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Healthier Cities.

HEALTHY CITY DESIGN INTERNATIONAL

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Examining the effectiveness and economic impact of a Controlled Environment Agriculture (CEA) Facility in London:

a one-year prospective study

Jamie Burrows | Founder/CEO, Vertical Future

www.verticalfuture.co.uk
www.minicrops.com

VERTICAL FUTURE

HEALTH & FOOD IN CITIES

By 2030, **over 70%** of the world's **population** will live in **cities,** placing a **greater strain on our food systems globally**.

Our current food system is flooded with **chemicals**, **mass-produced food**, **pollution** through excessive food miles, and food with **increasingly fewer nutrients per gram**.

Health factors linked to poor food and diet can include **obesity**, **decreased life expectancy**, **poor mental health**, **wellbeing**, and **other health & societal factors**.

Understanding of our food system is lacking and there is **limited evidence** to support innovative approaches to tackling the issues at hand.

OTHER FACTORS TO CONSIDER

LAND AVAILABILITY

FOOD SECURITY

CLIMATE CHANGE

CONTROLLED ENVIRONMENT AGRICULTURE

THE VERTICAL FUTURE FACILITY

minicrops™
Produce closer to home

"We use **Controlled Environment Agriculture Technology** to transform urban spaces (ideally in areas of multiple deprivation) into high-tech, semi-automated vertical farms, bringing high-yield, sustainably-produced food closer to end consumers. Under the brand name "MiniCrops" we offer products that are **better**, **fresher**, more **local**, and more **ethical** than any competition"

THE KEY NUMBERS

9 new jobs for Deptford

150 sq. M

of Production

2 tonnes

per month

3 hours

from harvest to delivery

2.5 food miles

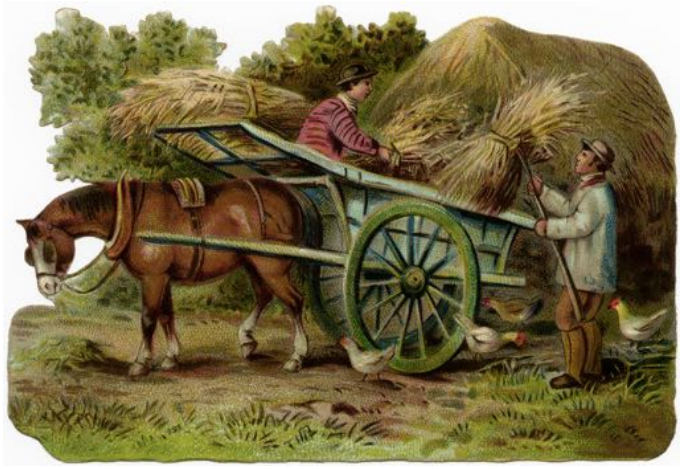
per customer

ZERO

pesticides, herbicides, and plastic


Delivered
by
LUCAS
(via skateboard)

AN IMMATURE MARKET



DATA
FROM EARLY ADOPTER TO GROWTH

Data is limited, if not non-existent in many areas relevant to CEA – especially in cities. This includes nutritional and yield data, critical in determining efficacy & designing future models.

LONGEVITY
ONLY 10-20 YEARS

As CEA or vertical farming is a fairly new sector with new technologies introduced every month, we have little evidence to look back on.

CURRENT COMPARATORS
LITTLE OUT THERE

A small ecosystem means that data and insights are rarely shared. This leaves the market very open but means that studies into important areas like nutrition can be challenging for smaller businesses.

STUDY DESIGN

TYPE | A one-year prospective study, starting in February 2019

COHORTS | Obtained from home consumer base (B2C) and restaurants (B2B) for effectiveness question; and comparators (competitors) for the economic impact analysis question.

EFFECTIVENESS | Analysis of customer data, including location, earnings, employment status, diet, weight, health status, and other relevant data points. Also, analysis of samples from retail and non-CEA facilities to compare nutrient density, combined with actual and publicly-available data on production costs and spend.

ECONOMIC IMPACT: Identification of two comparators. Analysis of land registry and similar data looking at ground rents, similar businesses, employment, and similar data types. Direct comparison based on a set of weighted criteria.

KEY RESEARCH QUESTIONS

OVERALL

1. How effective is CEA in inner city areas compared with alternatives?
2. What level of economic impact does CEA have in the surrounding area?

NUTRITION

How do the nutritional characteristics of the products farmed at the Facility differ from those farmed in traditional farms and closest alternatives available in supermarkets?

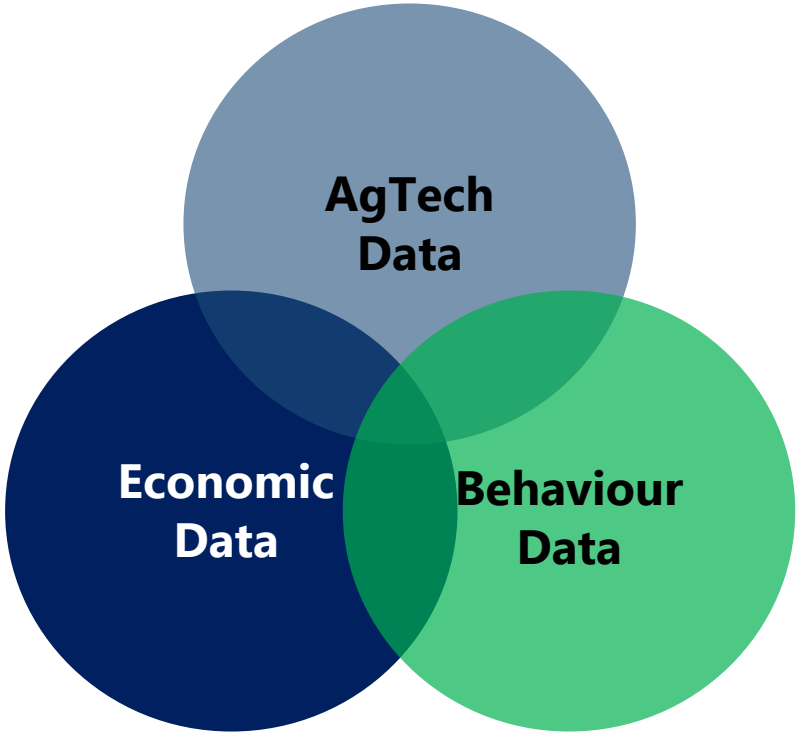
FINANCIAL

How do the products farmed at the facility differ from closest alternatives – in terms of price and cost of production?

ECONOMIC IMPACT

What is the economic impact of the facility in terms of: Job Creation, Education & Training, Community Outreach, and Externalities

TARGET OUTCOMES – GROUPS



USEFULNESS OF RESEARCH OUTCOMES

Future development of the CEA market in the UK

Influencing **customer buying decisions** and overall **understanding of urban CEA** and how it compares to traditional farming and supply chain methods

Influencing **governmental policy** decisions and **funding streams**

Supporting families in need in areas of multiple deprivation across the capital

Improving the amount of **data** in this field, which is currently lacking

THANK YOU

for the opportunity
to speak today!

VERTICAL FUTURE