of the feed materials purchased as the first stage of risk evaluation, which has now been completed for more than 95% of our raw material suppliers.

Once the initial Maplecroft evaluation has been completed, we will support our suppliers in mitigating their risks and complying with our Responsible Sourcing Standards. This includes completing an online Sedex assessment, which is reviewed by the ethical compliance team and may result in an on-site audit.

Throughout this process, the focus is on supporting suppliers to achieve the standards in place, and only to seek an alternative supplier if efforts to use our leverage to address relevant issues have failed.

As result of this process, we have assigned an ethical risk level to all our raw material suppliers ranging from Level 1 to Level 3.

Level 1 is for suppliers with higher potential risks, with a high or no Maplecroft risk rating and no risk mitigation in place. Level 3 is for suppliers with a low risk rating in the Maplecroft evaluation, or if the supplier is rated as medium or high risk on Maplecroft, but AB Agri has started to work with its suppliers on its risk mitigation process.

We have a target to achieve Level 3 ethical risk rating for all raw materials suppliers by the end of 2025. At the end of our last financial year, with a higher number of raw material suppliers, the percentage of suppliers in Level 3 had risen to 58%, a 26% increase over the previous year. The percentage of higher risk suppliers (Level 1) dropped from 54% to 5%.

We have expanded focus beyond raw materials to include third-party manufacturing and contracted labour. Over the past year, we have conducted a review of contracted labour used across our manufacturing sites globally,

28. ASDA-TCFD-Report-Final-November-23_compressed-2.pdf (kiteconsulting.com)

identifying potential risk. We have also assessed all our third-party manufacturers using a set of critical factors to evaluate risk levels. As a result of these evaluations, we have identified areas requiring risk mitigation actions and have plans to audit five third-party manufacturers and assess one contracted labour provider.

Regarding our own operations, all AB Agri manufacturing sites have completed an annual Sedex self-assessment. In 2022, we implemented a three-year rolling internal audit plan to conduct SMETA (Sedex Members Ethical Trade Audit) audits on all our manufacturing sites globally. Seven of these audits were conducted this year, with further sites scheduled for 2025.

Safety in our business

Health and safety is a fundamental pillar of our Target Zero programme. We are dedicated to achieving excellence across our global operations every day. Alongside our commitment to health and safety, we seek to provide healthy working environments and improve the quality of working lives for all colleagues. This year, we've continued strengthening our Target Zero culture amid business expansion.

We have realigned our Health Safety and Environment (HSE) support structure, considering growth areas and optimising support at the operational level with additional specialist support. Numerous risk reduction projects have been completed to ensure the safety of employees, contractors and visitors.

We also recognise the challenges of on-farm safety and have continued to focus on offsite safety risks and communication, using technology to communicate effectively with front-line workers regarding controls.

VIVE sustainable supply programme

AB Agri's business AB Sustain has developed VIVE, a programme that customers can use to monitor and improve environmental and social aspects of their agricultural commodity supply chain.

The VIVE programme encourages economic viability, social protection and environmental preservation within a selected agricultural commodities supply chain, by monitoring performance of nearly 1,000 indicators, including Scope 1, 2 and 3 emissions, due diligence on child labour and worker rights.

As VIVE is aligned to the UN SDG targets, and is benchmarked to different sustainability initiatives and standards, such as the Sustainable Agriculture Initiative (SAI) Platform and ProTerra, a single VIVE assessment also enables measurement against other programmes.

Where supply chain issues are identified, the VIVE customer actively works to make sure that action plans are created, implemented and evaluated as part of continuous improvement. These indicators and remediation plans are monitored through independent second-party assessments by organisations such as Control Union and Swiss certification service, SGS.

This approach to supply chain transparency is enabling buyers of VIVE-assessed products to better understand supply chain issues and further collaborate with suppliers.

We have enhanced our management system standards to support our global operations with consistent assurance protocols. Alongside this, there has been significant investment in standards to mitigate core risks, which helps us get it 'right by design'.

We are continuing to cascade Target Zero training across our organisation, focusing on attitude, behaviour, human factors and personal commitment. We have also seen great engagement and success with key training programmes this year. Our colleagues completed almost 4,000 e-learning health, safety, and environment modules, alongside monthly training led by subject matter experts.

The Take 2 approach, which empowers people to stop and think before acting, was enhanced through new technology, and our Target Zero calendar continues to cascade vital safety information and tools to the workforce every two months.

We have seen a 44% reduction in our Lost Time Injury (LTI) rate among employees, from 0.50% last year to 0.28% this year. Contractors are valued members of our workforce and we are pleased to report that in 2024, Lost Time Injuries to contractors reduced from three incidents to zero. We are committed to continuous improvement in reducing our overall injury rate year-on-year and our safety performance reflects the dedicated effort that is made to maintain a safe working environment for all.

Employee lost time injuries on-site (LTIs) (n., %) – Agri segment data

	2024	2023	2022	2021	2020
Employee lost time injuries on-site (LTIs) (n., %)	0.28%	0.50%	0.42%	0.29%	0.83%

ABN supporting the next generation



Dearbhla Connell

ABN, our UK pig and poultry feed business, seeks to create a working environment where all colleagues have the opportunity to utilise their unique skills and capabilities to their fullest potential.

The business enables cross-functional upskilling, for example mill operatives are supported to complete HGV licensing requirements to progress into delivery driver roles, while engineering apprenticeships provide development for individuals to become fully qualified engineers.

Our Continuous Skill Development Programme defines the skills and training required for each role. This has helped succession planning, especially in production and transport management where team leader roles enable colleagues to develop the specific skills required to take on the next level of management.

Dan Pollard, previously a production manager, progressed to become site operations manager for both our ABN Sherburn site and nearby anaerobic digestion plant through our development programme. Dan's skill set and knowledge of our processes, combined with ongoing support from his line manager, ensured that he was given the opportunity to take this next step in his career.



Dan Pollard

Externally, supporting industry initiatives such as the NFU Poultry Industry Programme and Harper Adams scholarship placement, allow us to engage with future talent from across the industry. This provides opportunities for the next generation to explore alternative career paths within the pig and poultry sectors, like Dearbhla Connell, who was our successful placement student back in 2019. On completion of her degree, Dearbhla joined ABN as junior account manager for the pig team and has since progressed to strategic account manager. The skills she gained on placement were invaluable to progressing her career.

“Ensuring that the future generation have both the awareness of career opportunities across our sector, and also the skills to pursue their ambitions, is vital to the success and future of our industry.”

Danny Johnson

General Manager, ABN

Building capability

Our success in tackling all four of these themes will, of course, depend on our capability and the industry's capability in various areas. We have identified the following as our main focus:

Building talent within the agriculture industry

Attracting talent into agriculture is an industry-wide challenge. As well as the ongoing issues our customers face in filling operational farm roles, our industry will also have to compete with others for the specialist talent we'll need to adapt for the future. These include making sure we have skills in areas such as technology, marketing, engineering and data insights.

As well as developing our own colleagues' skills, we also support the next generation of food and farming talent more widely. AB Agri sponsors the Nuffield Farming Scholarship programme, ABN provides a 12-month placement for a Harper Adams University student and AB Vista currently funds 11 PhD students.

Capability within our business

We are focused on building an inclusive workplace, where everyone can bring their best selves to work, and where all our people have opportunities to succeed, irrespective of identity or background.

As well as being a flexible employer, we have a wide range of activities to broaden our colleagues' knowledge and expand our talent pool. Many initiatives provide people with opportunities to develop their full potential and positively contribute towards the business's goals.

We also seek to nurture and maintain a fair, innovative and inclusive culture. Our diversity, equality and inclusion (DEI) approach, This is Me, is about creating a sense of belonging where everyone feels comfortable being themselves. We believe that having a thorough and robust approach to managing talent will result in a diverse workforce and an environment that is welcoming to all.



We have established Employee Network Groups, such as PRIDE, Parents and Carers, Women at Work, Race & Ethnicity, Enable (Disability Inclusion) and support groups covering Menopause and Men as Carers. Each group has a sponsor from the senior leadership team, and group leads meet monthly with our Chief Executive and the Group People and Performance Director to discuss challenges, advocate for underrepresented groups and seek support.

Number of employees, highlighting percentage of women in workforce (n., %) – Agri segment data

	2024	2023	2022	2021	2020
Number of employees	3,446	3,052	2,801	2,622	2,565
Women in the workforce (%)	36%	34%	32%	30%	32%

We have set targets to increase workforce diversity, focusing on attracting, developing, and retaining a more diverse workforce. Currently 36% of our workforce is female, with women receiving 36% of all promotions this year.

We have maintained a gender pay gap below 2% (0.4% in 2024) since 2021, reflecting our commitment to gender equality. Women make up nearly 40% of the executive team and the leadership teams now include 42% non-UK nationals, highlighting a diverse representation.

We prioritise fair and inclusive recruitment practices to ensure a diverse talent pool of candidates from a variety of sources, enabling the business to find the best candidate for each role. This commitment is supported by our applicant tracking system (Eploy), which achieved Digital Accessibility Centre (DAC) certification this year. DAC ensures digital media accessibility for everyone, regardless of the platform, and meets best practices in accessibility standards and legislation.

Gender balance is actively promoted when recruiting senior roles in the business by encouraging a balanced shortlist of male and female candidates. We also use CV blinding practices to mitigate unconscious bias. Globally, all recruitment agencies working with AB Agri are required to adhere to the Group Supplier Code of Conduct. These agreements centrally reference AB Agri's policies on Equality, Diversity, Inclusion and Dignity at Work.

We partner with various organisations to inform internal process development and promote jobs externally. These initiatives include:

- Armed Forces Covenant – Membership of this organisation connects AB Agri with military veterans and their partners seeking employment in the UK;
- Disability Confident – AB Agri has achieved Level 1 certification, demonstrating its commitment to work practices, opportunity provision and support services; and
- Accessibility initiatives – AB Agri has an Accessibility Toolbar on all external websites and a dyslexia-friendly font is available on all desktops and laptops.

Engaging our people

Our publication *Between The Lines*, launched in 2019, was created to bring together our global colleagues, featuring personal stories from across the company, and serves as a platform for fostering a global, inclusive culture.

Now distributed in eight languages, it has become a crucial communications channel for our business. It reaches all locations at least three times a year, either digitally or in print. In 2024, the magazine won the Best Internal Publication: Digital category at the Internal Communications & Engagement Awards.

We are providing opportunities for development within roles and broader career progression. In 2023/24, over 1,000 delegates participated in 150 workshops. As well as workshops, Insights Discovery, a psychometric assessment tool, is used by internal practitioners and qualified coaches supporting people to better understand themselves and their teams.

This year has seen the launch of three new initiatives:

- Management development programme – a three-day programme to support our managers to better support their teams;
- Ruminant technical expertise programme – a full-year experiential programme aimed at growing technical talent in dairy; and
- Translated e-learning bitesize programmes to support our colleagues who would find it difficult to access the full virtual programme, either because of language barriers or role requirements.

We offer levy-funded apprenticeships for residents of England, with an expanding programme offering. This year, the first Level Seven programme was completed with distinction. By the end of 2024, 49 people had completed apprenticeships within the previous four years.

Our talent programmes continue to bring a significant return on investment, with one third of our high-potential programme attendees in the last 12 months being either promoted or given increased responsibilities within their current role immediately following programme attendance.

The Pulse

Our continuous listening platform, The Pulse, is where colleagues get the opportunity to express their views and help us to understand how we're doing and the improvements we should be making.

We believe that open communication is crucial, and feedback, ideas and suggestions from our people are incredibly important to us.

Conducted quarterly to ensure timely celebration of successes and addressing of issues, the survey results provide valuable insights for both line managers and the wider People and Performance teams. Line managers are provided with toolkits to facilitate regular action planning sessions where teams discuss their results and any potential improvements.

We assess engagement of our people within the survey across a number of different drivers including wellbeing, inclusion and corporate social responsibility. All three of these areas are currently our highest-scoring metrics on the survey and all are trending above the benchmark provided by experience management company, Qualtrics. Our overall engagement score across AB Agri is currently trending at 72%, which is also above the benchmark.

Wellbeing

At AB Agri, we're committed to providing a healthy working environment and improving the quality of working lives for all colleagues. Our annual World Wellbeing Week aims to raise awareness around keeping fit and well both in and out of work.

In 2024 we hosted activities including a walking challenge, where colleagues kept a track of how far they had moved in that week and recorded their times on our Viva Engage hub. Collectively, our people recorded almost 21,000km – roughly halfway around the world, or from the UK to Vietnam and back.

In addition, a number of services are in place to help colleagues balance work and family commitments, manage stress and enjoy a healthier lifestyle. These include:

- Nudge – an impartial, global financial education platform that coaches people to better understand their finances, manage their money and plan for their future;
- Employee Assistance Programme – a service that delivers advice and solutions on mental health, practical problems, medical and nutrition worries, and any legal and financial issues; and
- Mental Health First Aiders – all have a deep understanding of mental health and what factors can affect wellbeing.

Science and research

Our own agricultural progress is underpinned by a thriving community of scientists and research studies. All solutions are robustly trialled in order to demonstrate their safety and efficacy.

Our businesses, too, invest in developing scientific advancements, both through close relationships with universities and through investment in our own laboratories and trial sites. These include the AB Neo Centre of Excellence trial farm, the Amur anaerobic digestion lab at York University and our own anaerobic digestion plant in Yorkshire.

Standards and regulation

In many areas, the agriculture industry has set and upholds standards that have reduced the need for regulatory intervention.

Although regulators share the industry's commitment to produce safe food for the world's populations, regulatory frameworks inevitably will not evolve at the same rapid pace as scientific breakthroughs and innovations. This creates opportunities for more progressive markets to achieve competitive advantage by evolving their regulatory frameworks to respond to the industry's changing needs. The UK Government's approach to gene editing is a good example of a regulatory framework allowing technology to be exploited.

Technology

Cyber security

As businesses automate manufacturing and exchange more information through onsite and cloud-based systems, having robust security defences and risk management plans in place is vital. AB Agri continues to assess and protect against risk of cyber incidents through ongoing updates to our technology infrastructure and incident simulations, and training for our people.

Using AI to process data

Where the benefits of collecting and using data have been increasingly felt throughout agricultural supply chains, artificial intelligence is expected to present new opportunities to streamline our processes, research and ways of working. These include using machine learning to reduce the need for extensive trials, and to effectively and efficiently analyse forage and feedstock.

“There is a lot of excitement around the potential for artificial intelligence and I believe we are only at the beginning of discovering what is possible. Undoubtedly these technologies will help to shape the future of our industry. Today we are piloting use of artificial intelligence for some of our internal forecasting and I expect to see this area of activity grow considerably over the coming years.”

Pascal Martel
Enterprise Performance Director

We would like to thank all our colleagues, contributors and partners who have contributed to this report and given consent for us to share their views and case study data. Your ongoing support is appreciated and we look forward to continue collaborating on these important topics for our industry in the future.

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