



**UK
FOOD
VALLEY**

Greater Lincolnshire

**THE FRESH PRODUCE &
CONTROLLED ENVIRONMENT
AGRICULTURE INVESTMENT
OPPORTUNITY**

2024



www.ukfoodvalley.co.uk



**North
Lincolnshire
Council**

Lincolnshire
COUNTY COUNCIL

The Fresh Produce & Controlled Environment Agriculture Market Opportunity

The UK and international fresh produce markets offer significant growth potential for innovative agricultural businesses. Key drivers include an expanding population and rising consumer demand for healthy, more sustainable foods.

A 2022 McKinsey¹ report interviewed over 8,000 consumers in the UK, USA, France and Germany, and in all four countries found a strong consensus on which food and health concerns were most important, reporting that half of consumers call healthy eating a top priority and one-third say sustainable eating is too.

The UK's long-standing 'Five a Day' campaign has boosted interest in healthy fruit and vegetables consumption, with the Government Food Strategy² (2022) also encouraging more healthy eating.

Covid-19, the UK's EU-exit and increases in energy costs have reinforced the case for investment in UK-based intensive crop production and highlighted the need for shorter, more resilient supply chains. With the UK importing 58% of the fresh

produce it consumes, significant potential exists for fresh produce import substitution³.

In response the May 2024 Blueprint for Horticulture, published at the No. 10 Food Summit called for the sector to grow to meet more of the domestic demand for fresh produce. The Blueprint stated that if we want to build our food security, we must go further in fruit, in which we only produce 17% of what we consume, and fresh vegetables at only 55%. This national commitment mirrors the focus on growing the fresh produce sector adopted in Greater Lincolnshire a decade ago.

Commercial horticulture uses a new generation of sustainable and efficient greenhouses and provides new opportunities to make UK producers more competitive.

Companies investing in Controlled Environment Agriculture (CEA) can improve sustainability by reducing food miles and accessing Lincolnshire's abundant renewable energy sources. By working with regional partners, such as the University and agritech clusters, they can apply leading-edge agricultural technologies and expertise to achieve step-change improvements in productivity, energy efficiency, and waste reduction.

Greater Lincolnshire presents a unique location opportunity for innovative fresh produce businesses pursuing growth in the UK market.



THE MARKET GROWTH OPPORTUNITY⁵

73.4m

UK population projected to grow by 3.8million from 2025-2035 to reach 73.4million⁶

£14.8bn

UK Fresh Produce Market Value in 2023

+48%

Growth in Value of UK Fresh Produce output since 2013

The UK Import Substitution Opportunity

8.6bn

UK Imports of Fresh Produce in 2023 (vegetables, fruit and ornamental crops)

£2.5bn

Imports increased by £2.5bn from 2013-2023

THE UK NEEDS TO INCREASE DOMESTIC FRESH PRODUCE SUPPLY

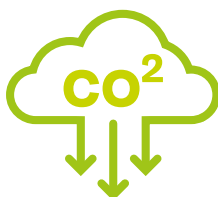
To meet targets on healthy eating

Long term growth potential from population growth and desire to buy more UK sourced produce

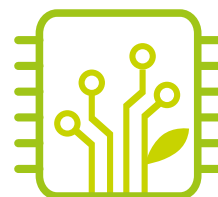
THE UK INVESTMENT OPPORTUNITY



Increase the production of fresh produce



Deliver world leading efficiency in low carbon fresh produce production



Boost labour productivity through automation and use of AI

The UK Food Valley:

The UK Food Valley has the scale to support food chain investment and aims to be a Global Top 10 Food Cluster

Agriculture, Food Processing, Wholesale Logistics & Input Suppliers support 75,000 jobs, GVA of £4.0bn

UK Food Valley has scale, depth & breadth in the food chain, with nationally leading specialisms in:

- Seafood
- Fresh produce
- Poultry & meat processing
- Plant proteins
- Logistics
- AgriFood Technology

Agriculture in the UK Food Valley:

- 4,300 farms on 580,000 hectares
- 30% England's vegetables
- 20% England's sugar beet
- 16% England's poultry
- 15% England's oilseed rape
- 13% England's potatoes
- 12% England's wheat & protein crops
- ~ £2.5billion output

**Sales over
£10.7billion
per annum**

**>90 international
agrifood
companies**

**30% UK food
travels via South
Lincolnshire**

Investment:

- £1/2 billion per year in major projects
- £1/2 billion per year in upgrades
- Over 130 £1m+ investments since 2016
- Over 30 investments >£10m
- Over 10 investments >£50m
- Investments in fresh produce, greenhouses, food processing & supply chain

UK Food Valley Fresh Produce and Controlled Environment Agriculture (CEA)

The UK Food Valley is the centre of the national fresh produce system, with clusters focused on crop production, processing, storage and distribution of both UK and internationally sourced fresh produce.

The UK Food Valley has the country's largest fresh produce production cluster:

- With 21% of England vegetable and fruit crop area
- Produces 30% of England's vegetables
- Produces 19% of England's ornamental crops

In Controlled Environment Agriculture (CEA), the UK Food Valley has been a longstanding leader, with a history of over 100 years in the use of greenhouses to produce crops. This historic strength has led in the last 5 years to a new wave of high tech greenhouses being developed, including 2 UK leading developments at Bridge Farm in Spalding and Dyson Farms at Carrington near Boston.

Multiple new greenhouse schemes linked to energy centres or existing fresh produce businesses are currently being developed, with a projection that in the decade from 2020-30 the greenhouse area will have doubled.

This concentration of the industry is based on:

- 25% of England's grade 1 land
- A good climate, water retentive soils and flat fields make it ideal for intensive crop production
- A concentration of UK and international businesses serving the fresh produce sector
- The UK's leading hub for fresh produce in South Lincolnshire
- Access to multiple sources of renewable and sustainable energy

South Lincolnshire Cluster

- Centred on Spalding and Boston, the South Lincolnshire fresh produce cluster is the largest in the UK
- It acts as a centre of fresh produce growing and processing with leading businesses such as Worldwide Fruit, AH Worth, JEPCO, Bridge Farm Group, Dyson Farms, AE Lenton, Staples, TH Clements, Naylor's, Morrisons, Princes, Burgess Farms, Taylors of Holbeach, Greencore, Davis Worldwide, Total Produce and many more
- Hosts major UK importers and packers including Melon and Co., Karsten UK, Ripe Now, Parallel UK, Green Partners UK, Flamingo, JDM Food Group and others
- South Lincolnshire is also home to leading cold storage and logistics businesses which serve the fresh produce sector including Fowler Welch (Culina Group), FreshLinc, XPO, Bakkavor and Turners
- Hosts major fresh produce input suppliers including the UK's largest independent seed company Elsoms, which focuses on this sector, the Allium and Brassica Centre with Farmacy, as well as international businesses such as Sakata, Seminis and Bayer who use trial sites in the area

Greater Lincolnshire: The Fresh Produce & Controlled Environment Agriculture Investment Opportunity

Greater Lincolnshire is the UK location of choice for fresh produce and controlled environment agriculture businesses investing to meet growing market demand, while pursuing transformational improvements in efficiency, productivity and sustainability.

Land

- 580,000 hectares of farmland
- 25% of UK grade 1 land
- Large areas of flat land suitable for Controlled Environment Agriculture (CEA) structures including sites for greenhouses and vertical farms

Climate and water

- Moderate, maritime climate means longer seasons and fewer extreme weather events
- Available water supplies with major schemes being developed to secure water supplies in the long term to respond to climate change
- Good light levels and clean air

Energy solutions

- Multiple sources of renewable and sustainable energy, across the whole of the UK Food Valley
- Investment in renewable power sources to help decarbonise processing, cold storage and distribution
- Opportunities for co-location with sources of 'waste' heat across the UK Food Valley

Business and Workforce Cluster

- Over 6,000 businesses in the agrifood supply chain
- Over 75,000 people employed in food production
- 14% of the workforce in food production, compared to under 4% at UK level

Supportive planners and public sector

- Concentration of the industry means the public sector and planning system understands and welcomes agrifood sector growth
- In the South Holland district over 40% of the workforce are employed in food production, 10 times the rate nationally, making it the UK's leading fresh produce centre

Innovation and skills supply

- UK leading centre for agrifood tech development, start-ups and high growth companies, pioneering next generation digital and technology solutions
- Cluster of innovative agrifood tech businesses and UK and international technology suppliers
- UK leading education and training centres meet skills needs from entry level to PhD alongside industry leading training and CPD provision

Greater Lincolnshire's combination of location advantages presents a unique opportunity to expand fresh produce and controlled environment agriculture businesses – to access growth markets, minimise investment project costs and risk, and leverage knowledge and advanced technologies for competitive edge.

Low Carbon and Renewable Energy

Greater Lincolnshire recognises that as an energy intensity sector, for production, storage and distribution, it is essential to help the fresh produce sector embrace energy efficiency and to source its energy needs sustainably. It is therefore linking the development of the fresh produce sector to investments in low carbon and renewable energy.

Greater Lincolnshire is at the heart of the growth in renewable and sustainable energy generation in the UK with the South Humber Bank, offshore and Lincolnshire wide opportunity⁷.

With the world's largest offshore wind farms located off the coast in the North Sea, the potential exists for energy-intensive businesses, including fresh produce growers and supply chain companies, to access reliable sources of cost-effective, low carbon power across Greater Lincolnshire. The growth of the energy cluster is projected to attract £60billion of investment by 2040.

The Viking Link is the World's longest power interconnector linking South Lincolnshire to Denmark's wind farms. Also in South Lincolnshire a new strategic grid energy storage site, at the heart of the fresh produce cluster, will provide grid balancing to match renewable energy supply with demand.

Greater Lincolnshire also has a large number of energy sources to support controlled environment agriculture heating and cooling needs, including:

- A cluster of large Anaerobic Digestion (AD) plants
- Industrial sites, data centres and energy park developments with 'waste' heat available

The Lincoln Institute for Agri-food Technologies (LIAT) has worked on large demand side grid balancing technology developments with industrial partners including Tesco. The new national programmes LIAT is leading on AI for agri-tech provides a platform to develop the use of innovative whole systems energy solutions.

Working with the UK Food Valley the University is building a new state of the art R&D greenhouse which will feature geothermal heating and new glazing technology. This facility will promote energy efficiency alongside productivity enhancing technologies, to deliver class leading low carbon fresh produce.



Industry Led Innovation

The UK Food Valley has innovation as its central focus, helping the food chain to adapt and evolve to meet changes in market conditions. Working with the University of Lincoln, the UK Food Valley area is the largest recipient of Innovate UK applied research funding for the food chain. There are many ongoing business-academia R&D collaborations, and substantial international research collaborations feeding state of the art knowledge into the region to support the agri-food sector.

The UK Food Valley is focused on three cross cutting innovation themes, all of which align with efficient fresh produce supply and their supply chains. The three themes are:

Accelerating food chain automation and digital technology adoption to deliver productivity growth and high value jobs;

Delivering low carbon food chains from farm to fork by focusing on low carbon technologies for production, processing and distribution;

Developing the market potential of naturally healthy and nutritious foods, such as fish, vegetables, salads, fruit, pulses and lean meat, in which Greater Lincolnshire specialises.

Since its establishment in 2016, the Lincoln Institute of Agri-food Technology (LIAT) has secured agri-food innovation projects worth over £100m, working with over two hundred industry and academic partners. Increased productivity in fresh produce businesses has been the single largest focus of this programme.

The approach to innovation in the UK Food Valley is to:

Work with industry to identify problems

Assemble inter-disciplinary teams to tackle these problems

Co-create solutions through collaborative projects which accelerate development and adoption by industry.

The innovation team is led by experts with decades of direct industry experience so the solutions developed can be deployed by industry quickly and efficiently.

CAPABILITY

Industry Cluster

Greater Lincolnshire's fresh produce cluster includes leading businesses at the forefront of innovation.

Leading fresh produce supply chain and processing businesses include Worldwide Fruit, Melon and Co., Karsten UK, Heather Mills, and Ripe Now.

Dyson Farms in Boston and Bridge Farm in Spalding have both developed UK leading glasshouse units in the last 4 years, featuring cutting edge robotics and energy systems.

Staples, a major brassica producer, are industry pioneers in energy and water efficiency and sustainability.

The cluster is represented by the UK Fresh Produce Network (ukFPN)⁸ supporting businesses with applied research, innovation and supply chain linkages.

CAPABILITY

Agri-Tech

The University of Lincoln's world-class Agri-Tech capability promotes agricultural productivity, efficiency, and sustainability.

The Lincoln Institute for Agri-Food Technology (LIAT) integrates sector-leading expertise in AI, robotics, engineering, crop science, environmental sustainability and supply chains, and includes the world's first robotic fruit farm⁹.

Related Lincoln research centres focused on data analytics, AI, digitalisation, robotics and automation include Lincoln Agri-Robotics¹⁰ the world's first Agricultural Robotics Global Centre of Excellence.

In 2024 LIAT is developing a new R&D glasshouse which will feature geothermal heating alongside glazing and automaton innovations.

LIAT is the lead partner in the 4 year LINCAM project which will invest £5m in crop technology commercialisation and the £1.5m AgTech Global project which aims to internationalise crop agritech solutions.

CAPABILITY

Cold Storage & Logistics Hub

The Spalding hub is located at the heart of Greater Lincolnshire's fresh produce cluster.

Leading temperature-controlled storage and logistics businesses including Americold, FreshLinc, Fowler Welch, and Turners in a fresh produce logistics cluster with over 25 companies.

A new Border Control Post at the hub enables the fast transfer of temperature-controlled foods from ports for additional product shelf life and the cluster has established links with fresh produce suppliers globally.

CAPABILITY

Education & Skills

LIAT now has a leading post graduate programme which is attracting students globally to study in Lincolnshire.

Greater Lincolnshire's further and higher education institutions partner with businesses to deliver specialised sector skills through the Lincoln Institute of Technology.

AgriFoRwArdS (EPSRC funded and led by LIAT) is the world's first Centre for Doctoral Training (CDT) in Agri-Food Robotics¹¹. In parallel LIAT also runs the SUSTAIN CDT¹² on AI applications in agri-food technology, and together these two Centres for Doctoral Training support 110 PhD students working on agrifood industry challenges.

LIAT's sister centre, the National Centre for Food Manufacturing (NCFM)¹³ is a satellite campus of the University of Lincoln located in Holbeach, South Lincolnshire. The centre combines education with industry-focused research and support, delivering apprenticeships, degrees and PhDs in specialisations including Agri-Produce & Supply Chain Management, and Food Science & Technology.

CAPABILITY

Available Sites & Properties

The UK Food Valley offers large-scale, pre-consented sites for food processing, cold storage and logistics activities.

There are multiple other sites across the UK Food Valley for large and small investors, ranging from farm-based sites to general business parks and specialist food processing and distribution centres.

Available properties include sites for large greenhouse developments with on-site access to renewable and sustainable energy.

These sites can meet most needs and location choices, but if you need something specific the UK Food Valley team will work with you to help find suitable premises.

CAPABILITY

Circular Economy

At the forefront of food industry circular economy innovations.

Greater Lincolnshire's leadership in food production and manufacturing has stimulated significant investment, and the development of advanced technologies and expertise, in circular economy specialisations including access to sustainable energy, food waste recycling and the manufacture of recycled food packaging.

Leading businesses established in the area include BioteCH4 (Anaerobic Digestion) and a new single use food plastics recycling centre built by Coveris in Louth. These regional capabilities present opportunities for food producers to implement more efficient, sustainable, waste minimising operations.

CAPABILITY

Renewable & Sustainable Energy

Greater Lincolnshire is at the heart of renewable and sustainable energy generation in the UK.

With the world's largest offshore wind farms located off the coast in the North Sea, the potential exists for energy-intensive businesses in the fresh produce sector to access reliable sources of cost effective, low carbon power.

There are exciting opportunities across Greater Lincolnshire to access sustainable and renewable energy options including 'waste' heat from AD plants, data centres and industry, biomass energy and connections to renewable power sources.

INVESTABILITY

Track Record

Greater Lincolnshire's attractiveness as a location for expanding fresh produce businesses is highlighted by recent large-scale investment projects.

In 2024, Bridge Farm Bioscience was opened by Bridge Farm Group in Spalding, following an initial £40 million investment in a 18 hectare glasshouse development in Spalding in 2020. They have planning for a further 12 hectares of glasshouses.

In 2023, Dyson Farming (part of the Dyson technology group) doubled the size of the UK's most efficient fruit farm in Boston¹⁴, including state-of-the-art optimised glasshouse environments, following an initial investment in 2021.

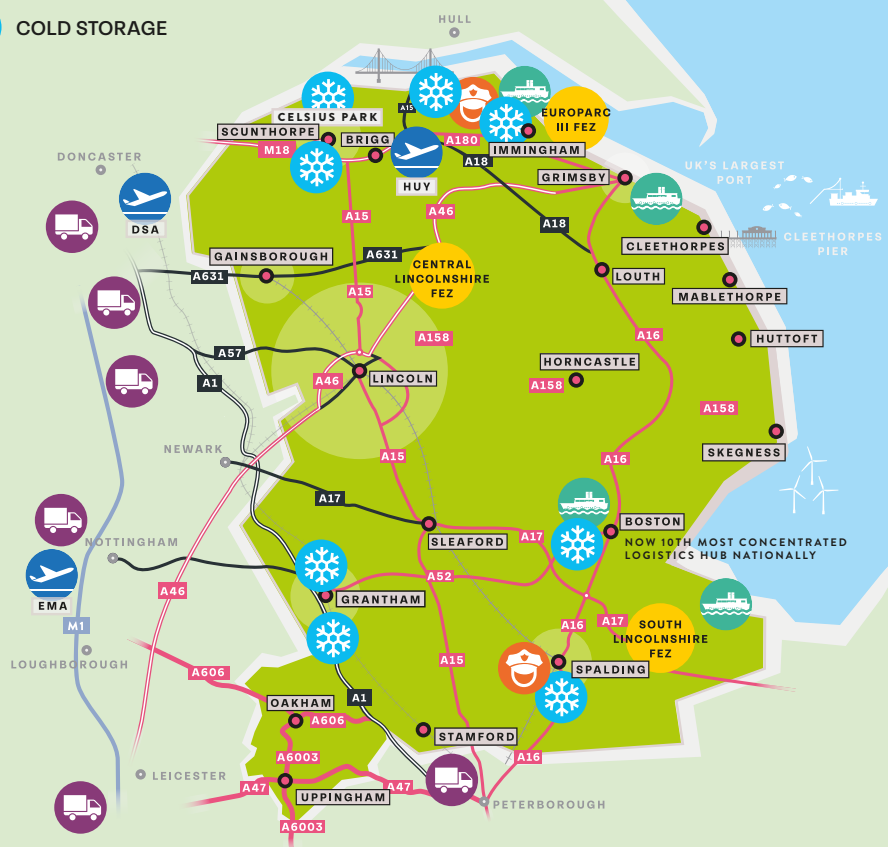
In 2020, Princes Group (Mitsubishi Corporation) completed an £84 million investment in vegetable processing at Long Sutton, Lincolnshire¹⁵.



Greater Lincolnshire provides fresh produce businesses with fast, multimodal access to distribution hubs and consumer markets in the UK and worldwide.

Key:

- GREATER LINCOLNSHIRE
 DISTRIBUTION HUBS
 COLD STORAGE
 BORDER CONTROL POST
 FOOD ENTERPRISE ZONE
 PORTS
 AIRPORTS



By Air

Humberside Airport provides global connectivity via Amsterdam and a temperature-controlled airside Perishables Hub. East Midlands Airport, the UK's largest dedicated air cargo hub, is less than 2 hours' HGV drive time from Spalding.

REFERENCES

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- 6 National population projections | Office for National Statistics
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- 8 UK Fresh Produce Network | Lincolnshire Chamber of Commerce | lincs-chamber.co.uk
- 9 Lincoln Institute for Agri-Food Technology | School of Agri-food Technology and Manufacturing | University of Lincoln
- 10 Lincoln Agri Robotics | Research – Robotics–Agriculture
- 11 EPSRC Centre for Doctoral Training in Agri-Food Robotics: AgriFoRwArdS | lincoln.ac.uk
- 12 SUSTAIN | sustain-cdt.ai
- 13 National Centre for Food Manufacturing | School of Agri-food Technology and Manufacturing | University of Lincoln
- 14 Strawberries | Dyson Farming
- 15 Long Sutton | Princes Group

SUPPORT FOR YOUR BUSINESS INVESTMENT

Working together UK Food Valley partner organisations, including local authorities, education providers and businesses, provide dedicated support to ensure a 'soft landing' for companies investing in the area. Contact us to find out how we can support your business relocation or expansion project.

Our services to business include:

- Support in finding the right site or property to lease or buy
- Location, economic and food cluster market intelligence
- Access to workforce recruitment, education and training solutions
- Access to sector specialists
- Access to sector-specific support programmes e.g. for food chain innovation
- Access to local supply chains and business networks
- Access to funding for business investment



Contact Us

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