



Dyson Farming's glasshouse  
Source: Dyson Farming

## Dyson Farming

# CASE STUDY

Dyson Farming's circular farming system includes a new 15-acre glasshouse in Carrington, Lincolnshire. It supports high-tech, sustainable farming in the UK, avoiding unnecessary food miles that come from imported strawberries.

Powered with renewable electricity and surplus heat from Dyson Farming's adjacent anaerobic digester, the giant glasshouse is 424m long with 832 rows of strawberries and 700,000 strawberry plants which will produce 750 tonnes of strawberries each year for British consumers. The success of phase 1 has led to the construction of phase 2, which will double production from 2024.

Dyson Farming's highly efficient circular farming approach has enabled the Dyson Farming business to become carbon neutral. For Dyson Farming this is the next step in producing quality British produce, at a commercial scale, by harnessing sustainable farming practices and technological innovation.

The glasshouse is lengthening the British strawberry season by growing quality strawberries in early spring and late autumn, a time of year when British strawberries are traditionally in very short supply. This will contribute to the UK becoming more self-sufficient in food, reducing the air miles associated with imported fruit.

A team of growers headed by Anel Angelov, has been brought together to oversee the operation.

Angel explains: "Growing quality strawberries at this scale, in a sustainable way, out of season, not only requires technological innovation but the expertise and experience of people who care passionately about producing quality strawberries. I am proud to be part of this team."

The anaerobic digesters produce gas which drives turbines producing enough electricity to power the equivalent of 10,000 homes. This green energy also powers the farming operation. There are two by-products from this process:

- Digestate, which is applied to nearby fields as an organic fertiliser to improve soils and crop yields. It is expected that strawberries will be grown in the digestate in future as well.
- Heat is captured and used to warm the glasshouse and encourage the strawberries to grow at a time of year where temperatures are too cold.

A climate control computer system adjusts the temperature in the glasshouse to maintain the optimal growing conditions for the finest quality strawberries. Rainwater is harvested from the glasshouse roof, stored in a lagoon and used to irrigate the plants. The hanging gutters, which hold the plants, 'swing' from side to side to allow 15% extra crop to be grown in the same area.

The site also has a packhouse and cold store facilities allowing Dyson Farming to pick, chill, pack and deliver fresh fruit to the end customer as quickly as possible.

The glasshouse will incorporate new technologies as they evolve such as advanced robotic picking and advanced LED lighting that could increase glasshouse efficiency and lengthen the season further.

