



Cereal monoculture UK

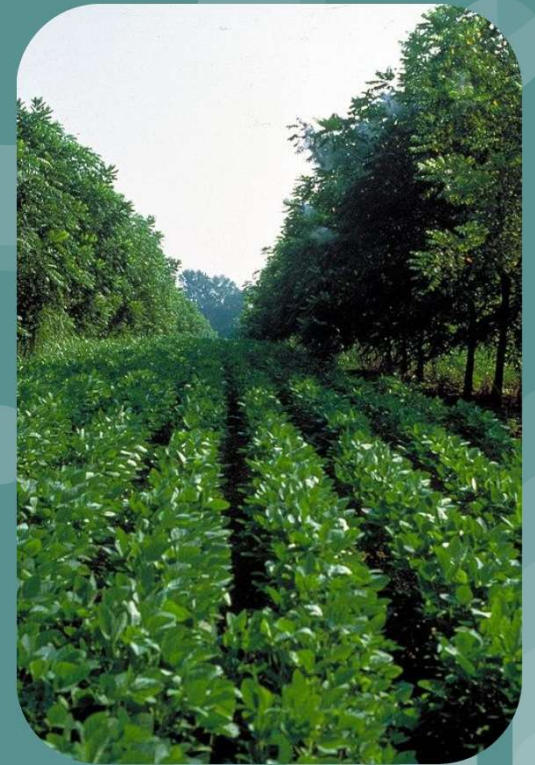
Talk given by Terry Thomson
On behalf of Swale Green Party
May 2024

Promoted by T. Valentine on behalf of T. Thompson (Swale Green Party) c/o PO Box 78066, London, SE16 9GQ

Farming

Past, present & future

Agroforestry, Alley cropping UK



Past

1700s (ish)

Population: 7 million

People employed by agriculture: 5 million

Fallow land 20%

Inputs (manufactured fertilisers, sprays)

Very little loss in biodiversity

1800s

Population: 15 million

People employed by agriculture: 1.5 million

Fallow land 4%

Discovery and production of fertilisers

Biodiversity loss between 1% & 3% (not much research evidence to know full extent)

Number of people employed in agriculture, 1801 to 2019

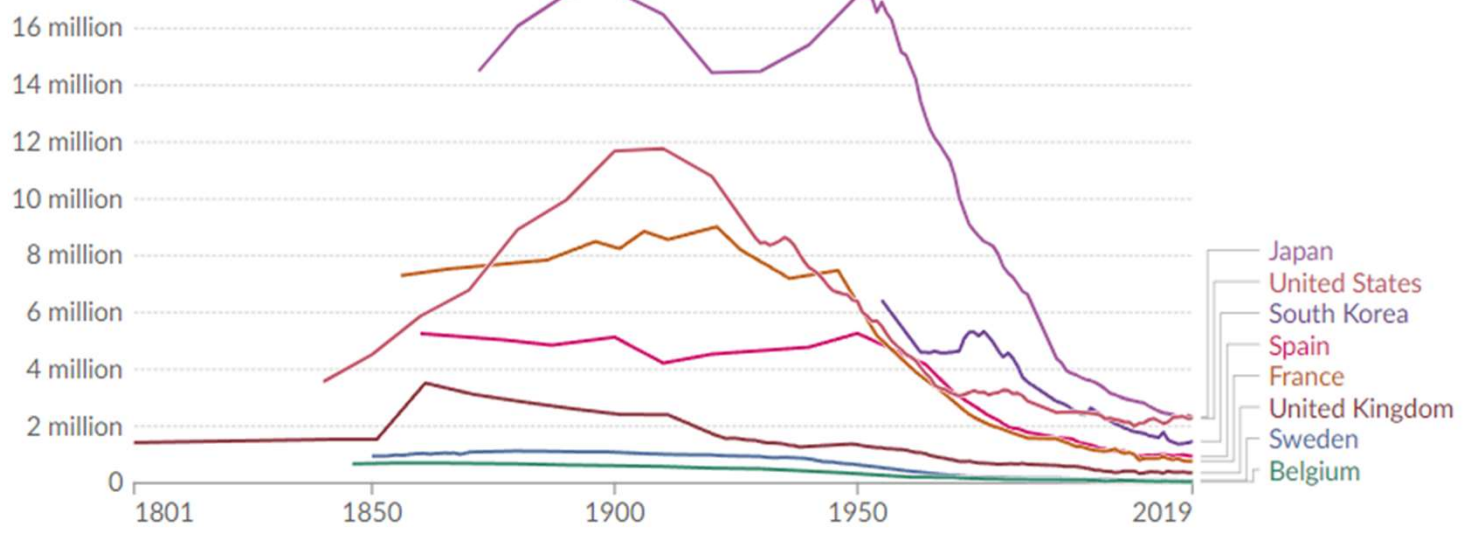


Agriculture includes the cultivation of crops and livestock production, as well as forestry, hunting, and fishing. Employment includes anyone engaged in any activity to produce goods or services for pay or profit.

Table | Map | Chart

Edit countries and regions

Settings



1801 2019

Data source: Our World in Data based on International Labor Organization (via the World Bank) and historical sources - [Learn more about this data](#)

OurWorldInData.org/employment-in-agriculture | CC BY



Related: [Employment in agriculture: Our data sources and definition](#)

Source: <https://ourworldindata.org/agricultural-production>

Past - Present

1950

Population: 50 million

People employed by agriculture: 1.6 million

Fallow land 3%

Inputs (manufactured fertilisers 20 million tons, sprays at 89% of cropped area)

Biodiversity loss 8%

Today

Population: 67 million

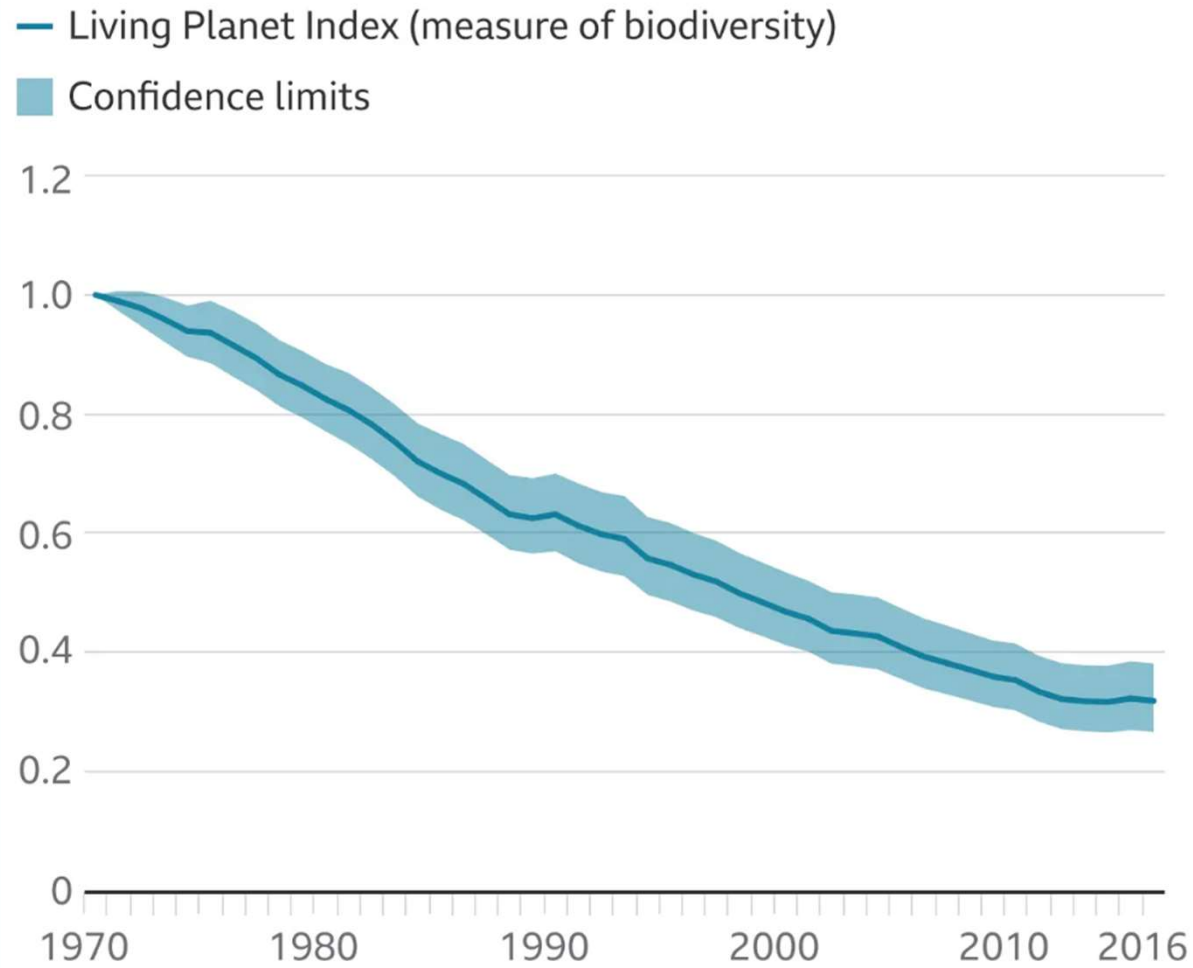
People employed by agriculture: 292 thousand

Fallow land 4%

Inputs - fertilisers 191.5 million tons (sprays at 46% of cropped area)

Biodiversity loss 21%

How wildlife has declined, 1970-2016

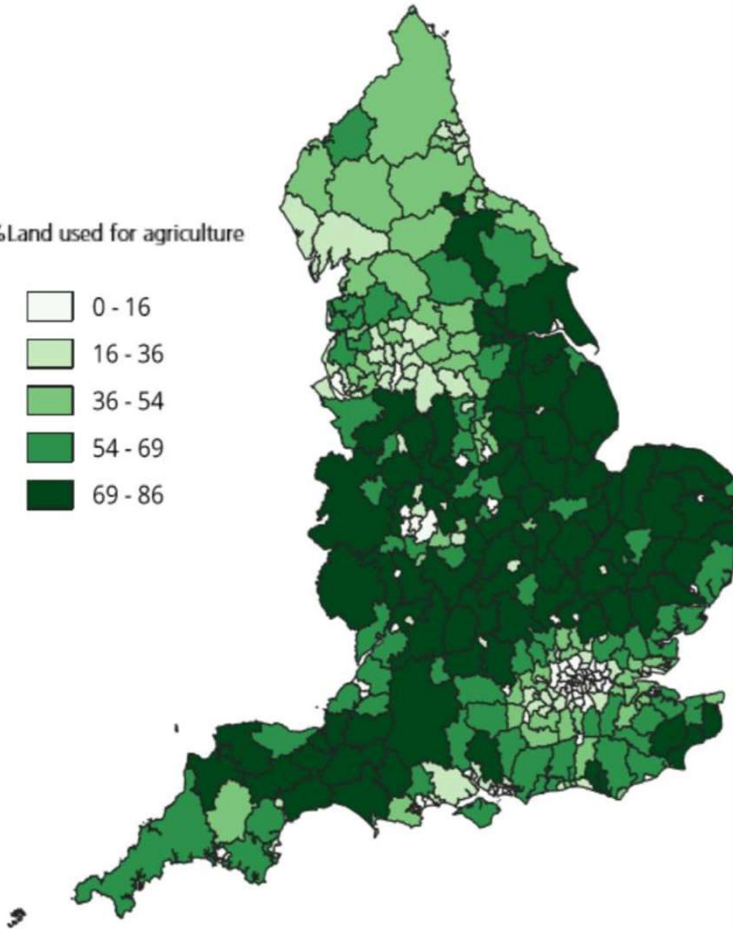
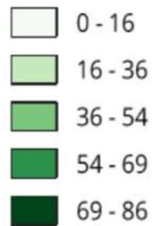


Source: ZSL

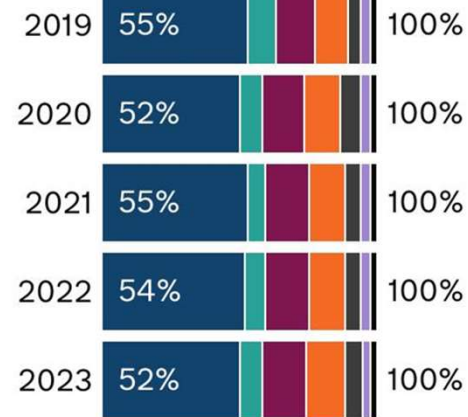
AGRICULTURAL LAND USE, 2017

% of land given over to agriculture, England

% Land used for agriculture



Note: These are a new dataset of experimental statistics, and are open to revision.
Source: Ministry of Housing, Communities and Local Government, 'Land use tables 2017'



Area of cropable farmland

Source: DEFRA

Problems facing farmers today



1. Low market value of produced crops
2. Labour
 - Retaining and affording
 - Recruiting
1. Government funding
 - Long term
 - Short term
 - Transitional
1. How to transition from modern traditional high input farming techniques to sustainable, diverse and organic

We will return to this later with a Q&A

Case studies of produced crops and its value

Our local farmer from Kent produces 91,200 kg of pears which equates to 568,000 pears. This farmer receives from wholesalers £0.046 per pear, which gives a total of £26,000. The retailers sell the pear for £0.7, which is a markup of 1500% giving them a potential gross total income before wastage and oncosts of £397,000.

Profit margin before machinery, property and insurance costs is £2200

Our other friendly Kent farmer grows 150 acres & produces 50 tons of milling oats and 325 tons of wheat for animal feed. He receives £170 per ton for feed, total £55,250 and £220 per ton for milled oats, total £11,000. Total income = £66,250. Retailers sales price of £726 per ton of animal feed, total £236,000. Sales price of rolled oats £2500 per ton minus transport and milling costs of 15% equals £106,000. Total income = £342,000.

Profit margin before machinery, property and insurance costs is £24,250

Current government funding schemes

ELMS - Environmental Land Management Scheme

SFI - Sustainable Farming Incentive

CS - Countryside Stewardship

LR - Landscape Recovery

Common agricultural payment (cap) is being phased out

- the Sustainable Farming Incentive (SFI) will pay farmers to adopt and maintain sustainable farming practices that can protect and enhance the natural environment alongside food production, and also support farm productivity (including by improving animal health and welfare, optimising the use of inputs and making better use of natural resources)
- Countryside Stewardship (CS) will pay for more targeted actions relating to specific locations, features and habitats. There will be an extra incentive through CS Plus for land managers to join up across local areas to deliver bigger and better results
- Landscape Recovery will pay for bespoke, longer-term, larger scale projects to enhance the natural environment

- reduce greenhouse gas emissions across the economy to reach net zero by 2050
- halt the decline in species abundance by 2030 and to ensure that species abundance in 2042 is greater than in 2022, and at least 10% greater than 2030
- improve the Red List Index for England for species extinction risk by 2042, compared to 2022 levels
- restore or create in excess of 500,000 hectares of a range of wildlife-rich habitat outside protected sites by 2042, compared to 2022 levels
- reduce nitrogen, phosphorus and sediment pollution from agriculture into the water environment by at least 40% by 2038
- increase total tree and woodland cover to 16.5% by 2050
- adapt to climate change

Our costs locally



LMIDB - Lower Medway Internal Drainage Board
£1 million per annum

This is used to protect lands & property from flooding. It appears a large majority of this is in defence of grade 4 and 5 agricultural grazing land. Can this cost be redirected from defence of grade 4 & 5 agricultural land to protection of grade 1 agricultural land from development?

Land use

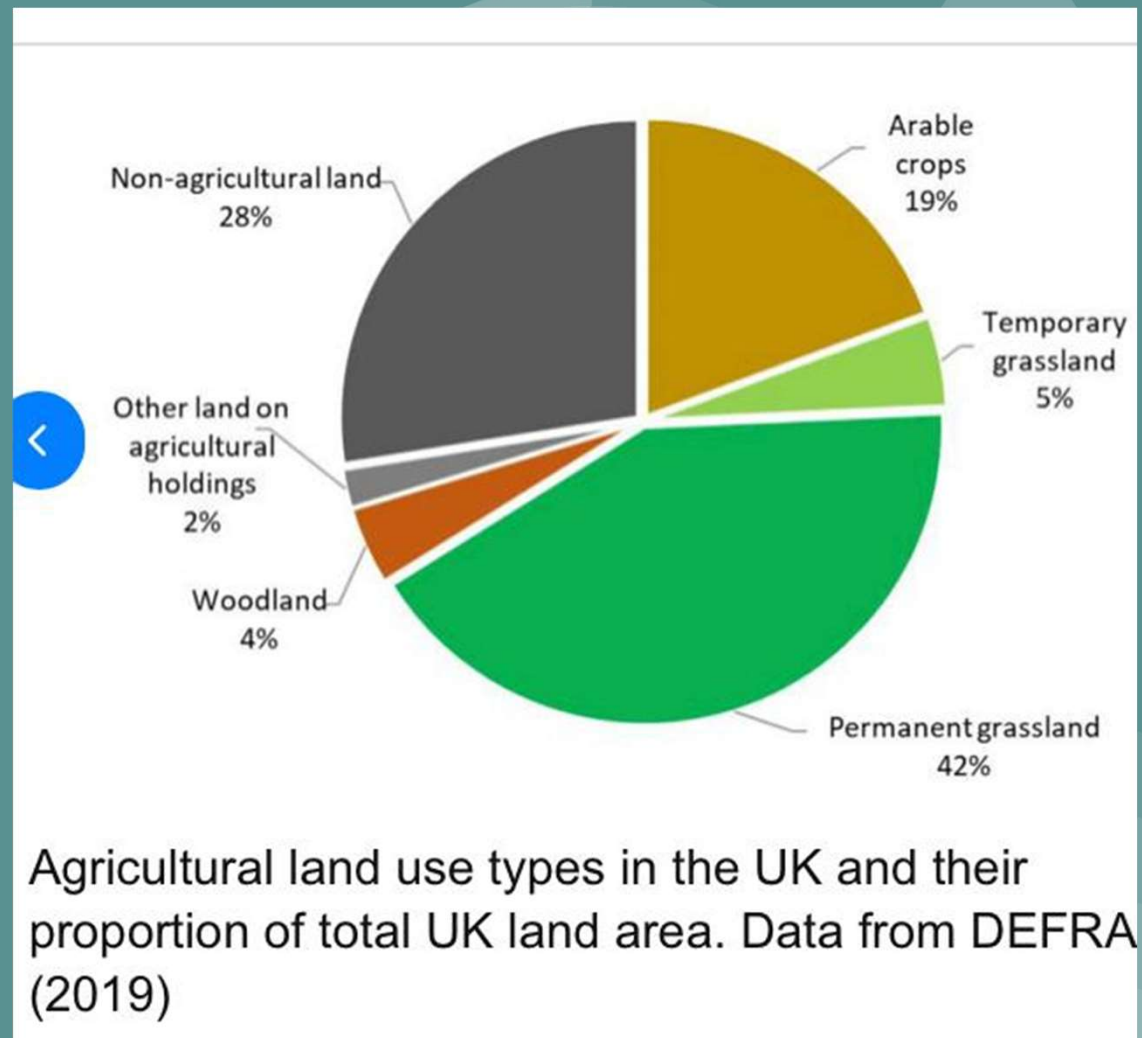
Non-agricultural land

- Moorlands 40%
- Grouselands 28%
- Scrublands 21%
- Other 11%

Arable crops

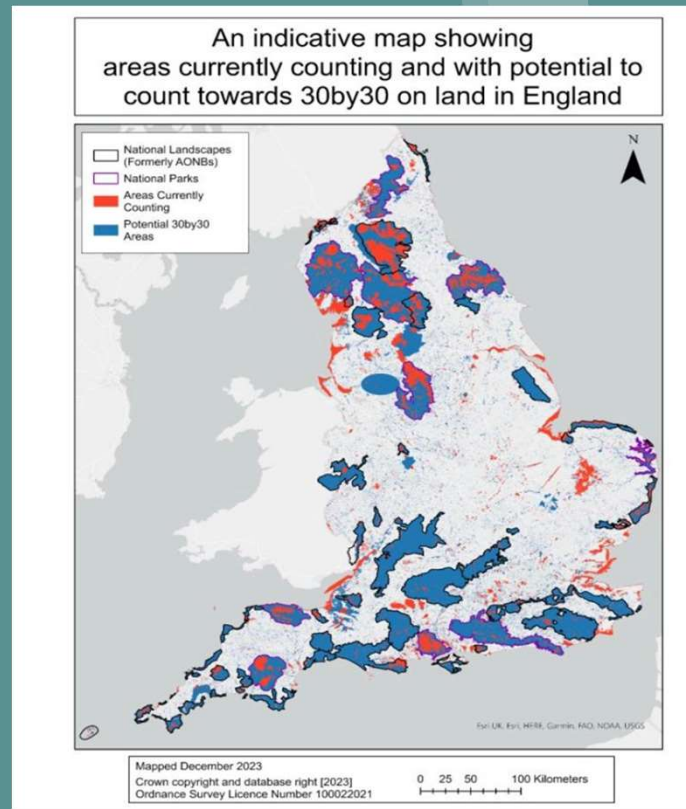
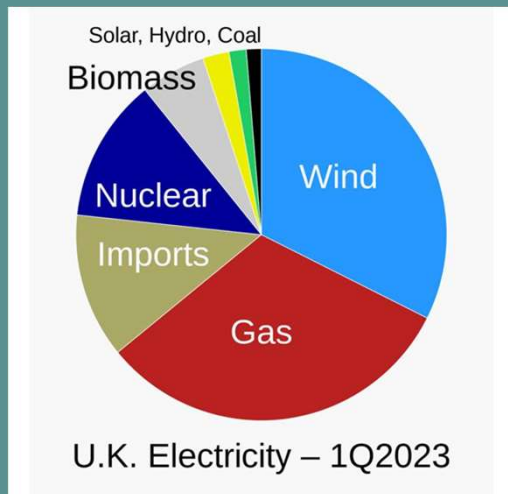
- 40% animal feed
- 2.1% fuels
- 57.9% human foods

Total area given over to animal feeds and fuels is 62%



Increasing biodiversity and wildlife zones

62% of current farmland has potential to be transitioned to rewilded zones, diverse, organic crop production, and clean, renewable energy.



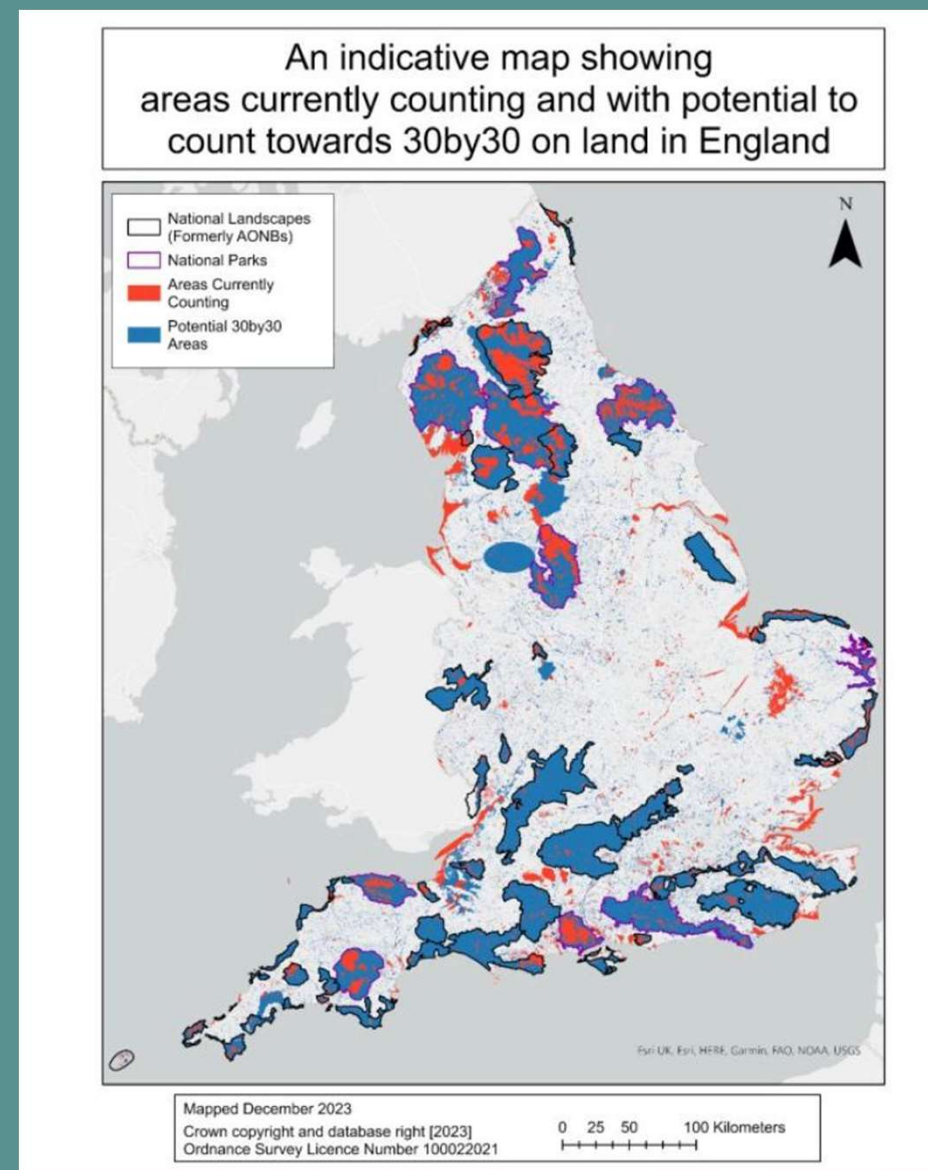
Source: Department for Transport RTFO data, UK Agricultural Departments June Survey/Census of Agriculture

Source: DEFRA

Rewilding

It would be possible with more diverse farming techniques, selective rotations and a plant-based diet to free up more land to allow full wildlife corridors throughout the UK. A lot of our reforestation can be incorporated within these wildlife corridors.

<https://www.rewildingbritain.org.uk/blog/time-for-an-ambitious-action-plan-on-30-by-30>



Diverse organic crop production

This could mean the reintroduction of small scale multicrop farming within the curtilage of the current large land ownership system, with the aid of modern technologies in tilling, planting, weed control if necessary, harvesting, and processing. The transition could be aided with the current 2.4 billion allocated by central government to the ELMS scheme and from taxes levied on land sales from farming use to housing and commercial use.

- Organic horticulture
- Alley cropping
- Agroforestry

Links to current examples;

Tolhurst Organics - <https://www.tolhurstorganic.co.uk/>

Tree of Life Veganics - <https://m.facebook.com/profile.php?id=100064710035095>

Energy

Micro hydro

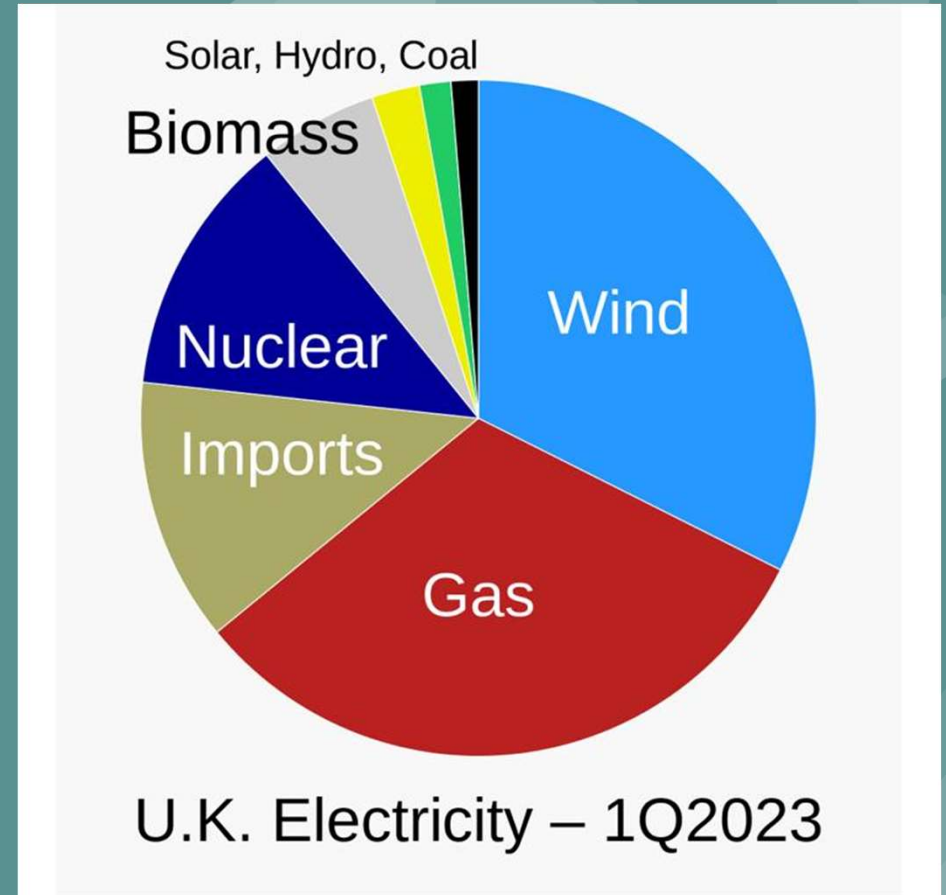
With the transition of funding from sheep and cattle grazing and offering grants to upland farmers we could utilise over 60, 000 micro hydro sites (highlighted by the environment agency) within the UK. These alone could produce 28% of our current energy needs, without damaging water courses, as they would be inflow systems.

Grass mills

With a transition of funding from sheep and cattle grazing areas that currently have other uses (such as Glastonbury Festival), they could use their grazing crops for biofuels.

Onshore wind

Offer funding for appropriate onshore wind energy production.



Source: DEFRA

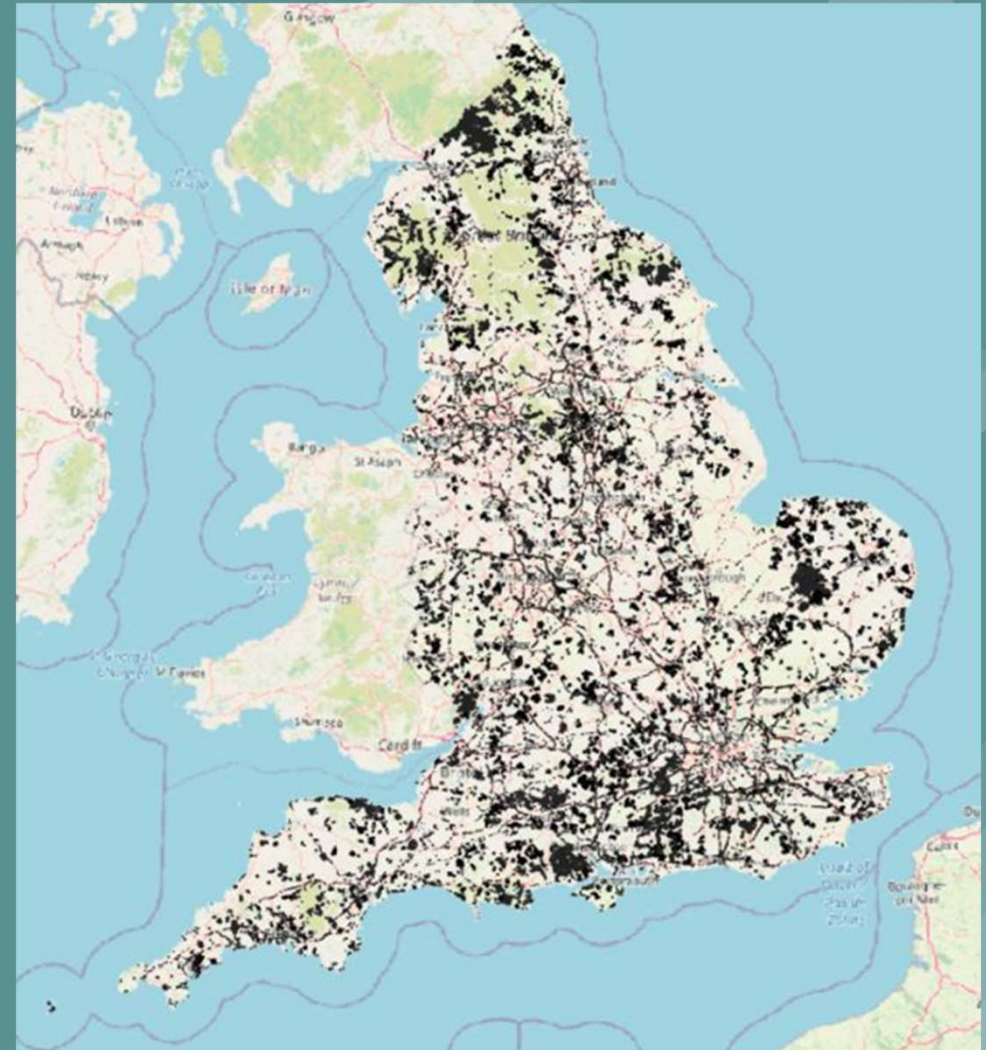
Forestry

We currently only supply 10% of wood products needed for construction and industry within the UK. 90% is imported. With better levies on imports and transition of grazing lands to forests, we can address this disparity and maybe move towards 95% of timber supply domestically.

Benefits of reforestation:

- Increase in biodiversity
- Reduction in flooding
- Highest level of CO2 retention
- Increase in building materials
- Retention of water
- Compost

Example of local forestry processing use;
Torry Hill <http://www.torryhill.co.uk/>



Summing up - what can we do?

- Educate consumers on the need for organic local foods and its costs
- Labour. How can we encourage people into farming and to sustain their interests?
- Education. How do we get farming on the curriculum?
- Farming and wildlife. How do we get people to see that they are integral to each other?