



entomics

Transforming food waste into resources

October 2016

15 million tonnes of food are wasted in the UK each year

a Carbon emissions

Equivalent to 10 million cars

b High disposal costs

Landfill tax £85 per tonne

c Lost value

£13 billion of lost value

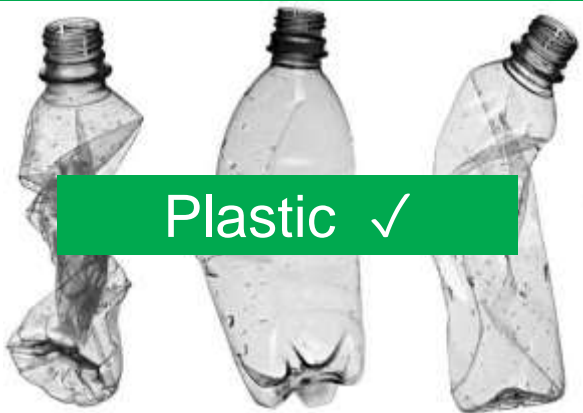


Aluminium ✓



Paper ✓

Food waste is a difficult problem to deal with



Plastic ✓



Food
???

And current solutions have significant limitations...

Compost



- ✗ Long conversion cycles
- ✗ Low 'value add'
- ✗ Urban-rural challenge

Anaerobic Digestion



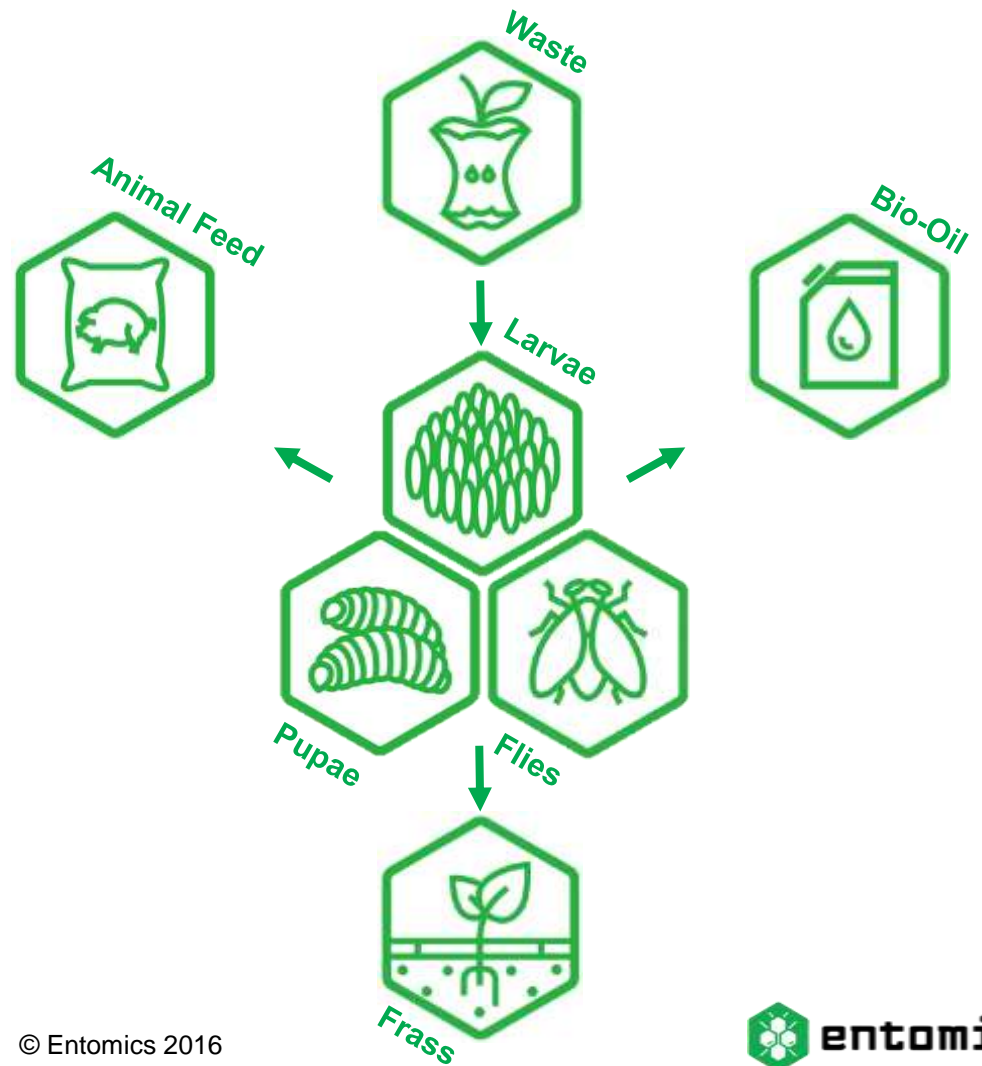
- ✗ Capital intensive
- ✗ Subsidy-reliant
- ✗ Methane has low intrinsic value



Our solution: the Black Soldier Fly

- a** Efficient conversion
 - Reduces food waste volume by 95%
- b** Rapid growing cycle
 - 14 day larval growth cycle
- c** Safe and sustainable
 - Naturally occurring throughout UK

A model for transforming food waste into three high value resources





A significant UK
market opportunity



£2b



£3b



£0.6b

= £5.5 billion



Efficient conversion of waste to resources



25%



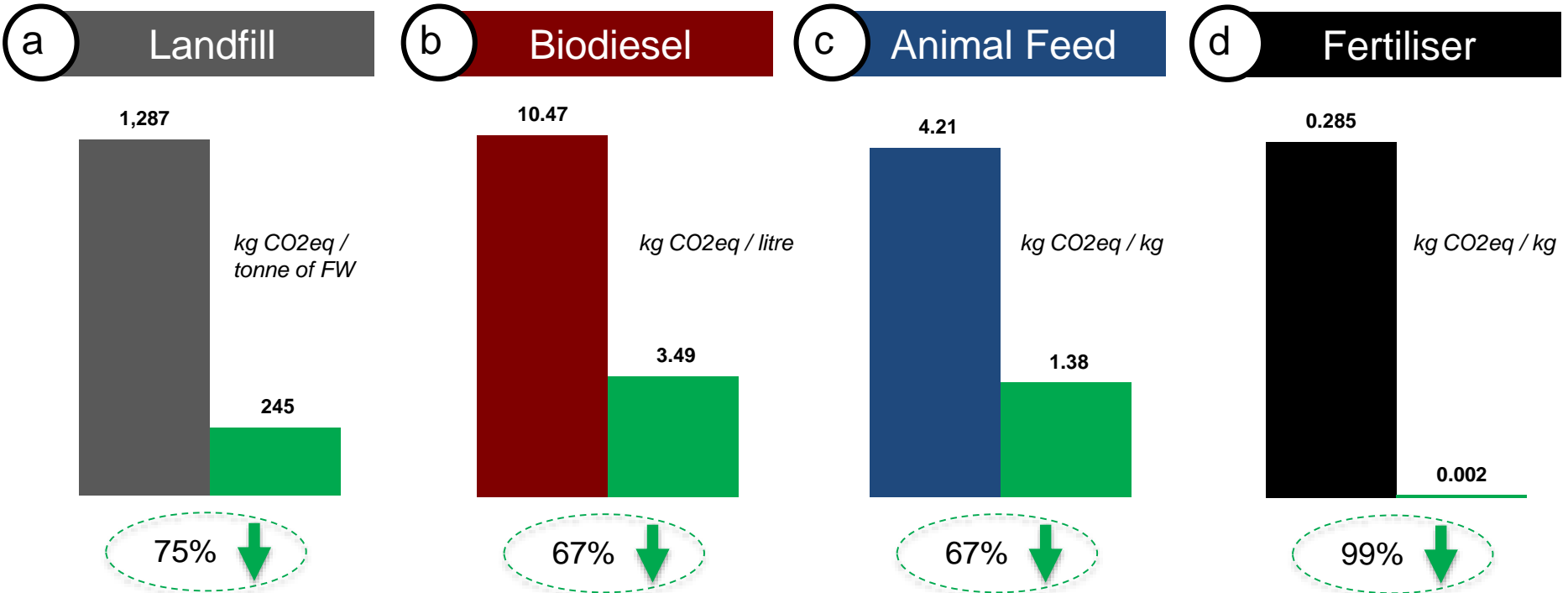
5%



15%

~ 50% conversion to 'products'

Our process avoids 2 tonnes of carbon emissions per 1 tonne of food waste processed



CO₂e = carbon equivalent

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We also mitigate harmful Indirect Landuse Change (ILUC) effects on the environment

a Biodiesel

- ✓ Arable land available for food production
- ✓ Less energy-intensive agricultural inputs
- ✓ Easing pressure on deforestation

b Animal Feed

- ✓ Less need for energy-intensive soybean (7% of greenhouse gases from growing animal feed!)
- ✓ High in micronutrients

c Fertiliser

- ✓ Enhances crop yields
- ✓ No harmful synthetic chemicals
- ✓ Organically-certified

Our team: a passion for science and sustainability

Joe Halstead

Biology



Matt McLaren

Business

Miha Pipan

Biochemistry



Fotis Fotiadis

Engineering

Partnerships & Recognition

Sainsbury's

Accelerate
Cambridge



UNIVERSITY OF
CAMBRIDGE
Judge Business School



Shell
liveWIRE



Winner



Finalist

SUSTAINABLE
LIVING
UNILEVER YOUNG ENTREPRENEURS AWARDS



Finalist



Awarded

Thank you



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