

BRITISH
GROWERS-
CONFERENCE
ASSOCIATION
TOMATO

Robotics – future of work in horticulture

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Sponsored by:



Future of Work in Horticulture

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The University of Lincoln



UNIVERSITY OF
LINCOLN

Lincoln Institute of Agri-Food Technology



£56M CRD since 2016
65 PhD Cohort over 8yrs
50 MSc Agrifood-tech
30 MSc Robotics
>200 BASIS CPD's
Eagle Farm
COP26
2 CERES start-ups
Saga Robotics

Our image
has to change



The world
is changing...



Technology,
robotics
and automation
will
change the
nature of work



Technology
alone
is not the
panacea



Department
for Environment
Food & Rural Affairs

Independent report

Automation in horticulture review

Published 27 July 2022

Recommendation 1: Defra should consider pursuing a long-term Seasonal Workers Scheme for edible and ornamental horticulture starting in 2022

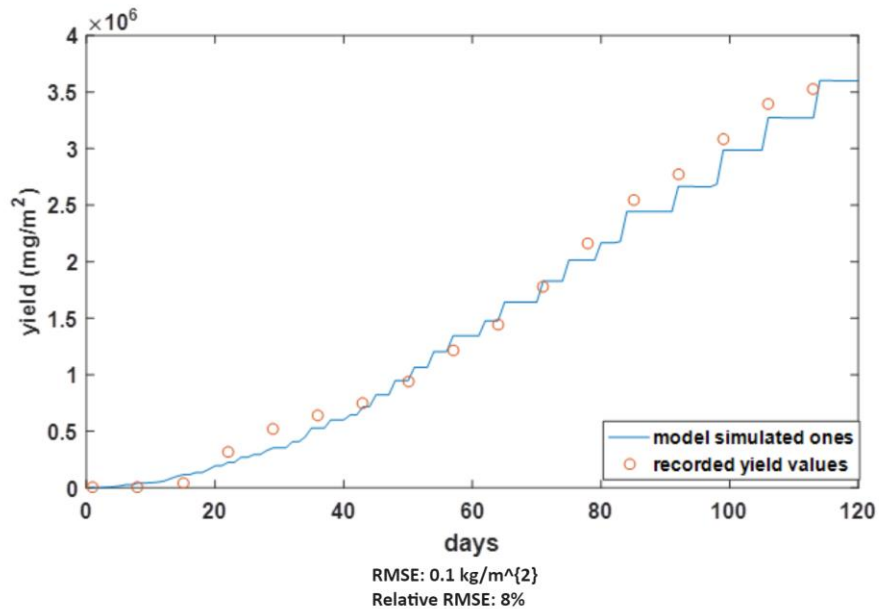
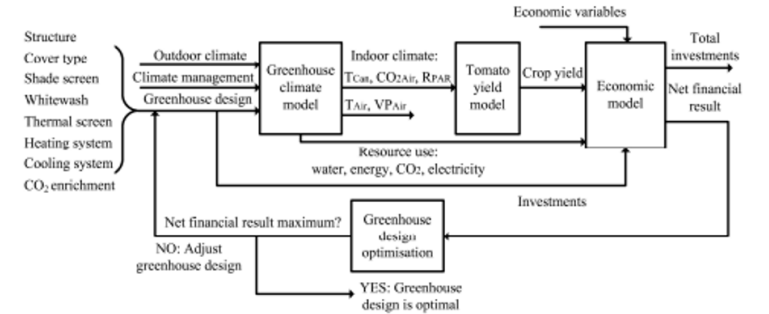
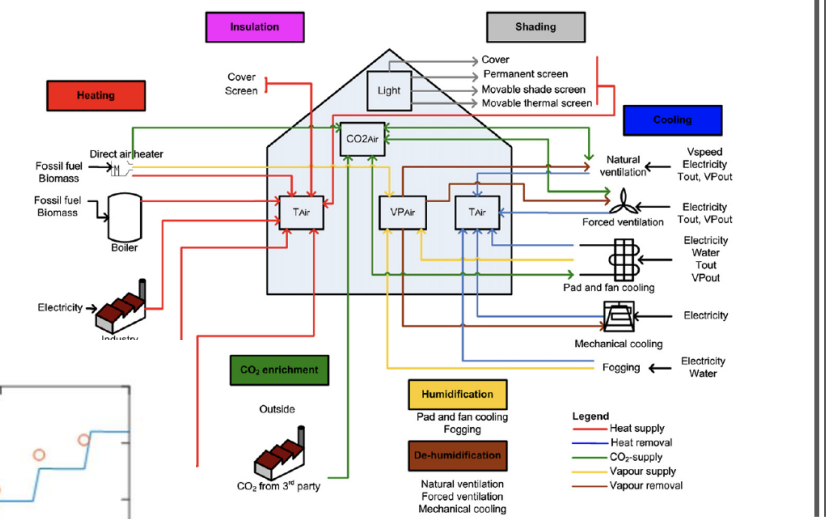
Recommendation 2: Defra should consider convening a consortium that brings together UK government departments, horticulture industry and technology companies to drive significant adoption of available and proven technologies by growers

Recommendation 3: Defra should consider launching a robotic crop harvester mission to fast-track innovative research and development of systems currently in the 'valley of death'

Productivity and Data

UoL work to optimise tomato yield and energy costs. We need data please!

Determine control parameters based on both greenhouse model and tomato yield model



$$\max_u \Delta Growth - \gamma \cdot \Delta Energy$$

$$0 \leq u \leq 1$$