



Sustainability Summary 2023





The global food system is set to face unprecedented pressures over the coming decades as demand for resources and the effects of climate change intensify. Produce Investments is already fully committed to protecting critical resources and cutting CO2 emissions within our operations however, we are not limiting our focus to our site perimeters - we are including up and downstream operations to ensure we focus on our biggest impacts and increase our understanding of sustainable supply chains. We can, therefore, move our impacts from negative to neutral or better still, positive. Opportunities for carbon neutral, growing decarbonisation and future targets are being reviewed within the business, with more specifics available from each of our individual companies but here are just a few things we are already doing across the group...





Carbon Emission – using less

We have an established management system in place which helps deliver continuous improvement in environmental performance; metering systems measure consumption which allows us to monitor and prioritise areas of focus for reduction. Improved refrigeration systems and LED lighting are just some areas the business has invested in, with 100% of the electricity used across the business coming from renewable sources.

On-site generation of clean electricity is also an area we have proudly invested in with a 1.5MW Wind Turbine installed at our Cambridgeshire site and large-scale solar panels installed at sites in Berwickshire, Cornwall and Cambridgeshire producing c. 650 kwh of electricity.

Our commitment to environment and sustainable development has benefited the business and our employees as well as external stakeholders and suppliers. Our Berwickshire site was also the proud winner of The Scottish Environment Business Vibes Management Award in the Large Business Category which recognised our hard work and commitment to sustainability.

In 2022 Greenvale partnered with Trinity Agtech, using their Sandy platform to capture scope 3 emissions data from our own growing operation and also from of a number of our potato growers. The Sandy platform provides suggestions for carbon reduction actions based on the detailed inputs for each farm. The insight into emissions from potato growing will allow us to provide targeted advice to growers on how to reduce their carbon footprint. For example, one of the greatest contributors to carbon emissions in potato production is fertiliser use. When making fertiliser recommendations to growers, our Produce Solutions team carefully tailor nitrogen rates to the variety, length of growing season and end-market requirements, to ensure optimum use and minimisation of waste and less inputs.

We continue to report our carbon reduction progress to our customers and other key stakeholders. We have disclosed our carbon and energy use data for our packing sites on the Manufacture 2030 platform for a number of years, and most recently we have disclosed our wider business performance through CDP.

Flowers: Backing British

Rowe Farming Ltd is a LEAF accredited farm and we grow 100% British flowers. During January - April, daffodils are the UK's seasonal flower of choice, and with the wallet-friendly £1 price point, they epitomise Spring. The majority of the world's daffodils are grown in Cornwall, making Rowe Farming Ltd one of the largest growers, pickers and packers of daffodils globally. Due to the unique maritime climate, Cornwall makes the perfect growing conditions for this humble yet sturdy little flower. Cornish daffodils are the highest quality on the market and sold worldwide, with exports to Holland, Germany, Poland, Croatia, Bulgaria, and America. What makes daffodils unique is that very few are grown outside of the UK and there are no imports of daffodils to the UK. In the event of crop failure, the absence of the daffodil on UK retailer's shelves would undoubtedly impact the horticulture industry, with the loss of volume needing to be replaced by importing flowers from outside of the UK, for example, additional tulips from Holland, roses from Africa and spray carnations from Spain or Turkey.

Rowe Farming is continually reviewing its growing processes with sustainability in mind. In 2021 we initially planted 5 acres of phacelia, known for attracting bees and other beneficial insects. Phacelia is also beneficial to soil through the prevention of nitrogen leaching and enhancing the organic matter. The use of inter-row grass to reduce soil loss through water run-off, and the use of GPS for precision spraying to reduce the use of chemicals have also been adopted.



Land – soil management and health

The Jersey Royal Company has, in recent years, invested in fertiliser placement equipment which has enabled us to reduce inputs by around 20%. We also collect around 60 tonnes of seaweed (locally known as vraic) which is used as a natural fertiliser and a useful source of organic matter.



Conservation tillage is key to our soil management and practices across the group include reduced tillage & traffic, increasing organic matter by use of Cover Crops, reducing pesticides as well as ensuring farm vehicles and equipment are appropriate for use and well maintained.

Suppliers – sustainable relationships



We have established long-term partnerships with our British Farmers. We do everything we can to support our supply base, with long term, sustainable contracts and with over 100 farms growing potatoes for us in the UK we are supporting family businesses within local rural communities. We have been working with some of our farmers now for over 25 years.

We support supplier certification, assurance schemes including Leaf Marque, Field to Fork, Nurture, Global Assurance and Water Stewardship to name a few and with us investing in innovation and technology to reduce inputs we can share our practical experiences through continuous improvement groups.

Variety development – Less Inputs, disease resistance

We continue to look to the future and invest in potato breeding, producing varieties to meet the changing consumer attitudes to health, indulgence, organics, and convenience while also addressing the challenges of climate change with reduced pesticide, fertiliser, and water requirements.



Produce Solutions is responsible for Greenvale's variety development program, identifying the most sustainable varieties for future production with the emphasis on selection for Potato Cyst Nematode (PCN) and blight resistance. Produce Solutions agronomists are some of the few who consider varietal blight resistance when recommending blight spray programs – reducing the number of applications of plant protection products made to crops.

Water – Using Less

Cascade, our award-winning crop washing system has not only has reduced our water consumption across the group but also segregates soil, sand and organic waste enabling these to be reused in an effective and efficient manner. The environmental benefits of this investment at both packing sites are massive and some of the awards the system has won in the past are testimony to this.

- Water Efficiency Award,
- The Re-Fresh Innovation of the Year Award,
- the Food Processing Environmental Initiative Award,
- The E.D.I.E Award for Water and Wastewater,
- The Footprint Award for Sustainable Use of Natural Resources and a Golden Green Apple Award.



Whilst potato production uses less water per kg of production than many carbohydrate-rich crops, the Produce Solutions team still look to optimise irrigation use to reduce overall water consumption per tonne and at the same time reducing environmentally damaging soil erosion through excessive water use. Also, within the Greenvale growing business unit there has been significant investment made in sprinkle irrigation systems which improves the accuracy and efficiency of water application.

Wildlife / Biodiversity

Bees are an essential part of farming and food production, so with the help of our company beekeeper and his colleagues at our Seed site in Perthshire we have several hives in place. We are in the process of expanding our hives to other sites and partnering with growers to expand further. We also benefit from some fantastic tasting honey as we sell the honey to generate more income for our employees' chosen charities, so its win-win for our taste buds, the environment, and the local community.



Our farmers work incredibly hard to look after all the wildlife on their farms – we need birds and small animals to eat the bugs that could harm our crops and we want to protect the landscape (and everything that lives in it) for generations to come.

We have dedicated spaces on our sites purely to giving homes to wild species including birds, field mice and voles. Our farmers leave extra-wide margins around fields so resident barn owls can happily hunt for their supper.

Rowe Farming Ltd sponsor the Wildlife Trust reserve which is sited on the former Pendarves Estate, and which is also home to Rowe Farming Ltd. Pendarves Wood nature reserve once made up part of an elaborate ornamental garden accompanying the Pendarves Estate Manor house. Many features of the garden can still be seen today including the lake, the remnants of various outbuildings and 250-year-old red rhododendrons planted along the original driveway to the house.



Waste – Zero Waste to Landfill

We rely on packaging to help protect product, increase shelf life, prevent food waste, and contribute to wider sustainability goals. However, we recognise that reducing single use plastic is an important issue for our customers. All the plastic packaging we use is fully recyclable and we have reduced the amount of plastic used to pack our potatoes, which has stopped a large amount of plastic going to landfill. We continue to investigate alternative recyclable materials to further reduce dependence on plastic use in our supply chain.

Food waste is a priority for us, with a focus on driving out inefficiency to prevent waste and surpluses from occurring. We have achieved zero waste to landfill at our packing sites. We also collaborate with our customers and the wider industry to help consumers reduce their food waste. We were partners in a study to demonstrate that it is safe to store potatoes in the fridge at home, which led to the Food Standards Agency changing their guidance on home storage for potatoes. We have also worked with customers to extend the shelf life of some of our products and remove date codes from packaging, enabling consumers to judge if produce is still good to use.



Restrain, another PI company, supplies ethylene generators to fresh produce businesses across the world to reduce sprouting in potatoes and onions, and to enhance the ripening of tomato crops, both of which have a positive impact on reducing crop waste. Restrain generates a modified atmosphere of the natural gas ethylene, a residue free alternative to other products which in turn reduces chemical use in storage as well as the associated waste reduction benefits. Restrain has previously won the Queens Award for Innovation for its pioneering work and environmental credentials.

We are even turning some of our waste into Vodka as every season we have an element of oversize Jersey Royal new potatoes that are, in effect, waste that would then cost us money to spread back on to land. This is an actual cost to the business in terms of person-hours, machine wear and diesel, as well as an additional environmental impact. The Jersey Royal Company engaged with a local food enthusiast and entrepreneur who is deeply passionate about Jersey, and someone who identified a gap in the market for a premium spirit. Together, we are successfully diverting waste and distilling it into 'Royal Mash', an award-winning product.

Produce Investments and its subsidiary companies are committed to help solve some of the biggest challenges facing our planet, whether that is working with our farmers to improve soil systems, reducing carbon emissions or assisting in tackling one of the world's largest problems of feeding an ever-growing population sustainably. Protecting the future of our planet is protecting our business.

Angus Armstrong
Chief Executive, Produce Investments
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