



LettUs
GROW

www.lettusgrow.com

Using aeroponics and IoT to improve local food security & reduce food waste

Who is LettUs Grow?

- ✔ LettUs Grow is an indoor farming technology company. We were founded in 2015 in Bristol.
- ✔ We build aeroponic equipment for greenhouse & vertical farms.
- ✔ We design farm management & control software.
- ✔ Our growers, plant scientists & engineers work collaboratively to ensure our technology can better the lives of farmers & improve our food system.
- ✔ We believe careful innovation in farming can make the world a better place.

Charlie Guy - CEO

Ben Crowther -
CTO



Jack Farmer -
CSO

Our core values

Certified



Corporation[®]

PENDING

We deliver impact

We are caring

We are ambitious

We are open & honest

We are responsible

“

Our mission is to reduce the waste and carbon footprint of fresh produce by empowering anyone to grow delicious food near its point of consumption.

”

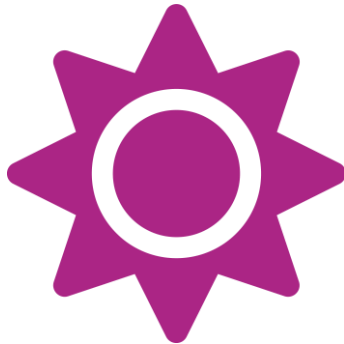


**Three quarters
of fruit & veg
eaten in UK is
imported.**

Climate impacts on UK farming



2019/2020 saw some of the wettest winter conditions ever encountered.



2020 was one of the driest and sunniest spring months on record.

The implications where felt on field work, rotations and yields

- Winter wheat area smallest since the 1970s, total production down by 38%.
- Provisional av. wheat yield was 20% lower than 2019
- Oilseed rape planted area fell by 27%, harvest down 38%
- Oilseed rape yields fell by 16%
- Winter barley production down by 43%
- Oats increased in area by 16%, but yield dropped by 19%

£45m

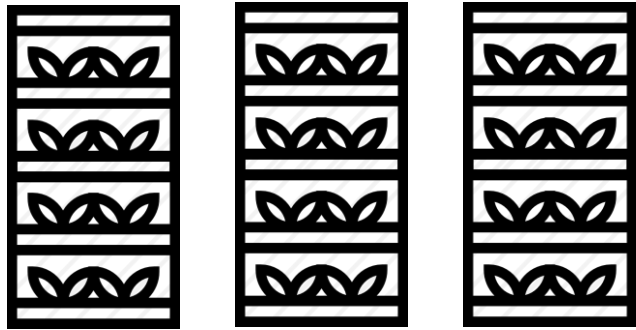
per week added to consumers'
bill by 2018 heat wave.

30x

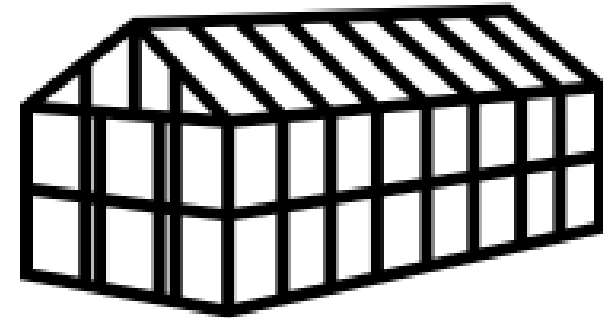
more likely

Indoor farming is one way to address these

issues.



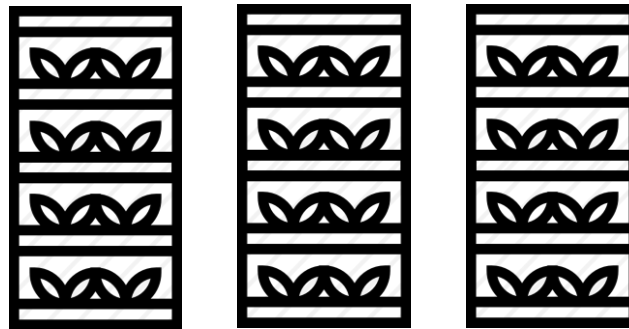
Vertical farms



Greenhouse farms

What is a vertical farm?

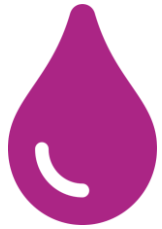
Vertical farming is the practice of growing crops in vertically stacked layers. It often incorporates controlled-environment agriculture, which aims to optimize plant growth, and soilless farming techniques such as hydroponics, aquaponics and aeroponics.



All of these are ways of optimally converting energy into plant matter, in the same way that the sun, rain and soil provide these functions.



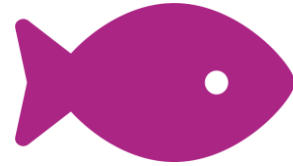
Benefits of vertical farming



95% less water than field farming



No pesticides, herbicides or harmful chemicals



No fertiliser runoff into waterways



Growing closer to the consumer results in less food waste



Takes pressure off depleted soils and farmlands



Growing local reduces the carbon footprint of produce

Indoor farming can help protect our shared planet.

What is aeroponics?

- ✔ A method of soil-less growing
- ✔ Irrigate using nutrient-dense mist instead of submerging roots in water
- ✔ This method allows roots to have greater access to oxygen. Optimum conditions for roots results in healthier plants – this means higher growth rates & far greater yields.
- ✔ Grow leafy greens, salad crops, microgreens, but also some fruiting crops, such as strawberries & tree whips for propagation





O S T A R A

Ostara® is the LettUs Grow farm management platform. It enables you to remotely manage and monitor the growing environment of your indoor farm via your mobile device or tablet. Ostara bridges the gap between your farm management and your control software.

Combining these into one programme allows you to fine-tune the operations of your farm. Ostara gives you the tools you need to make the right choices for your farm, fast. You'll be able to monitor the farm as a whole and also zoom in on the details - so no leaf goes unchecked.

Ostara controls & automates LIFE inside your farm:



Lighting

Sets up day-night cycles for your LEDs.



Irrigation

Controls the misting frequency of specific crops.



Fertigation

Controls nutrients, EC and pH of your farm.



Environment

Controls temperature, humidity and air flow speeds.



OSTARA

Ostara makes it simple for you to manage and
operate your farm

- ✔ **Reduce labour costs** - Spend less time performing routine tasks and reduce the need for extra hands around the farm with Ostara's automated control system.
- ✔ **Track your tasks** - Easily manage your team and schedule your tasks. Ostara can forecast key points in a crop's lifecycle, such as germination and harvest times, based on its sowing date and crop recipe.
- ✔ **Minimise downtime** - Accidentally left a valve closed while cleaning? Don't worry, Ostara helps you catch problems early. If something unexpected happens or anything goes wrong, Ostara will let you know.
- ✔ **Crop recipes** - Ostara knows which bed contains which crops and then adjusts LIFE cycles. These recipes are continually developed in-house by our team of expert plant scientists.
- ✔ **Learn from the experts** - New to growing? That's okay, you can give our team of specialists permission to view your system remotely, meaning they can help diagnose problems and provide solutions.
- ✔ **Reduce operation costs** - You can choose to run lights in the evening when energy is cheaper by adjusting Ostara's day-night cycles. Recapture and reuse also drastically reduces the amount of water used in the system.

DROP & GROW

- 🌱 Aeroponic vertical farm inside a 40ft shipping container
- 🌱 DROP & GROW: 24 contains 24m² vertical growing space & preparation room
- 🌱 DROP & GROW: 48 is 48m² vertical growing space & is great for scaling opportunities.



DESIGN & BUILD

- 🌱 Bespoke facilities above 96m²
- 🌱 Can utilise existing barn or warehouse space



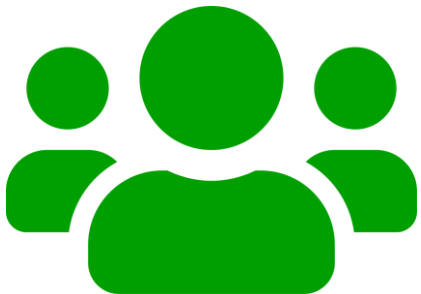
Benefits of local growing



Add resilience & strengthen community supply from issues in the global chain.



A tool for connecting with and educating people about food.



Community hubs - a place for people to come and connect with each other.



Stimulate the local economy and support their own communities.

The benefits of local growing:

- Resilience
- Connection
- Learning
- Local economy

Collaborators & partners

Research



Commercialisation



Technical & delivery



A more connected food future

“ LettUs Grow is looking to enable relationships between growers and their communities, and support the next generation of farmers.

We want to build partnerships with people and companies who share our vision for a more fair and connected food future. ”



Any questions?

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