

# ***Food waste in primary production***

A proposal for a collaborative  
data sharing approach

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# Why is primary production important



- Rough estimates suggest preventable food waste in primary production is comparable to manufacturing and retail (by weight)
- High resource use (carbon and water relevant to C2025, but also fertilisers, pesticides and soil)
- Opportunity to:
  - Reduce costs to business and consumers
  - Improve UK food security
  - Support delivery of sustainable intensification

# Don't we have the evidence already?



- There have been a number of attempts at the national and international level
- For example [EU FUSIONS](#), [UN FAO](#), [Nordic research](#) to name a few
- The research falls into two camps:
  - Wider, national estimates give good indications but have to use unreliable assumptions
  - Or examples of reliable evidence are limited to only a few sectors and/or limited geographic regions
- Why is this?

# The data challenge – such a big sector

For example, how many farms are there in the UK?

- ✓ 200,000 (assume about half are not commercial?)
  - c.100,000

How many sectors?

- ✓ Cereals
  - Wheat, barley, oats, rye, maize
- ✓ Oilseeds
  - Oilseed rape, linseed
- ✓ Potatoes
  - Salad, new, maincrop, baking potatoes
- ✓ Livestock
  - Cattle, sheep, pigs, chicken, other poultry
- ✓ Dairy
- ✓ Veg
  - Cabbages, carrots, cauliflowers, lettuces, mushrooms, onions, tomatoes...
- ✓ Fruit
  - Dessert apples, culinary apples, pears, raspberries, strawberries...

A large teal circle is positioned on the right side of the slide. Inside the circle, the text '+30 sectors (easily!)' is written in a bold, white, sans-serif font. The plus sign and the word 'sectors' are on the top line, and '(easily!)' is on the bottom line.

**+30  
sectors  
(easily!)**

# Collaborative Data Sharing as a solution

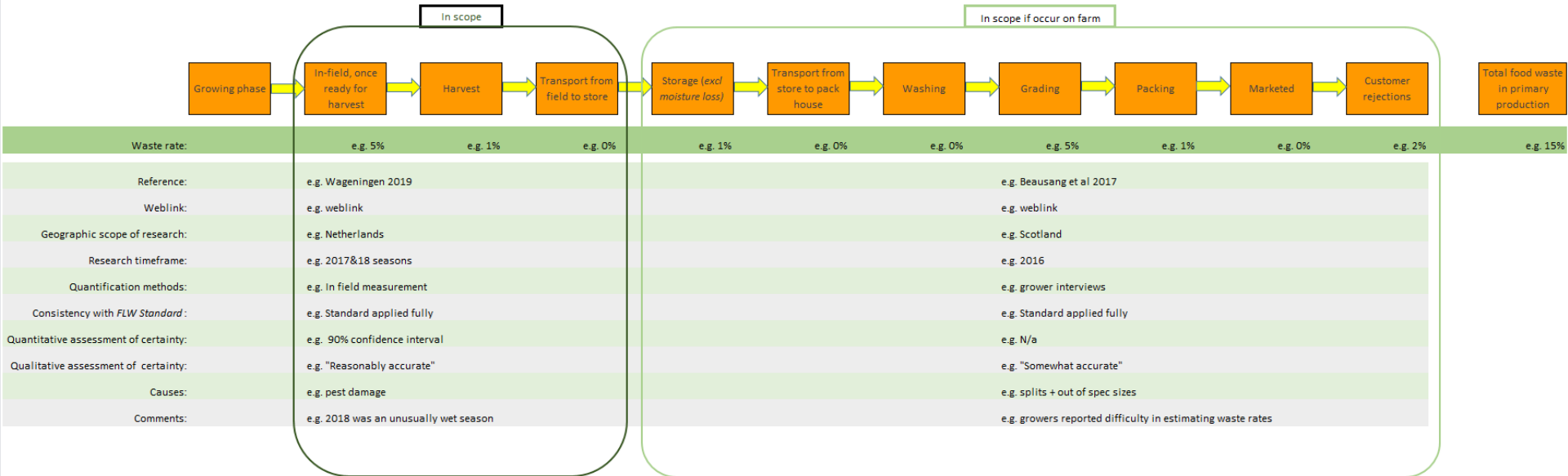


- No one organisation or government has had resource to tackle this
- So, there is common incentive to pool previously distributed resources around a common approach by coordinating research teams
  - WRAP has already spoken to researchers across England, Scotland, Nordic States, Australia and the US who are all interested
- Build a better, shared evidence base to create a more complete view
- Avoid duplication of effort will allow industry, researchers and funders to establish and act upon evidence more quickly and at lower cost
- This can then be used to prioritise interventions with the biggest impact, allowing industry to target performance improvements
- Based on best available evidence, which requires transparency over limitations, but accuracy will improve as research is delivered, data gaps are filled and assumptions refined

# An *example* data sharing platform

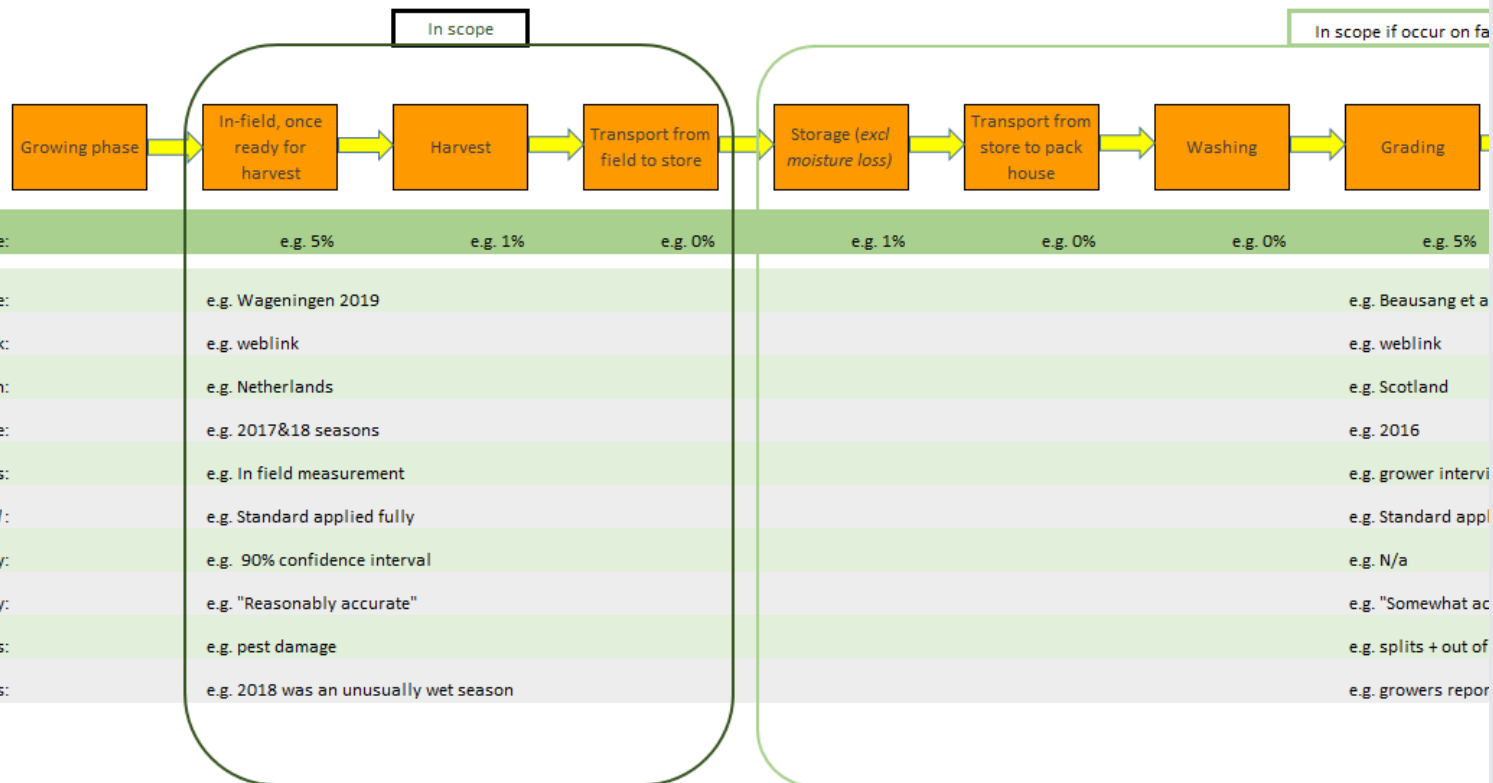


## Variation 1 (EXAMPLE European production)



## Variation 2 (EXAMPLE US production)

## Variation 1 (EXAMPLE European production)



## Variation 2 (EXAMPLE US production)

# Results summary screen



## Food waste in primary production

### Results summary for XYZ business / ABC country

EXAMPLE!!!

|              | <i>Marketed production/Sales (t)</i> | <i>Waste Rate %</i> | <i>Food waste (t)</i> |
|--------------|--------------------------------------|---------------------|-----------------------|
| Barley       | 6,655,000                            | 3.0%                | 199,650               |
| Carrots      | 731,000                              | 14.0%               | 102,340               |
| Cabbage      | 231,000                              | 15.0%               | 34,650                |
| Hen eggs     | 654,696                              | 4.5%                | 29,461                |
| Dairy        | 15,015,000                           | 4.0%                | 600,600               |
| Potatoes     | 5,588,000                            | 12.7%               | 709,676               |
| Strawberries | 115,500                              | 9.0%                | 10,395                |
| Wheat        | 14,383,000                           | 3.0%                | 431,490               |
|              |                                      | TOTAL               | 2,118,262             |



# Next steps



- There is already research underway, but it is isolated
- Support is required to coordinate research, prioritise data gaps and develop the data sharing platform
- Funding research to address data gaps would accelerate progress
  - The collaborative data sharing platform adds value to research outputs
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