Evaluation of the effectiveness of Low Energy Cooling Chamber (LECC), cold room, and misting chamber on storage life and quality of the vegetables in Tanzania

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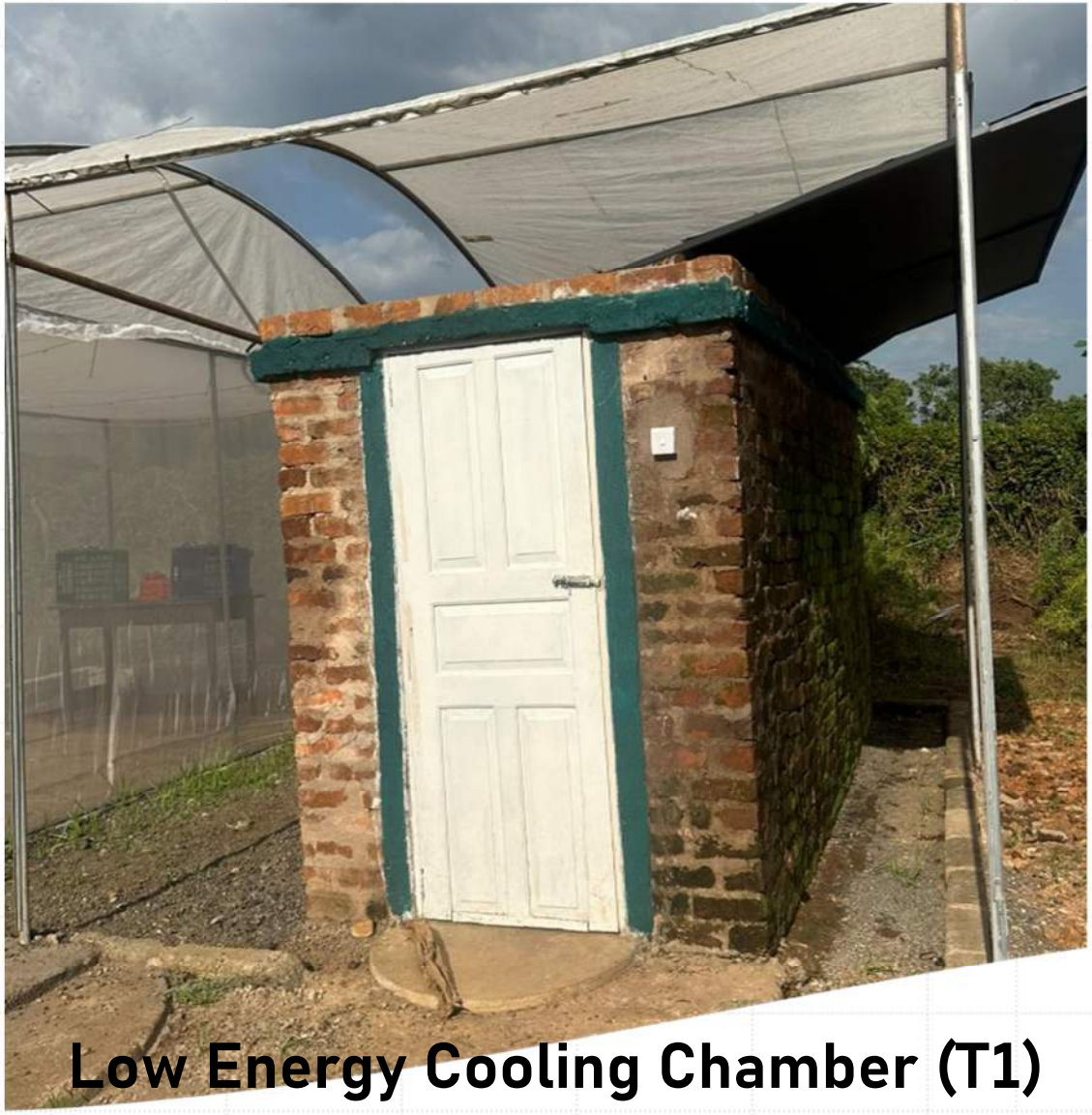
Background

- Climate change
- Population growth
- Post-harvest losses

Beltran-Peña et al., (2020)

Zero Energy Cooling Chamber



Low Energy Cooling Chamber (T1)

Cooling room (T2)

Misting chamber (T3)

Methods

Assessed vegetables

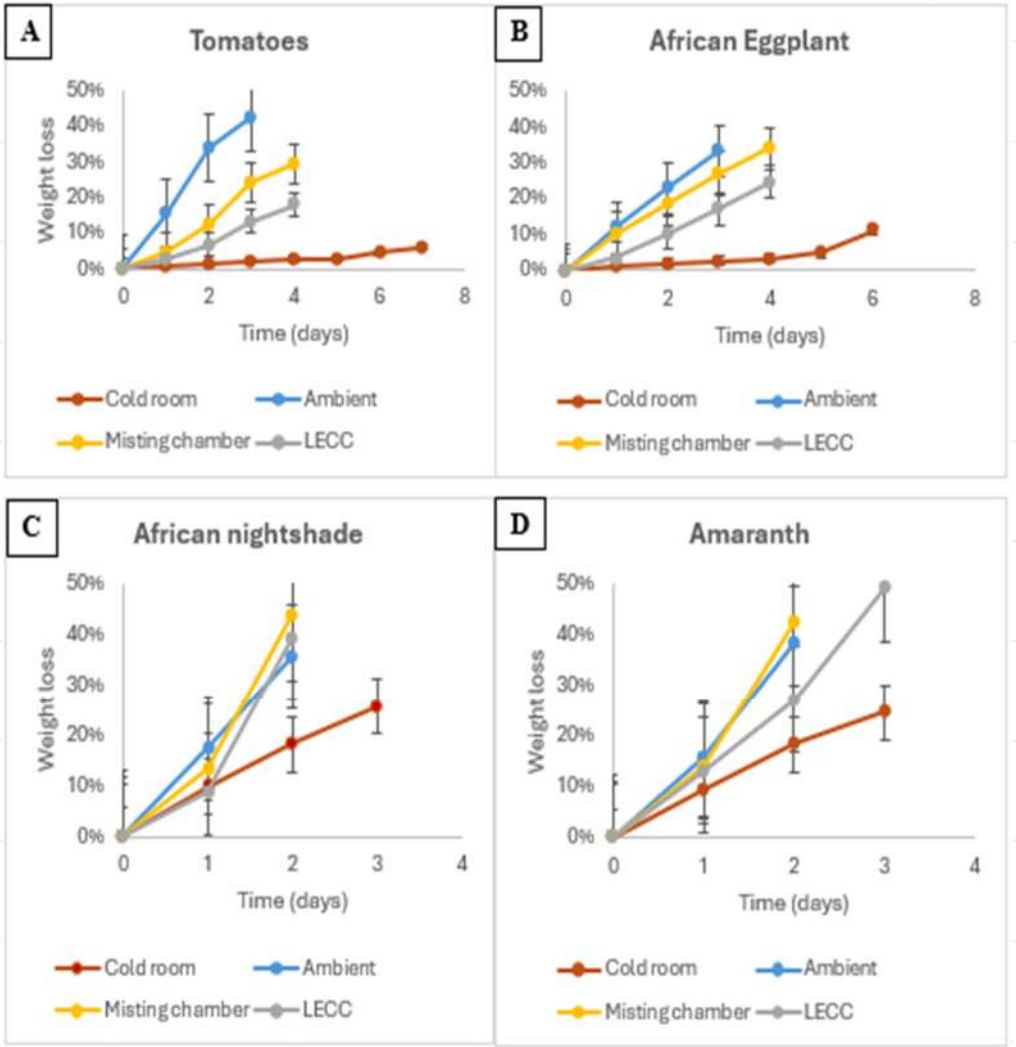
- *A – Tomatoes*
- *B – African Eggplant*
- *C – African Nightshade*
- *D -Amaranth*

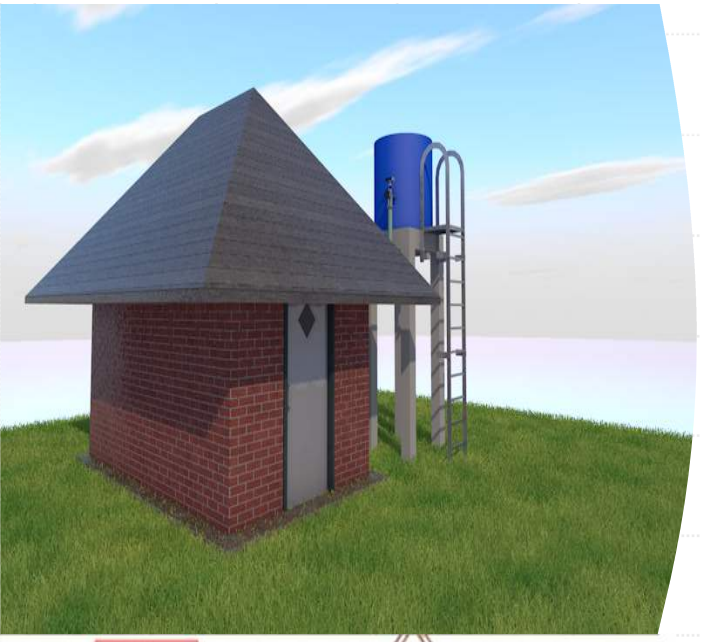
Findings

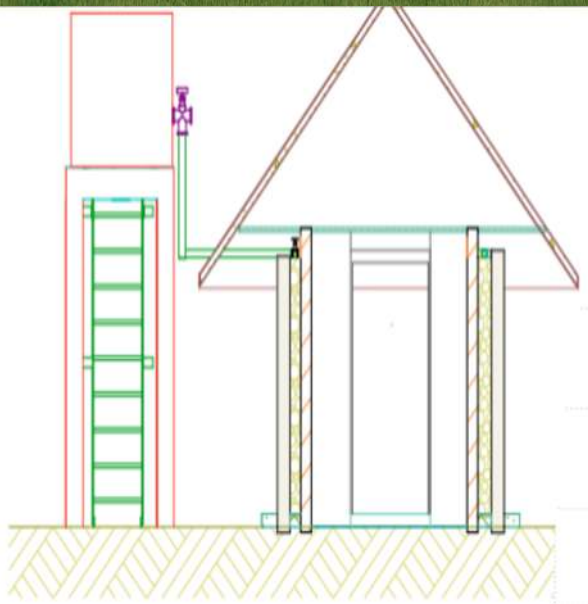
The cold room was the most effective, extending the shelf life of tomatoes to two weeks, compared to just three days in ambient conditions.

LECC and the misting chamber extended tomato shelf life to seven and five days, respectively.

Leafy vegetables, however, exhibited significant weight loss and colour change in all storage methods by the third or fourth day







Recommendations

- Optimize LECC Design
- Promote cold room
- Integrate Renewable Energy
- Establish Standards and Certification

- Future studies should:
  - Assess nutritional quality
  - Explore Hybrid Storage Methods
  - Investigate socio-economic feasibility

Acknowledgement

- God
- Family

and

THE UNIVERSITY OF SYDNEY

ahr applied horticultural research

World Vegetable Center

Thanks for your attention

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