





This report is based on the combined worldwide data relating to harvests of the financial year from 1 July 2020 to 30 June 2021.

All production and social data reflect the harvests of the 2020/21 financial year, although for some regions, these data reflect activity occurring during 2019/20.

We use science-based indicators for production, resource use efficiency, employee health and safety, and community outreach – all to promote good governance, sustainable production and to reduce risks.

With this report, Ingleby Farms & Forests ApS reaffirms its support of the Ten Principles of the United Nations Global Compact in the areas of Human Rights, Labour, Environment and Anti-Corruption.

In this, our seventh annual Communication on Progress, we describe our actions to continually improve the integration of the Global Compact and its principles into our business strategy, culture and daily operations. We are also committed to sharing this information with our stakeholders.

#### FARMING WITH NATURE

1. edition

#### Ingleby Farms & Forests ApS

Slotsgade 1A 4600 Køge Denmark www.inglebyfarms.com

#### CC BY-NC-SA 4.0 © 2021

Ingleby Publications are licensed under a Creative Commons Attribution-Non-Commercial-Share-Alike (CC BY-NC-SA 4.0) License. This means you are free to copy, distribute, display, and make derivative works, but you are not allowed to use our materials for commercial purpose and all derivative works must be licensed under the same terms. For further information, please visit the Creative Commons web page: www.creativecommons.org/licenses

#### Contributors

Andrei Pavel, Asger Ourø Jensen, Celina Gonzalez, Danitza Wong Vinces, David Mulraney, Frederik von Magnussen, Julia Williams, Katrine Møller Hellesøe, Laura Froman Lindeskov, Luis Nuñez, Mette Duedahl Høyer, Michala Jeberg, Monica Kejser Wesselhoff, Nicoline Lind, Rafael Leguísamo, Rasmus Juul Christoffersen, Susie Hjorth, Teodora Gogoasa, Tom McPherson, Vibeke Specht, Yesenia C. Solorio.

#### Photographers

Andrei Govoreanu, Bogdan Gheorghiu, Colin O'Donnell, Dace Trupāne, David Mulraney, Douglas Sibbald, Elvis Gailums, Gary R. Smith, Geoff Clarke, Hans Cogne, Hans Henrik Koefoed, Michala Jeberg, Rafael Leguísamo, Rasmus Juul Christoffersen, Robin Begg, Susie Hjorth, Tom McPherson.

Front cover photo: Dace Trupāne.

#### Editor

Michala Jeberg

Design BGRAPHIC

#### Print

KLS PurePrint

## The Ingleby vision

Our vision is to be world-leading regenerative farmers. We farm to produce good, healthy food, and also to protect the environment for future generations.

As farmers, we play an important part in solving some of the most pressing global challenges we face today. We want to farm with nature – not against it. We believe farming done right can help the planet, and we aim to live up to this task every day, in everything we do.

We apply regenerative farming principles and constantly improve our soils. We preserve and enhance the biodiversity on our farms, and work towards sustainable consumption and production.

We treat our animals, people and communities with care, love and respect.

Because the way we choose to farm today echoes for generations.



## Contents

4



















## A message from our CEO

2

6

STATISTICS.

Farming with Nature is our framework for becoming world-leading regenerative farmers. It encompasses our values and our commitments and simply shows our way of farming. Through regenerative farming practices, we build resilient farms, adapted to the increasingly unpredictable weather patterns.

#### **Healthy soils**

Climate change mitigation, food security, biodiversity and soil health are all interconnected solutions to the severe global climate emergency. This emergency forces us to rethink our farming landscapes, allowing them to provide not only food, feed, and fibre but just as importantly: ecosystem services such as crop pollination and carbon sequestration.

Science shows that regenerative farming practices can significantly improve soil health and help mitigate the effects of climate change. We know that the healthier the soil, the healthier the crop is. When the plants benefit from the nutrients and root systems, they build compounds to help protect against insects and diseases. Thus, a healthy, living soil full of vital bacteria, fungi and nematodes is more likely to produce sustainable, nutritious food.

#### Safety first

The health and safety of our colleagues have our highest priority. During 2020/21, we had no fatal accidents, but 25 accidents with time off work. Our LTIFR (lost time injury frequency rate) this year is 3.63, our second-best year in terms of safety, compared to 1.92 in 2019/20, the safest year ever. Our peer benchmark is between 7.71 and 9.70.

#### COVID-19

We have operated under pandemic restrictions for more than a year. Variations of the virus remain a risk, and we keep all preventive measures in place on our farms. To date, a total of 161 team members have been infected with COVID-19, the vast majority in Peru. We have not had any fatalities.

Regardless of all pandemic effects, we have operated all farms at full capacity, supported by our experienced management and production teams.

#### Climate change and agriculture

Global temperatures have set new records, the latest being extreme heatwaves in North America and Europe in June 2021, which was the fourth warmest month ever measured. The heatwaves impacted our farms in Europe and California by shortening the harvest window significantly and putting pressure on our water reserves.

The August 2021 IPCC report once and for all confirms that climate change and extreme weather is part of our future. No-till and regenerative farming methods can be part of the solution by storing atmospheric carbon in the soils, and we aim to be climate positive by 2030.

#### **Diversity is key**

For 2020/21, we have achieved outstanding results on our row crop, beef, sheep and dairy farms, based on solid yields and increasing prices. This diversity has counter-balanced challenges in our horticultural productions.

Prices for the main agricultural commodities have increased, driven by high demand and weather-related uncertainties. The downside is that when main agricultural commodity prices increase, input prices follow. Our journey towards regenerative farming will reduce our need for inputs, creating a much stronger, resilient and sustainable Ingleby Farms.

#### **CEO** change

On 1 June 2021, I became CEO of a farming company in excellent shape. I look forward to supporting the progress towards our 2030 commitments as well as strengthening our company-wide collaboration towards "One Ingleby".

Andrei Pavel CEO



## Farming with Nature

Everything we do is linked to our long-term commitment to our farms. We are very ambitious about how we farm and steward our land. As nature matters greatly to us, we believe in farming in harmony with nature.

Farming with Nature yields a wide range of benefits — from improved soil health through to better water stewardship, with a significant boost to biodiversity. We can make use of the soil as a carbon sink, while we produce more nutritious food in ways that make it not only better for the people who consume it, but also for us working to produce it. Our animals are an essential part of all this.

All Ingleby farms are embracing the 2030 Farming with Nature Commitments. Various practices and approaches fall under the umbrella of "regenerative farming" e.g. agroforestry, no-till, precision agriculture, holistic grazing and mob grazing, robotics, bio-char, compost teas and re-wilding. So, there are many ways going forward towards our commitments and no single solution fits every country, farm or field. In fact, Farming with Nature is not only about ticking off certain practices but rather, it is a process of understanding the specific farming system and the landscape where it is rooted, and working to continuously improve it. To orchestrate our efforts across all farms, we have chosen five areas to focus on. These give us a solid foundation for measuring our progress and for sharing specific know-how amongst ourselves. Farming with Nature is a continuous learning process.

The five areas are:

- Our Soil
- Our Animals
- Our Nature
- Our Communities
- Our Climate

Each area has its own Commitment and a set of goals as presented on the next page. Learn more about how we apply these commitments operationally, on page 12.

## Our 2030 Commitments



9

## Sustainability is our backbone

Ingleby Farms was born out of a vision to demonstrate that farming can be done in an environmentally and socially sustainable way while also being profitable. Our "Constitution", the Ingleby Sustainability Memorandum, was developed back in 2006 and has served us well ever since.

The main principle of our Sustainability Memorandum\* – that a farm in good heart is easily recognisable – is as valid as ever. As Ingleby Farms grew, the more farmers, customers and other interested parties wanted to learn about us, and it became apparent that we needed to verify our actions with data and reporting standards.

10

In 2009, sustainability reporting in agriculture was a developing discipline. Thus, we created our own system by selecting from the best sustainability reporting in other industries to develop our own measures, KPI's, databases and reporting standards to track our journey towards regenerative farming.

Many years later, when official frameworks emerged – such as the UN Sustainable Development Goals in 2015 – Ingleby Farms set the bar even higher, aspiring not only to be sustainable and hold a resource equilibrium, but to be regenerative and give more back to the environment than we take. Our metrics, KPIs and reporting standards, we believe, are still world-leading in our industry. With 11 years of data, our annual Production & Sustainability reporting is anchored in how we think and do things on our farms. Reporting helps us to track the development of each of our farms over time, using the data to make our farms even better, from soils, livestock and crops, to climate, biodiversity, safety, education and community outreach.

Lead by a sustainability team of five in the global office and many more involved around the world, sustainability reporting is a strong and well-established part of the Ingleby way, helping us uphold our values, and affirm our commitment to continuously striving to be better farmers.

Our Sustainability Metrics wheel on the next page illustrates how our reporting ties into the SDGs and our own Farming with Nature 2030 Commitments (see page 9).



#### OUR SOIL

- Build healthy living soils through:
- Limited soil disturbance
- Covering the soil - Diversification
- Living roots
- Integrating animalsSynthetic pesticide-freeMinimise synthetic
- fertilisersResponsible water
- stewardship



- Ethical veterinary
- practices

  Open-range and

ANIMALS

OUR

- pasture-fed year round • World-leading best
  - practice for livestock handling



#### OUR NATURE

- Enhance and protect
- the natural environment • 10% natural habitats
- 1% water habitats
- Monitor threatened species and ecosystems



#### OUR COMMUNITIES

- Zero harm work culture, with LTIFR result below our global benchmark
- 2% of annual work hours are spent in
- training • Balanced gender diversity
- Support and engage with local farming and environmental groups



#### OUR CLIMATE

- Climate-positive farming by 2030
- Annual improvements in crop GHG footprints

11

- Zero waste to landfill
  Reduce, recycle and reuse farm, office
- and packaging waste • Transition to renewable energy



## How are we progressing?

Ingleby Farms' internal goals and ambitions for Farming with Nature are supported by six of the UN Sustainable Development Goals.

Farming can play a pivotal role in advancing The Ten Universal Principles on environment, human rights, labour and anti-corruption. We recognised that we could both promote and advance the SDG's whilst also taking inspiration in refining our own model of sound, regenerative agriculture. This is why we joined the UN Global Compact in 2014 and zeroed in on six key SDGs to intertwine with our five Farming with Nature 2030 Commitments. To measure and track progress with these commitments, we are working with our teams to develop Farming with Nature plans, customised for each farm to measure, plan and set actions for their productions and environments.

What is Farming with Nature? – We farm in harmony with nature; producing high-quality nutrient-dense food on beautiful farms, actively taking action to create a healthy natural environment, safeguarding and improving biodiversity on-farm and in the local area.

Commitment	Farming with Nature indicator	Progress during 2020/21	Page
OUR CLIMATE	Climate-positive farming by 2030	<ul> <li>One year after launching a company-wide ambition of climate-positive farming by 2030, we have completed phase 1 of our GHG inventory plan by benchmarking our cropping GHG footprints over two seasons.</li> </ul>	56
SDGs 2 the second second secon		<ul> <li>We commissioned a life cycle assessment (LCA) of our Uruguayan grass-fed beef, which analysed data from five years under IPCC Tier I and II methods.</li> </ul>	61
		<ul> <li>We have drafted a farm GHG reduction toolkit to identify and plan the most effective mitigation actions tailored for each farm. We are imbedding these in the Farming with Nature plans during 2021/22.</li> </ul>	
	Zero waste to landfill	<ul> <li>We are currently investigating sources of waste on farm, plus their end destinations. We are exploring options to track and trace Ingleby Farms packaging.</li> </ul>	
	Reduce, recycle and reuse farm, office and packaging waste       • We started work to find alterr for our fresh produce to avoid • During 2021 we monitored ou and Denmark and have in place	<ul> <li>We started work to find alternative packaging solutions for our fresh produce to avoid plastic.</li> <li>During 2021 we monitored our office waste in Lithuania and Denmark and have in place recycling practices.</li> </ul>	
	Transition to renewable energy	<ul> <li>We have increased our use of renewable electricity from 46% ten years ago to 61% in 2020/21.</li> <li>9% of all the diesel consumed on our farms is biodiesel, an increase from 4% two years ago.</li> </ul>	assessment (LCA) of our 61 hich analysed data from five methods. reduction toolkit to identify nitigation actions tailored for g these in the Farming with g sources of waste on farm, Ve are exploring options to s packaging. native packaging solutions d plastic. ur office waste in Lithuania ice recycling practices. f renewable electricity from 58 2020/21. d on our farms is biodiesel, rs ago.



ommitment	Nature indicator	Progress during 2020/21	Page
DUR SOIL DGs CONS CONS CONS CONS CONS CONS CONS CONS	<ul> <li>Build healthy living soils through:</li> <li>Limited soil disturbance</li> <li>Armouring the soil</li> <li>Diversification</li> <li>Living roots</li> <li>Integrating animals</li> </ul>	<ul> <li>All our arable farms are adding more nitrogen fixing legume crops into the rotation, such as peas, beans and vetch to help reduce synthetic fertilisers.</li> <li>We have continued experimenting with companion crops on our farms, where two crops are grown together, such as wheat/fescue or barley/peas. This could help reduce both fertilisers and pesticides.</li> <li>We are adding more and more diverse cover cropping into the rotations. This year 22% of our net arable area had cover crops, compared to 8% five years ago.</li> </ul>	16
	Responsible water stewardship	<ul> <li>We have achieved the GLOBALG.A.P. SPRING assurance for our avocados, grapes and blueberries in Peru, which reinforces our efforts in responsible irrigation and best practice.</li> <li>In Romania, we have a new reservoir with surface water runoff for irrigation. We collect water in the landscape and recap drainage water before releasing it into the creek.</li> </ul>	20
	Minimise synthetic fertilisers	<ul> <li>We have reduced synthetic nitrogen use by 6% compared to last year.</li> <li>We have developed a lab on-farm in Peru that is experimenting with reproducing microorganisms found in the best performing soils, e.g. Bacillus spp. We hope that this can improve the condition of other soils and eventually reduce demand for synthetic fertilisers and improve resistance to disease.</li> <li>We are integrating cattle and sheep in the crop rotations by grazing crops post-harvest. This has the added benefit of nutrient and carbon cycling, improving soil health.</li> </ul>	32 36
	Synthetic pesticide-free by 2030	<ul> <li>Across all our cropping, we have reduced the amount of synthetic pesticides by 23% compared to our benchmark (average use across 2016/17 - 2018/19).</li> <li>We are working to improve the identification of specific weeds, by providing data to develop a camera that can identify crops at different stages and spray weeds. We have experience from this technology in Argentina, we are testing it on our sprayers in Latvia and next year, we will test it on our farm in Western Australia.</li> <li>We are also testing remote sensing precision in Romania using a drone equipped with a camera that detects weeds.</li> <li>In Peru we have established a facility for producing beneficial microorganisms such as fungi and bacteria to spray on the fields or apply to the soil via the irrigation system</li> </ul>	30

C

S

Commitment	Farming with Nature indicator	Progress during 2020/21	Page
	World-leading ethical veterinary practice	<ul> <li>Achieved Certified Humane, which among other things recognises sound veterinary practice.</li> </ul>	37
SDGs 2 mm 12 mm accounts accounts	World-leading best practice for livestock handling	<ul> <li>Our long-standing values of sound animal welfare were recognised when our beef production from Uruguay achieved the Certified Humane certification. Certified Humane's mission is to improve the lives of farm animals.</li> </ul>	37
15 High		<ul> <li>On Doña Hilda farm, Argentina, we have planted mixed tree species to both provide shade for our cattle and enhance biodiversity on the farm.</li> </ul>	
		<ul> <li>Our Tasmanian dairy farm, Clovelly, has signed the multi- year – Sustainable Plus – supply agreement with Fonterra. This is a contract given to only sustainable farms.</li> </ul>	37
OUR NATURE	10% of each farm in natural habitats	<ul> <li>We have been growing a native species nursery on our Motupe farm in Peru for several years. This now has 69 identified species, and 2 million seeds in storage.</li> </ul>	
SDGs		<ul> <li>On Puketiti Station, one of our New Zealand farms, we have been fencing off low wet areas and planting with native plants. We have also fenced and excluded bluff and rocky outcrops.</li> </ul>	44
		<ul> <li>Our Californian farm supports the Fresno Wildlife Rehabilitation, non-profit work with owl banding.</li> </ul>	
		<ul> <li>Planted a new copse of trees at the entranceway to Rincon del Perdido farm, Argentina.</li> </ul>	
	1% of each farm in water habitats	<ul> <li>In Romania, we have a new water reservoir for irrigation, securing more consistent water supply for crops and creating additional aquatic habitat.</li> </ul>	
		<ul> <li>During the year, we finalised an irrigation dam at Maria Elena farm in Uruguay.</li> </ul>	
	Monitor threatened species and ecosystems	<ul> <li>In May 2021 the New Zealand speleological society discovered a rare cave beetle in two caves on Ingleby's farm Puketiti Station.</li> </ul>	46
		<ul> <li>Annual spring bird monitoring occurred on our Baltic, Romanian and selected Argentine farms.</li> </ul>	
		<ul> <li>We surveyed birds on two farms in Argentina for the first time (San Antonio and El Tigre, finding breeding pairs of the near-threatened Dark-throated Seedeater (Sporophila ruficollis) and the poorly known Bearded Tachuri (Polystictus pectoralis).</li> </ul>	
	All farms have in place a Farming with Nature plan	<ul> <li>Customised plans (Farming with Nature plans) are in place for our European farms, while draft versions are under way for our New Zealand and Peruvian farms.</li> </ul>	45
		<ul> <li>Farming with Nature plans encompass measuring each farm's environmental performance, identifying priority areas and actions to guide environmental improvements.</li> </ul>	
		• During 2021 we commenced a project to expand these farm plans to include the five pillars of Ingleby's Farming with Nature commitments, including soil, nature, climate, communities and animal welfare.	

Commitment	Farming with Nature indicator	Progress during 2020/21	Page
OUR COMMUNITIES	Zero harm work culture, with LTIFR result below our global benchmark	<ul> <li>Our dairy farm Clovelly Dairy was awarded as the "Employer of Choice" at the annual Tasmanian Dairy Awards 2021, recognising our commitment to compliance, safety and work standards.</li> </ul>	38
SDGS		<ul> <li>We launched a sustainability-linked loan KPI for our accident and near misses, tracking LTIFR (lost-time injuries, relative to hours worked). This adds even more awareness and importance to safety on our farms.</li> <li>LTIER result of 3.63 this year which although an increase</li> </ul>	52
		from 1.91 last year, is still significantly lower than previous years.	
	Healthy and happy employees	<ul> <li>Our Romanian farm Campo D'Oro completed a pickers' village to accommodate seasonal workers during the blueberry harvest. The village includes an on-site food store, outdoor relaxing areas and sports area. We also provide lunch and transport.</li> </ul>	53
		<ul> <li>Our pistachio farm in California, Burrel Ranch, created a tutoring programme for 32 of our employees' children to provide educational support during the COVID-19 pandemic.</li> </ul>	51
	2% of annual work hours are	<ul> <li>Globally, we managed to achieve our training goal of 2%, with 2.1% of our time spent in training.</li> </ul>	
	spent in training	• On a country level, 7 out of 10 countries managed to achieve this goal.	
		<ul> <li>Health and safety is the largest category of training, followed by production.</li> </ul>	
		<ul> <li>We have heightened training globally on IT awareness, with regular awareness training for all administration staff.</li> </ul>	
	Balanced gender diversity	<ul> <li>This year, 36% of our global teams and 25% of our Board of Directors are women. This is an improvement over the 32% women last year.</li> </ul>	
	Support local schools and education	<ul> <li>We support two annual secondary education scholarships, one in Tasmania for the Marchus Oldham College, and one in California for a student from the local Burrel high school.</li> </ul>	
		<ul> <li>Our Californian farm also supports the Visalia Sunset Rotary by sponsoring youth programmes.</li> </ul>	
		<ul> <li>We provided support for children, schools and day care centres in Lithuania, New Zealand, Peru and Romania. This includes Christmas gifts, fundraising events, sports clubs and school building maintenance.</li> </ul>	
	Engage with local farming, biodiversity and conservation	<ul> <li>Donated construction material, tools, office equipment, and 1,500 avocado plants to the Rural Community San Julián de Motupe in Peru.</li> </ul>	
	groups	<ul> <li>We collaborate with the New Zealand speleological society, who monitors and explores cave systems on Puketiti Station.</li> </ul>	
		<ul> <li>In California, we engage annually with the Sequoia Riverlands Trust for environmental stewardship and restoration work</li> </ul>	



## Farming with Nature

16

As hands-on farmers and long-term owners of the land, Ingleby Farms believes in farming in harmony with nature. Nature matters, diversity matters, and agriculture plays a central role in preserving and enhancing biodiversity and ecosystem services on a global scale.

Our way of farming is all about working with nature, not against it. We rely on the five main principles of regenerative farming; all aiming to enhance soil aggregation, water infiltration and retention, and carbon sequestration. We already use these principles to some degree on our farms, and incorporating them further into our production is a main part of our strategy to reach our goal of becoming synthetic pesticide-free by 2030.



#### Limited soil disturbance

Tillage disrupts the natural structure of soil. As the soil is continuously being torn apart, it affects the living organisms in the soil that would otherwise help create natural soil fertility. No-tillage agriculture, on the other hand, is a breeding ground for rich and diverse biological soils. The less the soil is cultivated, the more earthworms and beneficial insects, such as ground beetles, spiders and other macrofauna will thrive. A rich and diverse fauna - in and on the soil - will increase the level of natural pest control and therefore reduce the need for synthetic pesticides. The increased number of earthworms plays a crucial role as they enrich the soil with recycled organic material; they also loosen, aerate and improve the drainage of the soil by burrowing and channelling.

#### Armouring the soil

We always strive to cover bare soil to protect it from wind and water erosion. This is done with either live or dead organic material, for example by growing cover crops or leaving residues from prior crops on top of the soil. Keeping the soil covered this way, we keep the moisture content in the soil, decreasing the risk of drought, and maintaining the soil temperature.

Living roots of cover crops in Romania



▲ Grazing December cover crops in Latvia

#### Diversification

Diversification is key in keeping soils healthy. It is all about using a variety of crops that complement each other by having different attributes. It can be crops with different root types (shallow roots, deep roots and tap roots). Some crops are high-carbon, some are lowcarbon, some are legumes. Some are winter crops, others summer crops. Each of them contributes to the soil's nutrients and physical properties, thereby maintaining soil health.

#### Living roots

Soils are most productive when soil microbes have access to living plant materials. A living root provides a food source for beneficial bacteria and promotes the symbiotic relationship between plant roots and mycorrhizal fungi. Living roots also help to reduce soil erosion.

#### **Integrating animals**

When grazing is well managed, animals can help sequester carbon and stimulate plant growth. As more grass is grown, more organic matter is available to recycle into the soil for feeding microbes. This captures and holds more water and nutrients, growing more and larger plants that can gather more sunlight for the photosynthesis process, and sinking more carbon back into the ground.

No-till, multi-species cover crops in Lithuania

### Farming with a 150-year perspective

17

Our long-term commitment is at the core of our family values: we are farming not only for ourselves, but for future generations to thrive and prosper.

Therefore, we are willing to invest in decisions, actions and innovation where the value only arises after extended periods of time. For us, it makes sense to improve our soils and nature, to minimise our impact on the climate and environment, to support local communities and be good citizens.

While we work towards the long-term success of our farms, we never lose sight of the present-day profitability.

We hope that our legacy will be healthy, thriving farms in flourishing communities and environments. We hope that future generations will look back at what we started and appreciate the condition of the lands we pass on to them.

After all, we are all merely stewarding our lands for the generations to come.



## **Our Farms**

18

We are long-term owners of land. As of 30 June 2021, we own and manage 45 farms and forests across nine countries and four continents. Our worldwide number of hectares adds up to 101,612 hectares of which we protect 29% as natural habitats, including 2.6% as water habitats. We own and manage arable land, pastures, horticulture and forests.



California, USA 1,825 hectares 1 farm



**Our Farms** 





Latvia & Lithuania 9,805 hectares 3 farms





**New Zealand** 6,735 hectares 4 farms







19

### **Our certifications**

At Ingleby Farms, our high internal agricultural and social best practices mean that we do not use external certifications to guide our operations. Instead, we are carefully selecting certifications to provide assurance to our external partners and customers of our farming practices.



tion. It entails an annual water

rates, consumption, impact on

watershed, protection of water

audit, including extraction

sources, and best practices in water management.

and driving improvements

in supply chain labour

standards.

impacts of farming operations, reducing the use of chemicals and ensuring a responsible approach to worker health and safety as well as animal welfare.













SPRING Peru















CERTIFIED











USDA

**USDA** Organic Integrates cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance and conserve biodiversity.



**EU Organic** Encourages the responsible use of energy and natural resources, the maintenance of biodiversity, preservation of regional ecological balances, enhancement of soil fertility and maintenance of water quality.



**Certified Humane** Awarded by Humane Farm Animal Care and covers the animals' entire lifetime. **Requirements relate** to nutritious diet without antibiotics, animals raised with shelters, resting areas, sufficient space and ability to engage in natural behaviour.



Never Ever 3 Guarantees meat comes from animals that never received antibiotics, hormones or proteins of animal origin during their lifetime.



**Certified Natural Beef** Certifies the entire production process all the way through packing and labelling. Compliant with food safety and traceability requirements.

## Our Soil

## We feed microbiology

Soil microbiology plays an essential role in decomposing organic matter, cycling nutrients that would otherwise not be available and fertilising the soil. In order to do so, they need food, water and oxygen, just like us.

We provide food for the soil microbiology by ensuring a healthy soil structure with space for air and water. Reduced tillage attracts bacteria, fungi and earthworms. The soil microbes stabilise the soil with their branch structure and by producing substances that glue the soil aggregates together. Also, earthworms create tunnels through the soil. Together these ensure space for oxygen underneath the surface and makes the soil work like a sponge that holds the water longer.

Food is provided by having a permanent plant cover on our fields. This ensures that there is always plant roots in the soil on which helpful fungi can attach and initiate a beneficial relationship with the plant. The fungi help the plant by providing nutrients and the plant releases sugars to the fungi through the roots, practically feeding all the microorganisms beneath them.

Without soil microbes, essential nutrients would rapidly be locked in a form that cannot be used by others and the continuation of life would be impossible. Therefore, we strive for a wide array of crops and cover crops, in order to increase the diversity of our soil microorganisms and ensuring that we can provide them with what they need, food, water and oxygen.





22% ARABLE AREA WITH COVER CROPS



44% ARABLE AREA IS



56% ARABLE AREA IS MINIMUM-TILLAGE

10% ARABLE AREA HAS DOUBLE CROPPING

### **Ecosystem engineers**

Earthworms are often called 'ecosystem engineers' because they change the structure of their environments with both horizontal and vertical tunnels. By their activity, earthworms offer many benefits, all of which help increase carbon sequestration and soil health, and in the end help us improve farm productivity. We like to call earthworms 'our best employees below ground' and we strive to have a living soil where they thrive due to our regenerative farming practices.

By wiggling their way through the soil, earthworms allow oxygen to be transported further down the soil profile and help stabilise soil organic matter. This makes the soil structure sponge-like, enabling it to hold more water and drain up to ten times faster than soils without earthworms.

When they wiggle their way up to the surface and leave their casts, they help us to rebuild topsoil. This is very important because this is where we seed our crops, and they help us give the plant the best start in a nutritious topsoil. The casts left in the tunnels provides a favourable environment for plant root growth and the tunnels themselves allow the roots to penetrate deeper into the soil where they can reach extra moisture and nutrients.

Earthworms are simply our best employees below ground and essential when farming with nature. Therefore, we make sure to feed them with organic material year-round and protect their homes by reducing or avoiding the use of tillage.

#### Earthworm assessment guide



Step 1 Choose site to assess.



Step 5 Break apart the topsoil cube and place any earthworms in a second bucket.



Step 2 Remove any crop residues from the surface.



**Step 6** Take a photograph of the earthworms.



Step 3 Mark out a 20cm x 20cm square.



**Step 7** Return the earthworms and soil to the field.



**Step 4** Remove a 20cm cube of topsoil and place the soil in a bucket.



Step 8 Note down the total number of earthworms, the site location, GPS coordinates, date, weather and soil conditions.



## **Harvesting sunlight**

In addition to harvesting our crops, we aim to harvest sunlight all year round. We need our soil to have a permanent cover, as the conversion of sunlight,  $CO_2$  and water into sugar and oxygen, also known as photosynthesis, takes place in plants.

Most life on earth depends on photosynthesis and when we harvest sunlight, we produce food for life both above and below ground.

Above ground we produce crops and grasslands that feed both people and animals. We produce feed for our cattle and premium grass-fed beef and lamb for people to enjoy.

Below ground we produce food for our soil microbiology. In exchange for the sugar produced for our soil microbiology, they give the plant minerals and nutrients, ensuring that we can grow a strong and healthy crop.

Instead of only growing crops on our fields which can only be done for part of the year, we also grow cover crops. These are seeded after harvest and prolongs the period of time that the field has a green cover. On part of our farms the cover crops will grow until spring and be replaced by a new crop. On our farms located in colder climates where the cover dies during winter, the residues will still protect the soil as an armour and slowly decompose so that the carbon is stored in the soil.

As well as covering our fields with a green cover and utilising every ray of sunlight, we protect our soil from wind and water erosion, keep the moisture content in the soil, decreasing the risk of drought, and we remove carbon from the atmosphere.

## Clean, plentiful water

On our farms, water irrigates our crops, provides clean drinking water for our livestock, and supports our diverse wildlife habitats. It is therefore important for us to continuously manage our water in the best way possible and we believe that transparency in our water practices is a necessity.

#### **SPRING** certification

In Peru this year, Ingleby Farms obtained the Sustainable Programme for Irrigation and Groundwater Use (SPRING) certification, which is an add-on to the GLOBALG.A.P. certification. This certification entails an annual water audit that includes the following criteria:

- Legal conformity of water sources and extraction rates.
- Monitoring of water consumption.
- Impact of producers on sustainable watershed management.
- Best practices in water management.
- Protection of water sources.
- Measures to demonstrate continuous improvement of water management.

This not only improves the transparency but showcases our commitment to sustainable water management. By setting objectives for us to follow each year, SPRING will help guide us to continuously develop the way we work with water on-farm.

The main objectives to be undertaken before next year's audit are the training of personnel in best practices of water management and reducing our water use by 0.5% over the previous year. This will be reviewed next year, after which, a new % reduction in total water use will be set for the following year.

#### Why and how we use water

Irrigation stabilises and increases yield, ensuring the farms' ability to endure extreme weather conditions like prolonged drought. Irrigation also improves the crops' use of fertilisers, as plants are more efficient at taking up nutrients when the soil is moist. On our cropped land, irrigation enables us to increase the number of crop rotations per year as harvest can be brought forward.

These are the reasons why we irrigate a total of 7,340 hectares in Argentina, Australia, Lithuania, Peru, Romania, United States, and Uruguay. The irrigated area equals 15% of our total arable land. In the fiscal year 2020/21, we applied 35,285 megalitres of water to our fields and orchards.

We don't exceed the long-term renewable supply of water, maintaining a water surplus, whether it comes from surface water or groundwater. Water withdrawal for irrigation is halted if water levels have decreased to a state that negatively affects the local aquatic and terrestrial ecosystem.

#### **Conserving water**

We use a range of nature-based solutions to conserve water and keep our rivers clean. We use terracing along slopes and keep grass waterways in low areas of our cropland. In this way, we slow the velocity of water after rainfall, and at the same time protect our soils and waters by reducing erosion and sedimentation.

We have an obligation to protect waters and water habitats for ourselves, our neighbours, future generations, and for biodiversity and ecosystem services. Black-necked Swan (Cygnus melanocoryphus) enjoying a water body in Argentina



#### Water habitats

Water habitats are epicenters of biodiversity and are an integral part of our long-term Farming with Nature project. They support healthy thriving ecosystems on our farms, benefiting both production and conservation.

Where possible, we create additional water habitats by digging shallow scrapes of variable size, shape and depth, forming diverse aquatic habitats for a variety of animals and plants.

Currently, water habitats make up 2.6% of our total area.





27



## **Growing food**

We believe that our focus on creating healthy soil will not only improve our yields, but also the nutritional value of our products. We believe that there is a correlation between fertile soil, healthy plants and the quality of the grain, fruit or nut.

We are specialists in growing high-quality, nutrient-dense crops. One example is blueberries which we have been growing in Romania since 2010. Today, we grow blueberries on 200 hectares and have become one of the leading blueberry growers in the country.

Our blueberries are grown on our very versatile farm, Camp D'Oro in our Lugoj hub. Here we do not only produce blueberries, but we are also growing hazelnuts, grains, seeds and have large areas grazed by our Aberdeen Angus cattle. All of this increases diversity on the farm and the surrounding landscape.

The farm hub is located near the charming city of Timisoara in the western part of Romania. Our selected blueberry varieties are perfectly adapted to the continental climate and with help from the warm summer and the many bees that live on our farm, our berries can develop their natural flavour and deep blue colour, resulting in high quality and taste.

Thanks to our diverse range of varieties, we can produce blueberries from June to late August. Once ripe, we carefully pick the blueberries, perform strict quality control, and store them in our cooling facilities within an hour. This is vital to secure quality and a longer shelf life, but also to maintain their health properties. Our blueberry production has been GLOBALG.A.P. certified since 2016.

The quality of our blueberries is a result of the love we have for our farms and the care that our team puts into the planting, pruning, and harvesting of each blueberry.



#### Record yields at Mt Elephant, Victoria

The art and science of farming is always exciting, especially when one's efforts are rewarded with extraordinarily high yields.

Our farm Mt Elephant, Victoria, reached the highest yields since we purchased it in 2010. Wheat yields reached 7.2 t/ha, barley 7.3 t/ha and canola 3.5 t/ha, compared to 10-year averages of 5.3 t/ha, 5.4 t/ha and 2.7 t/ha, respectively.

The reason behind those high yields is most likely a mix of factors. Over the past 10 years, we have continuously improved the soil health, for example by letting our sheep graze the crop stubbles to help with weed control and by using vetch as a ground cover and fodder crop. Also, due to a drier-than-normal winter, the crops did not suffer from waterlogging and the team had better conditions to succeed in weed control, control the crop growth and ensure optimal nitrogen application timing and utilisation. All the elements went in our favour.

#### Sweet honey

Bees are essential workers for agriculture as pollinators, but they also provide us with another important service: honey. Production is not the main focus with our beehives, but we do produce honey from many different crops and hence with different tastes, which are mainly sold on local markets in Romania and in the Baltics.

In Romania we have around 400 beehives with the main purpose to pollinate the blueberries. The honeybees are put on the field early April and will stay there for three weeks together with bumblebee hives. We have specific paddocks on the farm where the bees stay during the winter period. We mainly produce blueberry, acacia and multi floral honey in Romania. We have a smaller number of beehives in the Baltics where we have a large variety of crops and produce honey from canola, white clover, phacelia and vetch.





# Reducing synthetic pesticides

Two years ago, we set the goal of becoming synthetic pesticidefree by 2030. Since then, we have reduced use on our crops by 23% against our benchmark.

The initial step towards our goal has been to focus on our soil's health. We are convinced that improving soil health will also improve plant health and their resilience to pests and diseases. Therefore, we are driving up the use of cover crops on all our arable farms, increasing plant diversity in the fields by adding more types of crops, testing how several crops grow together, looking into crop varieties that are more resilient against diseases, reducing tillage, as well as growing more legumes to store feed for the life in the soil.

In addition to prioritising soil health, we have started to embrace new techniques to help us control weeds, insects and diseases.

One example is our use of beneficial insects and natural substances to control insects and diseases.

We are also working together with equipment manufactures to develop camera systems for spraying and weeding that can tell the difference between crops and weeds, potentially minimising herbicides.

#### Show us the numbers!

Measuring pesticide use is tricky. There are multiple variables to consider, including the product, the active ingredient and the toxicity of that active ingredient. We have been measuring pesticide use by the level of active ingredient (AI) per hectare in our sustainability reporting for more than 10 years, so we had a solid benchmark for measuring progress.

During 2019/20, our global cropping teams reduced pesticides by 12% against this benchmark, and the following year by 23%!





#### Spot spraying

Testing and implementing new technologies is a big part of reaching our 2030 commitment of no synthetic pesticides. We are currently testing remote sensing technology for precision farming which enables us to only spray where it is needed on the field.

To accelerate the development of these technologies, we work together with the manufacturers by testing their products on our fields and provide data for them to improve their algorithms.

We are currently working to improve the identification of specific weeds from the crops in the field, and we are also providing data to develop a system where the camera can identify the crop at different stages and will spray all but the crop. We have experience with this technology from Argentina, we are currently testing it on our sprayers in Latvia and by next year, we will also be testing it on our farm in Western Australia. Besides from the camera technology installed directly on the boom of the sprayer, we are also testing remote sensing technology for precision farming in Romania using a drone. The large drone is equipped with a camera that can detect weeds when inspecting the field and convert the information into an application map for the sprayer. The application map tells the sprayer to only spray the parts of the field where the drone has identified weeds.

We have high expectations for the improvement of these technologies and believe that the spot spraying systems will be able to reduce our herbicide use by between 70-90% in the coming years and that in the near future, we will be able to replace the remaining 10-30% with a bioherbicide derived from natural sources.

## **Beneficial organisms**

Synthetic pesticides do not just harm the targeted pest(s) but also kill or disturb insects that are essential to a healthy farm and ecosystem. An alternative to synthetics is to utilise organisms that are natural enemies to the pests.

#### Mealybug destroyer Cryptolaemus Montrouzieri

Ladybugs are among the most well-known insects in the world and are particularly effective as biological control agents. Their large appetite is useful at controlling mealybugs and their larvae imitates the look of their prey, the mealybug. This is important, as mealybugs are protected by ants who benefit from the honeydew they produce.

#### **Wasps** Trichogramma pretiosum

Perhaps the most well-known insect for biological control, Trichogramma are tiny wasps that parasitize moth eggs. We have these ready in our insect laboratory in Peru, for when larvae of Heliothis moths attack our blueberries.

#### Bacteria Bacillus ssp.

Bacillus is a genus of mainly soil-dwelling bacteria. Many Bacillus species live around plant roots in a symbiotic relationship. The plant roots excrete sugars that the bacteria eats and in exchange it protects the plant against threatening insects or microorganisms.

#### Entomopathogenic fungi

Fungi are critical to a healthy soil, but certain species also help to suppress pests. In Argentina, Peru, Romania and California, we release native strains of fungi that are pathogenic to insect pests. These include Aspergillus flavus, Beauveria bassiana, Lecanicillium lecanii, Paecilomyces species and Trichoderma harzianum. This year we have released a diverse number of species to help control our pests. Especially in our horticultural production, beneficial insects, nematodes, bacteria and fungi are released to keep our crops healthy. In Peru, we produce several of them ourselves.

Here are just some of the helpful organisms that we released onto our fields around the world this past year.

#### Raptors - Owl, hawk, falcon etc.

Predatory birds play an important biological control role on farm, preying on rodents and small birds which left unchecked can destroy entire crops. In our orchards, we have installed bird boxes and perches to encourage our feathered friends to nest and patrol the skies over the fields around the clock.

#### Lacewing Chrysoperla rufilabris

Lacewings feed on a wide range of pests including aphids, mealybugs, scale insects and caterpillars. The adults even feed on nectar and pollen. Our farms utilise this by planting flowers in- and around the orchards. In this way, we both attract wild lacewings and feed the ones we released.



#### Nematodes Heterorhabditis

Beneficial nematodes are produced on-farm in Peru and released in orchards through the irrigation system to combat multiple pests. We release the nematode species Heterorhabditis, which works together with the bacteria Photorhabdus, to control multiple pests.

#### Parasitic wasp Anagyrus pseudococci

This wasp lays its eggs in mealybugs and is utilised by farmers worldwide. The invasive species Gill's mealybug has become an increasing problem in Californian orchards and this parasitic wasp helps to keep the population down.



## Our Animals

## We raise our livestock outdoors

For us, animal welfare is always a top priority. We raise healthy and ethically treated animals. They are open-range and pasture-fed, year-round.

We raise more than 150,000 sheep, 28,000 cattle and 3,950 dairy cows. Our sheep are mainly Perendale, Romney and Finnsheep crossbreeds, and Merino. Our beef cattle are mainly Aberdeen Angus and our dairy cows are Holstein-Friesians.

Our sheep, cattle and horses are open-range and grass-fed, grazing on extensive native or seeded pastures, or fodder crops such as kale, beets, lucerne, clovers and vetch.

As part of our regenerative agriculture strategy, we are increasingly integrating animals into crop and seed productions by grazing residues and cover crops. Strategic grazing can stimulate forage photosynthesis and maintain the natural condition of productive pastures, while herbivores are an integral part of the carbon cycle, contributing to healthy soils.

We believe that pasture-fed livestock systems have multiple benefits, such as higher levels of Omega-3 and vitamins A and E, superior meat flavour, marbling and tenderness.

With balanced breeding that supports the health, feed efficiency, meat and wool quality, we are actively refining our herd genetics for animals that are best suited for our local farm environments.

We follow strict ethical practices on how we treat and handle our livestock to ensure the best animal welfare, and ultimately, the best meat, milk and wool.

Good livestock husbandry needs a dedicated, hands-on team of people living on-site, creating what we call "living farms". We employ people that have a gentle passion for caring for animals.



28,438 BEEF CATTLE

6,159 DAIRY CATTLE (milking and non-milking dairy cattle)







## Integrating livestock into cropping systems

Keeping animals present in the agricultural landscape is a pillar when farming with nature. From having mainly specialised livestock or crop farms, we are increasingly combining the two on most of our farms with cattle and/or sheep.

The previous specialisation created a reliance on synthetic fertilisers in the cropping farms, and a concentration of manure nutrients in the livestock farms. By diversifying and reintegrating crop and livestock operations, we reap a lot of benefits:

#### Use of marginal lands

36

On most farms, we have areas that are less suitable for crop production due to soil conditions, soil type, topography, etc. Some of these areas are well fit for grazing and raising livestock. Other places, the best option is a combination of both cropping and livestock, where livestock is part of the rotation.

#### Improved nutrient recycling and reduced fertiliser input

Livestock droppings improve soil fertility, and manure from livestock winter housing can be used for field application and/or composting. By combining crops and livestock, the whole farm nutrient balance of imports and exports improves.

#### Less soil disturbance and increased soil fertility

Perennial fodder crops and pastures in the rotation provide less soil disturbance and increasing soil fertility. Often, our grain crops are undersown with grass/clover or other legumes to provide nitrogen in subsequent rotations and fodder crop establishment. Grass roots help to build soil structure and soil drainage. And perennial grass in a crop rotation also has a positive impact on earthworm populations.

Sheep grazing cover crops in Latvia



#### Use of plant residues and cover crops

Our livestock feed on cover crops, crop residues and waste crops that would otherwise be lost. This way they offer an alternative source of feed, the livestock clean up fields while helping reduce diseases and weeds. We also use livestock to graze seed crops that benefit from defoliation, e.g. white clover. Having these alternative sources of feed for our livestock enhance their nutrition while providing more resting time for our pastures.

#### Increase in soil carbon sequestration

Crop-livestock integration has the potential to increase soil organic matter. In particular when using rotational and mob grazing management. The livestock assist in efficient residual crop nutrient recycling, hooves help incorporate plant residues, and belowground biomass increases together with soil biological activity. Prolonged soil cover and low soil disturbance have also shown to improve soil carbon sequestration.

#### Increase in farm biodiversity

Grazing animals inoculate soils with their dung and saliva and there is a wealth of beetles, fungi and other organisms associated with this. The insects and fungi that live in – and of – dung contribute to seed dispersal, break-down of the dung and development of soil structure and nutrients. Further, crop-livestock integration diversifies the overall landscape mosaic, creating diverse habitats which enhance general biodi-versity.

#### Resilience

Crop-livestock integration provides greater flexibility of the whole system to cope with potential climate hazards, crop losses and socioeconomic crises. It reduces the risks associated with raising a single product and creates diversification of income options, lower production and energy costs through on-farm production of feed and fertility, and uses of biomass from crops as animal feed, enhancing the overall sustainability of our systems.

#### Living farms

We like living farms where people live and thrive. Having livestock on our farms provide year-round activities and support the need for people living on-farm.



#### **Certified Humane**

Animal welfare has always been a top priority for us. Therefore, we are proud to report that as the first beef producers in Latin America, our seven farms in Uruguay have obtained the "Certified Humane – Raised & Handled" certification for our Black Aberdeen Angus beef.

The certification, awarded by Humane Farm Animal Care (HFAC) September 2020, covers the animals' entire lifetime and requires that:

- All animals must be free to move and not be confined.
- All animals must be able to exhibit natural behaviours.
- All animals must have sufficient protection from weather elements and live in an environment that promotes well-being, including daily access to pasture.
- Food additives such as antibiotics, hormones, growth promoters and animal by-products are prohibited.
- Managers and caretakers must be thoroughly trained, skilled and competent in animal husbandry and welfare.

The program also certifies animal welfare practices at the processor's facilities including transport and handling. This means that the whole supply chain from the animal is born until it is slaughtered, operates with good animal welfare procedures.

## Leading the dairy industry

By combining the latest dairy technology, animal welfare practices and environmental stewardship, our dairy team is proving that milk production can be both efficient and sustainable.

Clovelly is Ingleby Farms' award winning 3,556-hectare dairy farm located in Northeast Tasmania producing 25.9 million litres of milk annually from a herd of 4,000 Holstein-Friesian cows. Clovelly Dairy achieves industry leading standards across all fields:

#### People

Clovelly was awarded the 2021 Dairy Farm Employer of Choice Award at the Tasmanian Dairy Awards.

Clovelly employs 40 fulltime staff with a focus on developing a passion for livestock and the local community. Staff turnover is low, and any hiring is done by word of mouth from the local community.

#### Environment

1,270 hectares of Clovelly has been set aside as terrestrial and freshwater habitats for nature with 53 hectares under a covenant to protect the rare and threatened shinney grass tree (*Xanthorrhoea bracteate*) and other species.

#### Animal welfare

Bobby (male) calves are usually considered a by-product of milk production and Clovelly is among a handful of farms (less than 1% of Australian dairy farmers) who choose to raise bobby calves through to 12-18 months for high quality and ethical dairy beef production.

#### Financial

As a result of Clovelly's exemplary performance, Fonterra has signed the multi-year – Sustainable Plus – supply agreement with Clovelly. A contract given to only the best dairy farms.



# Bees and pollinators

Pollination is an essential service provided by nature with one third of all food and beverages estimated to be delivered in-part thanks to pollinators.

The western honeybee (Apis mellifera) is the world's most identifiable pollinator. However, most pollination is done by other insects including moths, flies, wasps, beetles, butterflies and over 20,000 species of bumble and solitary bees.

Pollinators, like all insects, are increasingly under threat on multiple fronts with climate change, deforestation, agricultural intensification, introduced species, urbanisation, pollution and nutrification all contributing to decreases in pollinator abundance and diversity of species.

Ingleby Farms is protecting and enhancing populations of pollinators on-farm by:





#### Increasing habitat area

Pollinators require access to a reliable supply of high-quality feed, freshwater and shelter in the form of diverse habitats and pollinator friendly plantings. Protecting a diverse range of natural habitats such as forests, meadows and scrubland on-farm directly supports healthy pollinator populations.

We improve areas of low diversity by increasing green spaces and creating microhabitats by retiring field margins to grow a mixture of insect and pollinator friendly plantings (wildflowers, bushes, trees etc.) which ensure year-round pollen and nectar supply on-farm for all pollinators.

#### **Reducing impact**

We reduce pesticide use by using Integrated Pest Management (IPM), which benefits pollinators. IPM emphasises the least possible disruption to agroecosystems through frequent crop assessments to identify pest species early, rather than precautionary blanket application, utilising both natural pest control methods and targeted insecticide applications to reduce impacts to non-target species.

Reducing pollution and nutrification from agricultural fertilisers also benefits pollinators as many rely upon vegetation which is adapted to low nutrient conditions. Like IPM, frequent soil testing and precision fertilisation technologies increases the efficiency and accuracy of fertiliser applications, reducing adverse impacts on pollinators.

E Contents

## Our Nature

Contents

# From the ground up

Soil is one of the Earth's most diverse habitats – a living medium containing millions of microscopic organisms that form the backbone of above-ground biodiversity and ecosystems.

Diverse and healthy populations of soil organisms directly enhance the quantity and quality of food production by increasing the soil's ability to hold water and sequester carbon, and the ability of plants to access nutrients in the soil profile. As farmers, we are dependent on a healthy soil ecosystem, and thus continual improvement of our soils is deeply ingrained in how we farm.

As we reduce tillage, the underground food web is disturbed less, helping amongst other things, hyphal networks – crucial to nutrient uptake – to develop, and worm burrows which aid in drainage are left intact. Crop residue left on the ground, together with reduced tillage, means that soils are not left bare, helping our soils to avoid large temperature fluctuations, preserving soil moisture and preventing erosion. The crop residue even gives soil organisms material to feed on and build the healthy soil structure full off micro and macro pores.

Our increasingly varied crop compositions and rotations contain species with different rooting patterns, types of litter, and root exudates which create diverse microhabitats and feed for soil organisms. Diverse crop rotations prevent the build-up of unwanted soil biology such as pests and pathogens. Grazing livestock on our fields inoculates our soils with their dung and saliva, supporting a wealth of insects, fungi and micro biota.

Overall, we have learnt the importance of soil organisms and that an increased diversity of soil biota benefits the entire farm system. Microbes make phosphorus and other nutrients more available to plants, reducing the need for synthetic fertilisers. Microorganisms also form symbiotic relationships with plants, boosting plant growth and health.

Finally, Ingleby Farms believes that healthy soil makes our production systems better placed to cope with environmental stresses, including but not limited to, the many effects of climate change. So, Farming with Nature starts from the ground up.







HECTARES OF FORMALLY PROTECTED COVENANTS



29% INGLEBY'S LAND IN NATURE



SIGNIFICANT SPECIES ON OUR FARMS

## **Significant species**

The Ingleby Significant Species List was created by combining data from annual bird monitoring, biodiversity surveys of protected areas and chance sightings of species on-farm. Individual species were then weighed against the IUCN Red List of threatened species, regional/local conservation statuses and the on-farm population (resident/breeding, part time/migrant and occasionally seen) to assess their individual conservation priority. The Ingleby Significant Species List contains 88 rare and threatened species found on Ingleby farms. Species are listed in descending order of conservation importance (top, high, medium, low and monitor) to provide a framework for conservation priorities on-farm.

Ingleby Farms has launched the Mascot Species initiative, where each farm team is selecting a species found on-farm as a mascot for biodiversity conservation and habitat restoration.

#### Argentina



Capybara Hydrochoerus hydrochaeris

Location: El Tigre IUCN status: Least concern Ingleby status: Mascot species for El Tigre

The world's largest rodent – the capybara – can be found on El Tigre amongst the riparian shrubland habitats on-farm which support an incredible diversity of species.



#### Whistling Heron Syrigma sibilatrix

Location: Don Aurelio IUCN status: Least Concern Ingleby status: Mascot species for Don Aurelio

Each year, during their mating season, the whistling heron's distinctive whistle-like call can be heard on Don Aurelio.



#### Southern Long-nosed Armadillo Dasypus hybridus

Location: San Joaquin IUCN status: Near threatened Ingleby status: Mascot species for San Joaquin

These gentle creatures are skilful burrowers that dig small caves, preferably in good soil with new pastures, and thus are valuable allies in reducing soil compaction on San Joaquín.

#### Australia



#### Tasmanian Devil Sarcophilus harrisii

Location: Boobyalla IUCN status: Endangered Ingleby status: Low priority

A secretive animal, Tasmanian devil scat has been found in riparian scrub and dry black peppermint forest on Boobyalla.



Golden Sun Moth *Synemon plana* 

Location: Mt Elephant Station IUCN status: Not evaluated, regionally critically endangered Ingleby status: Top priority

The single most important species found on any Ingleby farm. The golden sun moth is found on Mt Elephant Station amongst 200 hectares of natural temperate grassland of the Victorian volcanic plain.



Carnaby's Black Cockatoo Calyptorhynchus latirostri

Location: Felton IUCN status: Endangered Ingleby status: High priority

Found within the 1,299 hectares of Banksi woodland and Kwongkan shrublands on Felton.

#### California



#### Swainson's hawk *Buteo swainsoni*

Location: Burrel Ranch IUCN status: Least concern Ingleby status: Low priority

Observed hunting on Murphy Slough.

#### Lithuania



Northern lapwing Vallenus vallenus

Location: Pagiriai IUCN status: Near threatened Ingleby status: Low priority

Observed breeding on-farm during bird monitoring 2020.



#### Eurasian Lynx *Lynx lynx*

Location: Pagiriai, Lithuania IUCN status: Least concern Ingleby status: Monitor

The forest mosaic in and surrounding Pagiriai farm is perfectly suited the Lynx, a solitray and secretive species with a large home range.

#### Latvia



#### Moor Frog Rana arvalis

Location: Graudi and Dobele Agro IUCN status: Least concern Ingleby status: Monitor

Found in drainage diches, ponds and wetlands on-farm.

#### **New Zealand**



#### Long-tailed bat *Chalinolobus tuberculatus*

Location: Puketiti Station IUCN status: Critically endangered Ingleby status: High priority

Approximately 706 individuals roost in the Grand Canyon cave on-farm forming one of the largest populations in the country. The surrounding primary and modified primary forest on Puketiti serve as excellent habitat for this species.

#### Peru



#### Common Green Iguana Iguana iguana

Location: Motupe IUCN status: Least concern Ingleby status: Mascot species for Motupe

Iguanas can be seen in the trees in front of the Ingleby Peru main office on Motupe.

#### Romania



#### Grey Wolf *Canis lupus*

Location: Greengate IUCN status: Least concern Ingleby status: Monitor

Occasionally seen on-farm. Secretive species with a large range



Rosalia longicorn Rosalia alpine

Location: ledera Forest IUCN status: Vulnerable Ingleby Status: Medium priorit

Found in stands with a high proportion of beech, good volumes of deadwood and old trees. Its presence is an indicator of Ingleby's excellent forest management.

#### Uruguay



Geoffroy's Cat Leopardus geoffroyi

Location: La Rinconada IUCN status: Least concern Ingleby status: Mascot species for La Rinconada

One of Ingleby Uruguay's team members rescued a female Geoffroy's cat six years ago which continues to visit La Rinconada farmhouses sporadically.



## **Protecting natural habitats and water bodies**

As part of our Farming with Nature principle, we strive to protect and enhance biodiversity. One way we do that is by designating and protecting areas for natural habitats and water bodies.

Of all our owned land, 29% (29,803 hectares) are designated natural habitat and 2.6% are water bodies. This includes formally protected areas with a land title covenant and areas under our own internal Ingleby protection. Some of these areas is not suited for farming, but most of it we deliberately do not produce on. Such areas include forests, natural grasslands, native bush, wetlands and riverfronts.



Our freshwater bodies and their surrounding area are the most biodiverse places on our farms. To protect these biodiversity hotspots, we have unfarmed buffer strips next to all major water bodies.

In Romania, we internally protect 226 hectares of forest that act as a safe haven for bears, lynx and wolves. An additional 427 hectares of forest is protected under the Natura 2000 scheme.

In Uruguay, 67% of our land consists of natural grassland, water bodies, and woodland. The natural grassland which our cattle roam is part of Rio de la Plata Grasslands. This ecosystem includes thousands of plant species, 450-500 bird species and almost a hundred mammalian species. We graze this land, because grazing is an integral part of its conservation, but we do not interfere with the land in any other way.

Our goal is that 10% of each of our farm hubs' total area are natural habitats and 1% water habitats.

• Our protected dry forest in Peru

#### Farm Environmental Plans

With agriculture spread across 38% of the global land area\*, farms have a central role to play in landscape management for the benefit of humanity and all other species on planet Earth.

New Zealand has officially asked all farms to implement Farm Environmental Plans (FEPs) before 2025. We introduced these plans on our King Country Farms: Puketiti Station and Riverlea. The two farms already had excellent farming principles in place, so being officially compliant with certified FEPs in place on-farm will happen in advance of the mandatory 2025 deadline.

Setting aspirations even higher, we are currently adapting the FEP framework to encompass our own five commitments Our Soil, Our Animals, Our Nature, Our Communities and Our Climate (see page 9) and many initiatives like regenerative agriculture, zero waste, synthetic pesticidefree and mascot species. Wrapping them all into



a single Farming with Nature plan allows us to effectively implement and track progress for all our initiatives. This new plan is currently in beta testing phase on-farm. Upon conclusion of this testing phase and any adjustments, we plan to roll-out to the rest of Ingleby Farms over the coming years.

\* www.fao.org/sustainability/news/detail/en/c/1274219/

#### Farm Environmental Plans components

FEPs are mandated by central government to safeguard and improve New Zealand's natural environment for future generations. Every farm in the country must achieve these standards by having a certified FEP in place by 2025.

#### Soil health

• Soil testing and nutrient budgeting used to reduce the risk of soil and nutrient losses to waterways.

#### Freshwater

- Freshwater health testing
- Stock excluded from waterways by fencing or planting with stock water provided in all paddocks.
- Critical source areas identified and remedied.

#### Biodiversity

- Indigenous vegetation and species on farm monitored, protected and restored if necessary.
- Pests and weeds controlled.

#### Climate change

- Greenhouse Gas (GHG) emissions sources and sinks identified and measured to determine on-farm GHG balance
- Plan in place to reduce GHG emissions.
- Impact of climate change on business considered and planned for.

#### Waste and chemical management

• Chemicals and waste handled and disposed of responsibly.

#### Forage cropping

• Winter cropping conducted to the highest standard to avoid adverse effect on soil, water and livestock.

#### Irrigation

 Irrigation water-take measured, and sustainable irrigation guidelines are followed.

## **Biodiversity monitoring**

Biodiversity – diversity of species, genetics and habitats – ensures a healthy local ecosystem which in turn provides a wide range of services such as pollination, biological pest control, freshwater provisions and soil accumulation on which agriculture is dependent.

Monitoring biodiversity on-farm helps Ingleby Farms to maintain a healthy local ecosystem and where possible, identify opportunities to improve conditions, ensuring the continued production of healthy nutritious food and conservation of a diverse range of habitats on-farm and the species they contain.

Bird monitoring is the most effective and widely used biodiversity monitoring across all our farms. Birds are an excellent indicator of ecosystem health and environmental change as they occupy a broad range of ecological niches feeding on plants, insects, mammals and other birds. The presence and absence of certain bird species can be used to infer the presence or absence of different ecological communities.

Yet, we monitor so much more than birds. Each farm monitors or surveys what is unique to their local area, adding up to a vivid portfolio of biodiversity monitoring:



Humming bird, Peru



reetops provide great locations for raptors to perch, Argentina

#### Bird monitoring

Changes in bird populations are useful indicators of our farms as habitats, but also of broader environmental changes. Ornithologists with knowledge of local species monitor the birds on our land. So far we have detected 509 different bird species across all our farms!

#### **All locations**

 Ingleby GIS (INGIS) mapping system to describe on-farm landscape composition and track changes over time.

#### Argentina

• Bird monitoring conducted on selected farms since 2016.

#### Australia

 Protected areas present on-farm in Tasmania, Victoria and Western Australia surveyed to identify important flora and fauna for protection as part of the covenants.

#### Latvia

- Bird monitoring conducted on both farms since 2015.
- Privately Protected Areas on-farm surveyed annually since their creation in 2018.

#### Lithuania

- Bird monitoring conducted on-farm since 2015.
- Privately Protected Areas on-farm surveyed annually since their creation in 2018.

#### **New Zealand**

Vermilion flycatcher (Pyrocephalus rubinus)

- Grand Canyon Cave (Puketiti Station) long-tailed bat population and rare subterranean invertebrate communities monitored frequently.
- 810 hectares of protected forest (Puketiti Station) surveyed to identify flora and fauna as part of covenant.
- Stream health (physical and biological condition of river) monitored on Puketiti Station and Riverlea annually since 2020.

#### Peru

- Bird monitoring conducted on-farm since 2014.
- Dry forest monitored on Motupe with seed collected as part of on-farm nursery to preserve genetics and increase dry forest area locally.
- Insect monitoring conducted on both farms as part of beneficial insect project for biological pest control.

#### Romania

- Bird monitoring conducted on all farms since 2011 and all forests since 2018.
- Privately Protected Areas on Greengate and Campo D'Oro surveyed annually since their creation in 2019.
- Forest protected areas in all forests surveyed annually.

#### **United Sates**

• Bird monitoring conducted on-farm since 2009.

#### Uruguay

- Bird monitoring conducted on selected farms since 2015.
- Natural pampas grasslands and the flora they contain surveyed on Rincon de los Tapes, El Ombu and Doña Maria.



# Naturally regenerating

Romania has a long and proud tradition of sustainable forest management and is home to some of the largest expanses of mixed-species forests in Europe. We sustainably manage these natural forests in accordance with the highest professional and environmental standards.

100 kilometres north-west of Bucharest in Romania, Ingleby Farms owns three large forests totalling 7,261 hectares. We have over 19 different tree species in our Romanian forests. The dominant broad-leaf species are beech, oak and lime, but we also have hornbeam, spruce, fir, ash and cherry.

We use a continuous cover forestry system which uses natural regeneration and succession to replace harvested trees.

#### **Forest management**

In general, our forests in Romania are young. Almost half of the trees are between 60 and 80 years old, with their main cutting not for another 30 to 40 years. In the meantime, our main task is to thin the forests, so that we improve the quality and species composition, and over time create more valuable and biodiverse forests. We promote valuable trees, support ecosystems and biodiversity through progressive cuttings and natural regeneration, which maintain a favourable balance between young and mature forest. This also strengthens the stability, vitality and resilience of the forests to climate change.

We do plant a few new trees in areas where forest does not currently exist or areas where natural regeneration has been slow. In general, we follow internationally recognised standards for responsible forest management.

#### **Harvesting trees**

We do not use intensive harvesting and we never make clear cuts. We only remove the mature trees in a stand once it is fully populated with new young trees (this process takes about 30 years). We protect very large and old trees, that are usually rotten inside. They are of prime importance for specialised forest flora and fauna and help enhance the biodiversity of our forests.

#### Wildlife

Our forests are situated in one of the most spectacular and wildlife-rich areas of Romania. This region is renowned for its isolated wilderness, and sightings of large mammals, such as wild boars, brown bears, grey wolves, wild cats, red deer and lynx are common. Sometimes we also see Carpathian chamois on the neighbouring sunny mountain slopes.

#### **Protected forests**

High in the Carpathian Mountains, you find our Siriu forest which totals 1,356 hectares. Siriu forest does not have any European or international priority habitats, but it connects forest lower in the Buzau valley to a Natura 2000 area that contains virgin old-growth forest, alpine pasture, herb fields and scrubland. Siriu forest contains 427 hectares of land within the adjoining Natura 2000 area (ROSCI 0229 SIRIU). Here, we have adopted a special management plan that respects the Natura 2000 ecological and social objectives.

We protect an additional 226 hectares at the top of Siriu forest, combining it with a 58-hectare Natura 2000 area. The 284 hectares are steep in places, representing a difficult harvest setting and erosion risk. But the area has abundant wildlife and the opportunity to create a safe haven for nature. It is for this reason that we have removed this area from production and created a nature reserve.

To ensure that sensitive plant and animal life of a region is not disturbed, we have established ditches on access tracks to this area of forest as increased motor bike traffic is becoming a significant issue. We also have 2,381 hectares as a designated hunting-free silent area where game has a safe haven for breeding.

#### **Building relationships**

Building good relationships with the local communities is important to us. We focus on environmental educational projects. We hope that these projects will inspire the local communities to respect and care for the forests around them.



FOREST PRODUCTION AREA 6,977 hectares





## Our Communities



## **Growing our people and communities**

Students all over the world were greatly impacted by the COVID-19 pandemic. Many schools decided to turn to online learning to adhere to social distancing protocols.

The lack of funding, resources and access to technology in schools became more visible, especially in underserved communities. Ingleby Farms California decided to create a tutoring programme for employees' children to provide support during the pandemic. We found it important to relieve our employees of some of the stress caused by the major shift in the education system.

Tutors were able to have in-person sessions with their students. They provided personalised help for each student in all subjects. There was a total of 32 students, ranging from kindergarten through 12th grade, who benefitted from the programme during the 2020-21 school year.

#### Medical campaign in Las Norias, Olmos, Peru

At Ingleby Farms Peru, we are fortunate to have our own on-farm medical team to take care of the health and well-being of our employees. We appreciate opportunities for extending our medical efforts to the broader community, for example by participating in the medical campaign in Las Norias.

We arrived at the local health centre to provide support in the medical campaign aimed at the residents of the area. Together with the human resources team, our physiotherapist carried out examinations of members of the community with various ailments and provided them with treatment and guidelines for caring for their physical health. 4,597 TOTAL EMPLOYEES

TI,038 FULL-TIME EMPLOYEES













## We put safety first

Providing safe work environments for our teams is one of our most important responsibilities.

One of our major goals at Ingleby Farms is a zero-harm work culture. Realistically, we know that this is difficult to achieve. Our farm managers hold daily or weekly safety briefings with their teams. Our teams report on accidents, but also on near misses.

The number of accidents worldwide has increased since last year, unfortunately. 16 accidents in 2019/20 increased to 35 accidents in 2020/21. We continuously monitor and analyse this data to assess where we should direct efforts and resources to reduce risk. To increase awareness of safety, we have initiated a global campaign featuring our new safety mascot



Farmer Fred and his safety buddy Frida. They will help us all to consider safety as a daily priority for ourselves and our colleagues.

Ingleby Australia has done a great job in safety with a decreasing number of accidents and an increase in reported near misses. We see reported near misses as a good thing, as this is a sign of higher awareness.

Globally, we had zero accidents in September and January.

\* Safe Work is an Australian government statutory body established in 2008 to develop national policy relating to work, health, safety and workers' compensation.



#### LOST TIME INJURY FREQUENCY RATE

#### ACCIDENTS VS NEAR MISS IN INGLEBY AUSTRALIA





#### Weekly safety meetings

We have weekly safety meetings to identify high risk points and talk about safety improvements at our farms. At the meeting we have managers and team members from the field to get the full picture of the work in the field.

#### **Employer of choice**

Clovelly Dairy, Tasmania, was awarded as the "Employer of Choice" at the annual Tasmanian Dairy Awards 2021. The award recognised Ingleby Farms' commitment to compliance, safety and work standards. Despite the challenges of COVID-19, the team in Tasmania has continued to perform well with record milk production.



#### Grand opening of Pickers' Village

Every season, when our Romanian blueberries are ripe, it requires great many hands to help with harvesting. After several years in the work, we were able to accommodate the pickers of the 2021-harvest in our brand new Pickers' Village.

In the first half of year 2020 we dedicated a plot of land for the village and installed all utilities like running water, electricity and sewage. Then, we created the layout for 100 housing units and the access roads.

Each unit can host four workers and is fully equipped with furniture, microwave oven, freezer and air conditioning. In addition to the living quarters, there are other units designed for common use such as: dining area, minimarket, fast-food corner, laundry, rest rooms and shower facilities.

To create a relaxing living space, but also to protect the village from dust, trees and grass were planted. Finally, wooden pavilions are scattered around the village for the pickers to enjoy lunch or spend their leisure time in.





## Our Climate

100

# Farming for the climate

Ingleby Farms is kicking off the UN's Decade of Action by challenging ourselves to transition to climate positive farming by 2030.

As owners and stewards of the land it is our full responsibility to act and create change in how we farm to not only reduce and mitigate emissions, but lock carbon back into our soils, trees and plants.

We believe that farming is at a crossroad where the time is now to create positive change and turn a corner towards new ways of farming, thinking, adapting.

In 2019, we launched a cornerstone goal for a better future for farming: aiming for climate positive farms by 2030. This means our farms will have positive net effects on the climate by drawing down and storing more  $CO_2$ -e than they release.

#### Challenges

However, the challenges we face are many. Our most immediate hurdle is completing a company-wide greenhouse gas (GHG) inventory of scopes 1, 2 and 3. Our diversity across countries and productions (growing 52 crops, meat, wool, dairy and timber, plus integrated arable and grazing farms) has created a labyrinth of accounting pathways, data and benchmarking that we are working through. The process is also impeded by the lack of internationally-agreed carbon accounting standards for farming, plus emerging science to support modelling of  $CO_2e$  – especially with soil and pasture sequestration.

#### **Opportunities**

Along the journey of measuring our production footprints, we are learning much about the interplay of carbon, soils, animals and nature. By creating GHG assessments of our major crops in the Cool Farm Tool, our farm managers are gaining insight into what within the production generates the most emissions. They can also see how their soil management through reducing tillage, cover cropping, diversifying rotations and planting trees drives carbon sequestration. Read more about our crop GHG benchmarking journey on page 56.





2.14 MILLION KWH SOLAR ELECTRICITY GENERATED ON OUR FARMS





**353** Kg co<sub>2</sub>-e / ha



CROP GHG FOOTPRINTS BENCHMARKED

### All about carbon

Two years after launching our ambitious goal of climate-positive farming by 2030, here's what we have done so far, plus our road map for the coming years.

#### **Crop GHG\* benchmarking**

Our farm teams have been busy using the CFT\*\* to benchmark our cropping footprints over the two previous seasons (2019/20-2020/21). This is the first major effort to benchmark our farming impact and set a trajectory for achieving climate-positive by 2030.

Across our arable farms, we analysed 25 different cereal, oil and seeds crops. Here's what we found:

- We reduced overall crop GHG footprint 40%, from 584 kh  $\rm CO_2e$  / ha in 2019/20 to 353 in 2020/21.
- The single largest source of emissions arises from the production and application of synthetic fertiliser.

- How we manage the crop residues is the second major source of emissions, since we mostly leave or mulch the residues on the
- fields to decompose. However, this also benefits surface protection of the soil as well as soil microbiology.
- Winter wheat is the most carbon intensive crop assessed across Ingleby Farms. This is driven mainly by its synthetic nitrogen demand, coupled with the large portion of hectares dedicated to growing wheat.
- Our regenerative land management decisions with cover cropping and reduced tillage are showing to sequester carbon in the soil.

#### Ingleby Farms' methods and emissions scope

We have defined our operational boundaries for responsibility of direct and indirect emissions, according to recommendations from The GHG Protocol Agricultural Guidance.

We report all scope 1 and 2 (direct) emissions in our crop assessments in the CFT. The scope 3 (indirect) emissions we include are transport

\* Greenhouse gas \*\* Cool Farm Tool

#### Our Climate Journey

Here are the key milestones we are working towards before 2025, half way on our journey to Climate Positive Farms by 2030. During the coming years all 45 farms and forests will have a climate positive strategy in place as part of their Farming with Nature plans, with targets, actions and progress measured annually. 2021

#### Row crop benchmarking

We have completed two-year benchmarks for major cereal, oil and seed crop GHG footprints.

#### Fruit and nut benchmarking

We have started assessing our fruit crops in the CFT. By 2022 we plan to complete two-year benchmarks for all major perennial horticulture crops, such as avocados, grapes. blueberries and pistachios.



of goods to the farm, and synthetic fertiliser production. We do not include transport and freight of our produce to end destinations beyond our farm gates.

It is important to highlight that our crop GHG benchmark for 2019/20-2020/21 will be subject to carbon-modelling updates within the greenhouse gas calculator provider. These occur when the methodology and science behind emission factors used in such tools are updated. These will retroactively update Ingleby Farms' benchmark.

#### Cool Farm Tool carbon calculator

Ingleby Farms joined the Cool Farm Alliance in April 2019, and we are using their carbon calculator, the Cool Farm Tool (CFT), to measure key goals under our Farming with Nature Commitments (see page 9).

#### 2022

Dairy, beef and lamb benchmarking Experimental livestock assessments are underway, and we will finalise GHG footprints for our dairy production, plus a sample of our sheep, cattle and integrated farms during 2022.

#### Forests and habitats

We are investigating how to best measure carbon captured in regenerating habitats on farm together with our mixed forestry. We plan to have these in place by early 2023. 2023 -

#### GHG inventory

After the last of our production groups have GHG benchmarks in place, we will complete a company-wide GHG inventory for scopes 1, 2 and 3.

#### **3rd party certified**

We are investigating formal assurance or verification bodies for our GHG work, which we plan to have in place before 2024.



Science-based targets set We are inspired by the push of the Paris Agreement to limit temperature increase to 1.5 degrees, and we aim to have a sciencebased target in place by 2024.

## Energy and renewables

Agriculture uses energy in the form of fuel and electricity to operate farm machinery and equipment, to dry grain and cool fresh produce. At Ingleby Farms, we are acutely mindful of our energy consumption, embracing as much renewable energy as possible.

Across all our farms\* and offices electricity consumption (scopes 1 and 2), 61% is sourced renewably, including 2.14 million kWh of solar power generated on our own farms.

In some of the regions where we farm, the national energy grids are mostly comprised of renewable energy sources. For example, most of the electricity used in Tasmania, Uruguay and New Zealand comes from hydro and wind power.

#### **Energy use**

We measure our energy use to continuously improve the environmental performance of our production systems.

In 2020/21, we used a total of 308,384 gigajoules (GJ) of energy. This amounts to 3.51 GJ/ ha, and an energy intensity of 0.73 tonnes produced per GJ. The majority of energy spent directly on our farms is in the form of diesel (46%) followed by electricity (31%) and natural gas (16%).



\* All Ingleby Farms, not only the arable farms benchmarked in the Cool Farm Tool



Irrigation is particularly energy intensive, responsible for 74% of our global electricity use. Diesel use is traditionally high in cropping systems. We aim to reduce this by moving towards minimum tillage, or no tillage, incorporating more pastures into rotations and upgrading old diesel-powered drying systems. We constantly search for better machinery and equipment that is lighter or multi-purpose, to reduce both diesel and soil disturbance.

#### **Energy use efficiency**

We want to increase our energy use efficiency, measured as yield (tonnes) per GJ, by 2% per year. However, our energy efficiency has been decreasing by 9% per year as an average over the last six years due to our focus on soil improvements, major construction and developments, increased irrigation, pistachio processing as well as costs of drying grain. We have also increased our production of seeds, which yield much less volume than other types of crops.

In 2018/19, we processed pistachios in our new processing facilities for the first time. This extensive operation is fuelled by natural gas, hence the major increase in natural gas use in the chart above. However, once we have implemented all developments, we should see a decrease in energy use, and an increase in energy use efficiency.





## Life cycle assessment of grass-fed beef

The environmental impact of beef production and their effects have become an international concern with heated discussions, mainly focusing on the methane emissions of ruminants and the size of the area required to feed the livestock.

However, in Uruguay we graze cattle on the vast grasslands of the Pampas and are firm believers that it is the best thing we can do for the planet. And here is why:

The Pampas has been grazed thousands of years before humans ever settled there. The natural wildlife and vegetation have co-evolved to produce a sturdy and bio-diverse ecosystem that is dependent on one another. Without large grazing animals, plant biodiversity and growth would decrease which would lead to loss of wildlife, soil quality and overall resilience of the ecosystem.

To imitate nature, we practice rotational grazing on our pastures in Uruguay. The pasture is divided into segments which the cattle rotate between. In contrast to continuous grazing, rotational grazing reduces the risk of overgrazing and allows the grassland to recover.



This type of grazing mimics the natural herd movement of grazing herds and is what the Pampas was made for.

#### Life cycle assessment

We are very aware that reducing our carbon footprint is essential for a healthy global climate. In 2020, we commissioned a life cycle assessment of our beef production in Uruguay, to follow the carbon footprint of our beef production. By monitoring seven of our livestock farms in Uruguay over five years, we found that our carbon footprint per unit of land increased 22%. But because our productivity increased 27%, we ended up with a carbon footprint per kg meat that was reduced by 4%. This is a great example of when increased productivity by good agricultural practices leads to reduced emissions. 100% grass-fed

We nave chosen the Aberdeen Angus breed due to its original characteristics and because it adapts well to our environment in Uruguay. Our beef production is based entirely on grass, so we select those cows that breed efficiently and deliver steers that perform well exclusively on grass. Our Aberdeen Angus beef obtains the proper marbling, offering a high-quality grass-fed meat with the nutritional properties and great flavour that today's consumers increasingly request.



## Striving to do right

Ingleby Farms operates in many countries, some of which are perceived to have a medium to high risk of corruption. We are committed to conducting our business in an honest and ethical manner. We work against corruption in all forms, including extortion and bribery.

#### **Ethical policy**

We abide by our Ethical Policy, Anti-Money Laundering & Anti-Corruption Policy and Supplier's Code of Conduct. Together, these constitute our Code of Business Conduct.

We require our employees and business partners to comply with the Ingleby Code of Business Conduct and to report any violations or suspected breaches. This is supported by our online whistleblower system allowing for full anonymity.

We have a zero tolerance towards breaches of our Code of Business Conduct. For 2020/21, we are proud to report no breaches of ethical conduct, no production and sustainability breaches, no IT security breaches, and no whistleblowing cases.

We investigate all submissions thoroughly, take appropriate actions and report any breaches to the Board of Directors. We ensure there is no retaliation against people who report alleged breaches of the Code of Business Conduct.

### Labour standards and human rights

We support and respect internationally recognised labour standards and human rights. We fulfil our legal obligations and offer reasonable terms on pay, pension, sick leave, holidays and notice periods. We do not use any form of forced or compulsory labour, and we do not use child labour. We uphold the freedom of association and the right to collective bargaining. Our main risks related to human rights are found within our supply chains. To mitigate these risks, we asked all new suppliers to sign and adhere to our Supplier's Code of Conduct, which includes our expectations and minimum standards for labour and human rights. Again in 2020/21 we have not experienced any human rights violations on our farms or to our Supplier's Code of Conduct.

#### **Equal opportunities**

We oppose all forms of discrimination, and recruit employees regardless of age, race, gender, nationality, religion, sexual orientation or other personal diversity indicators. We are equal opportunity employers, and we want to create equal and fair working atmospheres welcome to all.

We monitor the gender ratio of our teams. Our target is for the underrepresented gender to reach at least 40% by 2025 at all levels in the organisation. Women are currently the underrepresented gender, making up 36% of our total employees and 25% of the Board of Directors.



#### Please compost or recycle this publication

True to our vision, we have produced this publication using cradle-to-cradle certified paper and ink, which means that all materials – except the staples – are fully biodegradable and can safely enter circular systems without any harm to living beings or the environment.

We took it to the ultimate test and buried last year's report in a natural grass pasture. 10 months later, the earthworms, bacteria and fungi had turned most of the publication into soil.

We kindly ask you to honour our efforts by either composting or recycling the publication. It means a lot to us. Please don't forget to remove the staples.

Thank you.



October 2020



August 2021





#### Farming with Nature

As hands-on farmers and long-term owners of land, Ingleby Farms believes in farming in harmony with nature. Nature matters, diversity matters, and agriculture plays a central role in enhancing biodiversity and ecosystems.

Integrating livestock into cropping systems is key when farming with nature. Our sheep and cattle feed on cover crops, crop residues and waste crops that would otherwise be lost. We also use livestock to graze seed crops that benefit from defoliation.

Grazing animals inoculate soils with dung and saliva, and there is a wealth of beetles, fungi and other organisms associated with this. Their hooves help incorporate plant residues, and belowground biomass increases together with soil biological activity.

