

# Food Solutions Challenge



# Agenda

Length	Section
5 min	Welcome & warm up
10 min	Impacts of food loss
15 min	Causes of food loss
5 min	Real-life application
45 min	Breakout Session!
5 min	Taking it Further

# Warm Up: Where is food lost?



## Food Loss

Food Loss refers to all edible food that is lost before it reaches the consumer.

## Food Waste

Food Waste refers to all edible food that is lost after it reaches the consumer.

# Impacts of Food Loss

# Food Loss & Food Waste



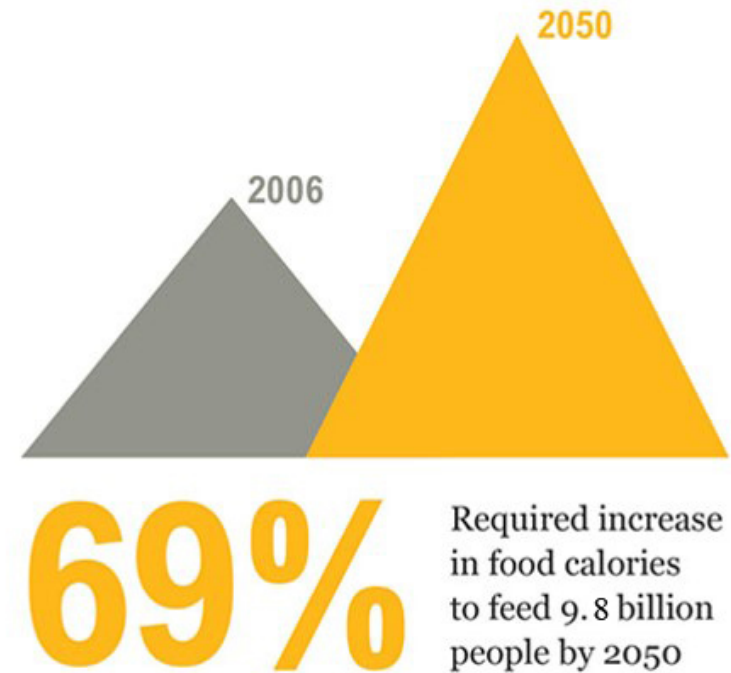
Video Source: [Food and Agriculture Organization of the United Nations](#)

# United Nations Sustainable Development Goals



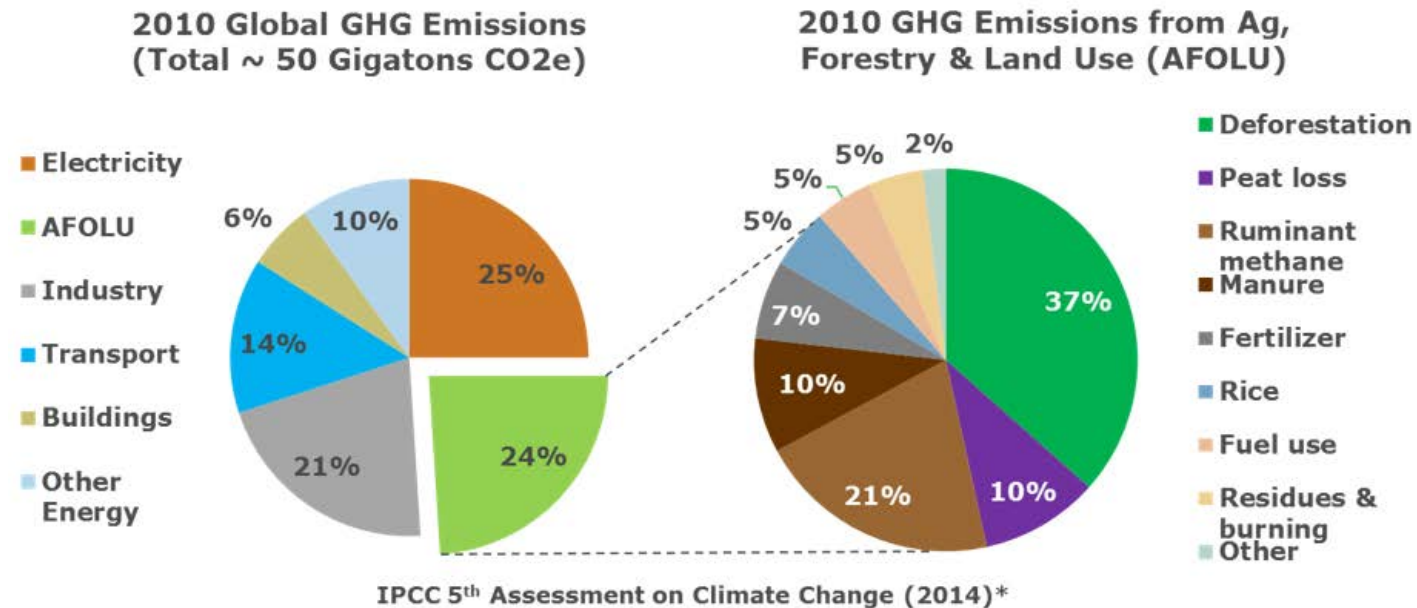
# Feeding a Growing Population

- Projections estimate that by 2050, the global population will be 9.8 billion.



# How Food Production Impacts Climate Change

## GHG Emissions from Ag, Forestry, Land Use



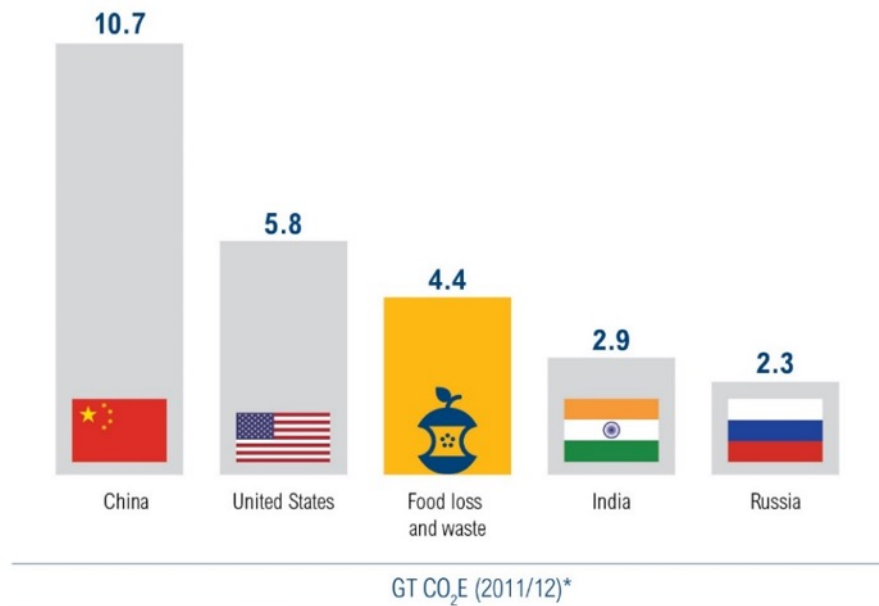
- Ag & Forestry is source of ~24% of global emissions
- 50-80% of deforestation emissions are related to Ag expansion

\* Based on: [IPCC Climate Change Report \(2014\): Mitigation of Climate Change](#).



# Food loss and waste GHG emissions

If Food Loss and Waste Were its own Country,  
it Would Be the Third-Largest Greenhouse Gas Emitter



\* Figures reflect all six anthropogenic greenhouse gas emissions, including those from land use, land-use change, and forestry (LULUCF). Country data is for 2012 while the food loss and waste data is for 2011 (the most recent data available). To avoid double counting, the food loss and waste emissions figure should not be added to the country figures.

Source: CAIT, 2015; FAO, 2015. *Food wastage footprint & climate change*. Rome: FAO.



# Food Loss and Waste Land Use

- It takes an area the size of China, Mongolia, and Kazakhstan to grow food that's ultimately lost or wasted.



# Water

- Food loss and waste account for 45 trillion gallons of water being wasted.



# Economic

- It is estimated that food waste and loss costs American families USD \$1,500 per year.<sup>1</sup> For farmers, the picture is even worse. It is estimated that food loss and waste costs food producers worldwide USD \$940 billion annually.<sup>2</sup>



Sources: <sup>1</sup>Buzby, J.C., H.F. Wells, and J. Hyman. 2014. The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States. Washington, DC: USDA Economic Research Service.

<sup>2</sup> FAO. 2015. Food Wastage Footprint & Climate Change. Rome: FAO

# Causes of Food Loss



# Food loss at the farm

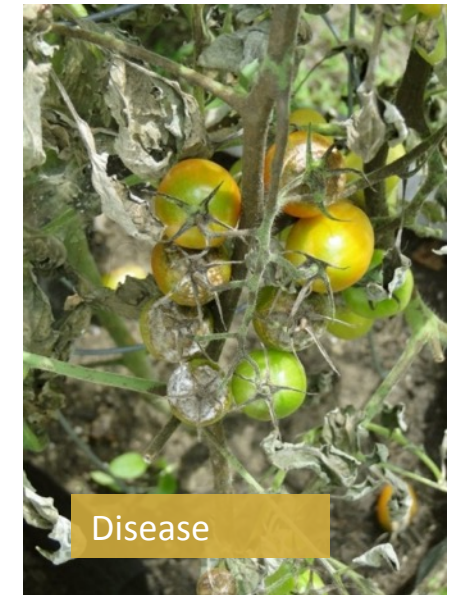
The Farm

Post-harvest

Processing

Distribution

- Definition: During or immediately after harvesting on the farm



# Farm Forward with Big Data



Video Source : [AgWeb](#)

# Food Loss During Post-harvest

The Farm

Post-harvest

Processing

Distribution

- Definition: After food leaves the field for handing, storage, and transport





# Empowering Smallholder Farmers to Reduce Post-harvest Loss



Video Source : [World Food Programme](#)

# Food Loss During Processing



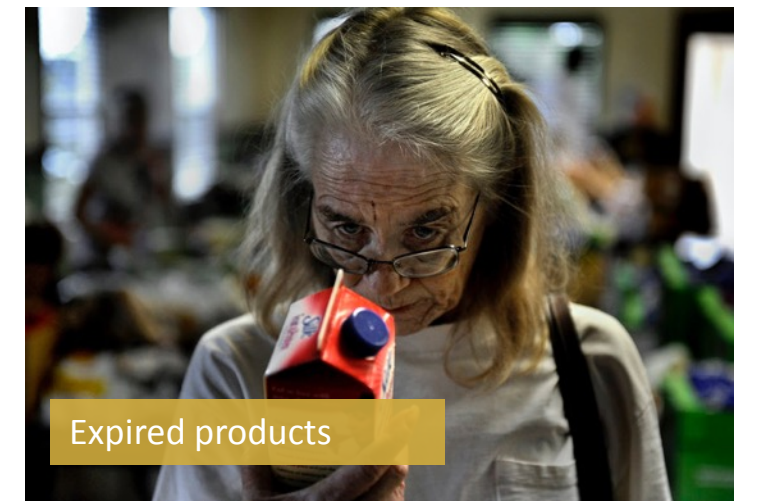
- Definition: During industrial or domestic processing and/or packaging



# Food Loss During Distribution



- Definition: During distribution to marketing, including losses at wholesale and retail markets



# Food waste rebel wants you to eat ugly food.

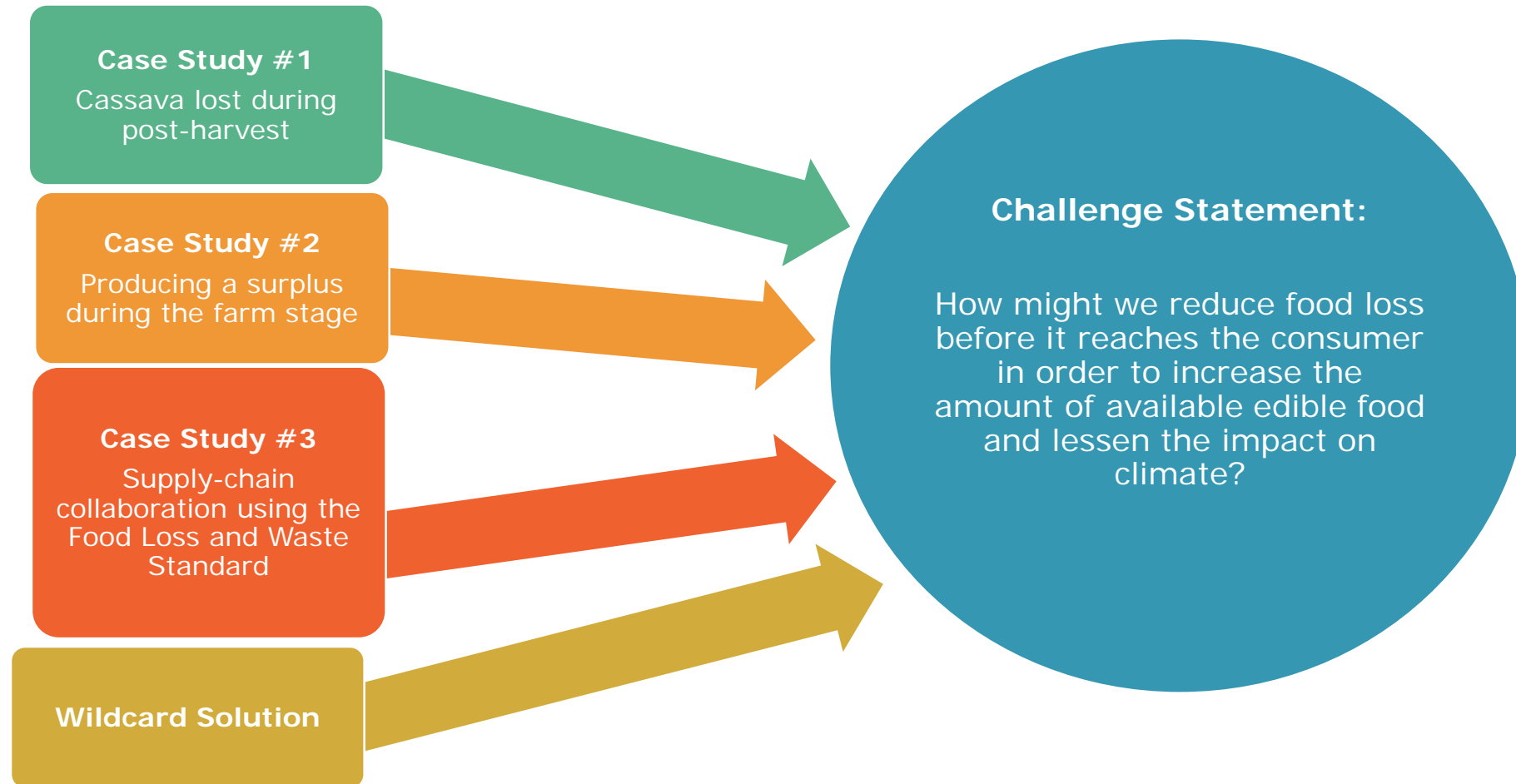


Video Source : [National Geographic](#)

# Real-life Application



# Case studies and challenge statement



# Cassava lost during post-harvest

- Cassava is an edible root that is eaten through the world, especially in sub-Saharan Africa (SSA) where it is the second most important source of calories. However, 40% of cassava is lost post-harvest.



# Producing a Surplus During the Farm Stage

- Feeding America estimates that more than 6 billion pounds of fresh produce go unharvested and unsold each year.





# Supply-chain Collaboration Using the Food Loss and Waste Standard

- The Food Loss and Waste Standard is a shared yard stick by which companies and others can measure their food loss and waste the same way.



Breakout Session!



# 2018 Food Solutions Challenge Business Canvas



**Challenge Question:** How might we reduce food loss before it reaches the consumer in order to increase the amount of available edible food and lessen the impact on climate?

**Case Study:**



## EXECUTIVE SUMMARY

Briefly describe your product, service, solution or program. What is the value it provides, and how does it address the challenge? How does your solution meaningfully reduce the amount of food lost before it reaches the consumer?

## ANTICIPATED OUTCOMES

Does your solution address food lost before it reaches the consumer? How will your solution meaningfully reduce greenhouse gas emissions while increasing the amount of food available for human consumption? In what ways is your solution a game-changer?

## SHORT TERM & MEDIUM TERM GOALS

What are the first steps you would take to implement this? What is your goal for the first 5 years of this idea? If your solution was successful in the short term, what might its role be 5-15 years from now? How might your solution grow or evolve if your short-term goals were met? What resources and partners would help your solution remain relevant?

## TYPE OF SOLUTION

Is your solution biological/chemical, mechanical, business oriented or product based? Who could be the partners to assist with creation and implementation, and would any of them help you secure resources?

# Challenge Statement

Food loss, meaning food wasted before it reaches a consumer, accounts for 64% of all edible food that is lost. When food is wasted at the farm, in harvesting, in production, and in transportation, we lose both edible food and also the climate-changing environmental resources that went into producing it.

**How might we reduce food loss before it reaches the consumer in order to increase the amount of available edible food and lessen the impact on climate?**

A close-up photograph of several green pea pods hanging from a stem. The stem and pods are covered in fine, white, hair-like structures. The background is a soft, out-of-focus green. A semi-transparent white rectangular box is overlaid on the left side of the image, containing the text "Taking it Further" in a dark green, serif font.

Taking it Further

# Rubric

## Impact – 50 points

- Does the solution meaningfully reduce GHG emissions? Does the solution take into consideration the GHG impacts of their idea from multiple angles?
- Does the solution meaningfully increase the amount of food available for human consumption with available resources?

## Innovation – 20 Points

- How is your solution a game-changer?

## Relevance – 10 points

- Does your solution answer the challenge statement question?

## Viability – 20 points

- What are the first steps you would take to implement this? What is your goal for the first 5 years of this idea? Who will benefit most (and be disadvantaged)? Who could be the partners to assist with implementation, and would any of them help you secure resources?
- If your solution was successful in the short term, what might its role be 5-15 years from now? How might your solution grow or evolve if your short-term goals were met? What resources and partners would help your solution remain relevant?

# Time to Pitch



# What makes a great pitch?

## **Great pitches often:**

- Clearly solve a specific problem
- Get your attention with their unique idea
- Have a name for their solution
- Explain why the solution will appeal to and help consumers
- Communicate the short term (<1 year) and long term (5-20 year) impact of their solution

## **Great pitches can:**

- Use a personal example to focus on a user's need
- Feel like a conversation
- Keep people's attention: 1 min max



# Food wastage footprint



Video Source : [Food and Agriculture Organization of the United Nations](#)