



NO-FOODLOSS PROJECT
“Loss-non”

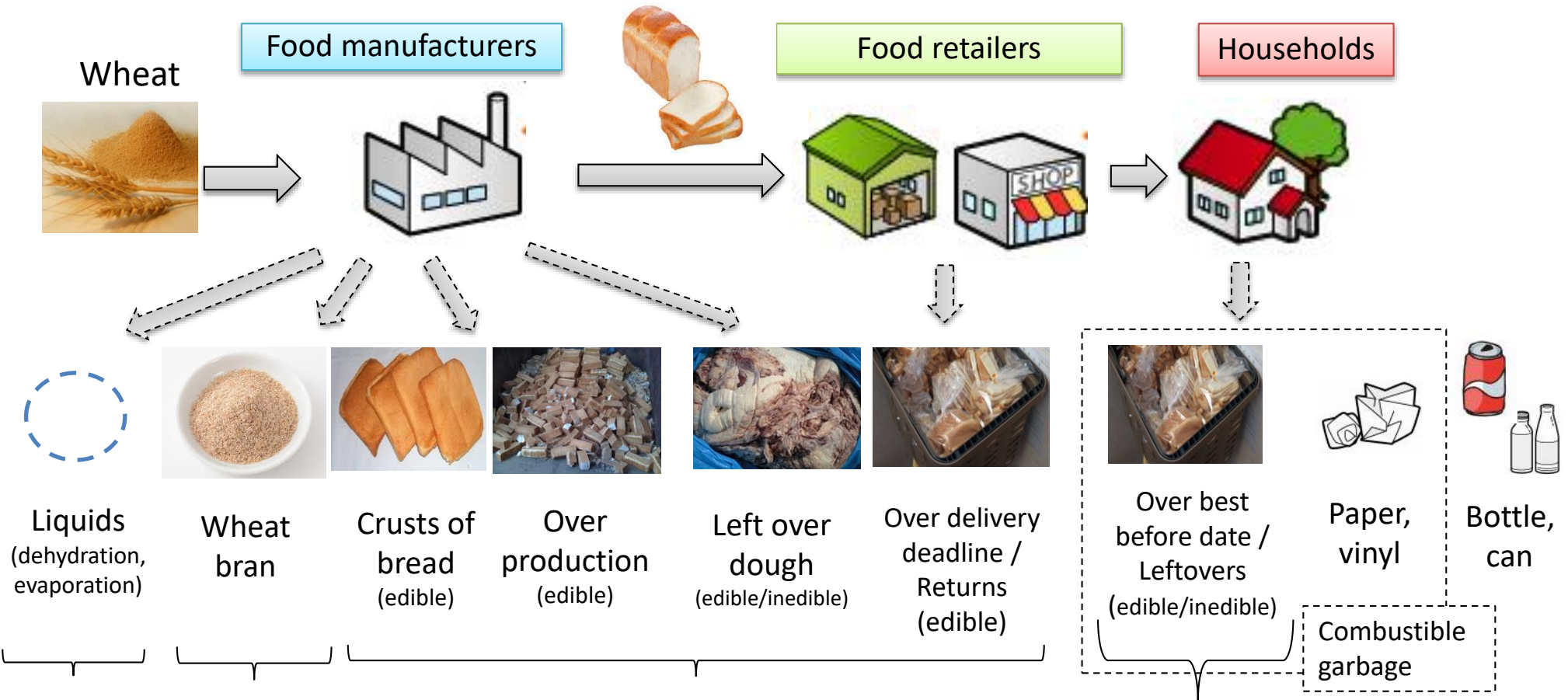
Reducing food loss and waste in Japan

- Accounting and Reporting system-

June 2017

Environmental Policy Office
Food Industry Affairs Bureau
Ministry of Agriculture
Forestry and Fisheries
(MAFF), JAPAN

Meaning of Food waste / loss in Japan



Reducing

Valuable by-products

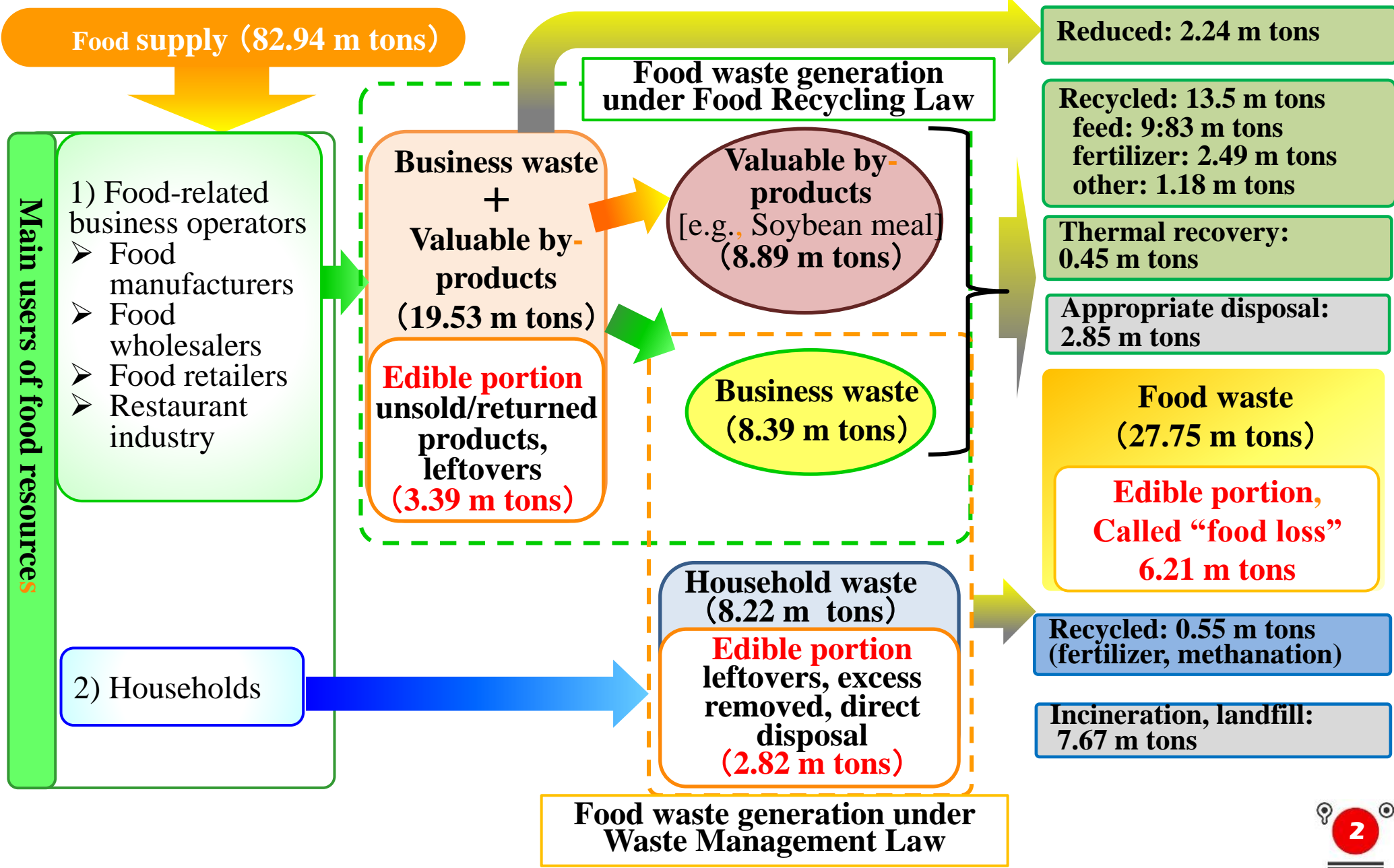
Food waste from industry

Food waste from household

After using / not using for food
By-products from manufacturing, processing and cooking which cannot be eaten

Combustible garbage except paper, vinyl and non-food items

Usage situation of food waste generation (FY2014) <Conceptual diagram>



Food loss generation in Japan

- ✓ Food loss generated in Japan (6.21 million tons) is about twice the food assistance amount offered by the World Food Program (WFP) for the entire world.
- ✓ Weight of food loss per person per day in Japan is about that of a bowl of rice.

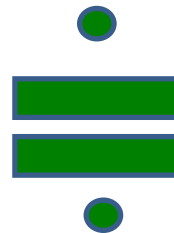
Food loss generation in Japan (FY2014) (6.21 million tons)

Businesses
Edible portion
(3.39 million tons)

Households
Edible portion
(2.82 million tons)



food assistance amount offered by the World Food Program (WFP) for the entire world (2014):
About 3.20 million tons

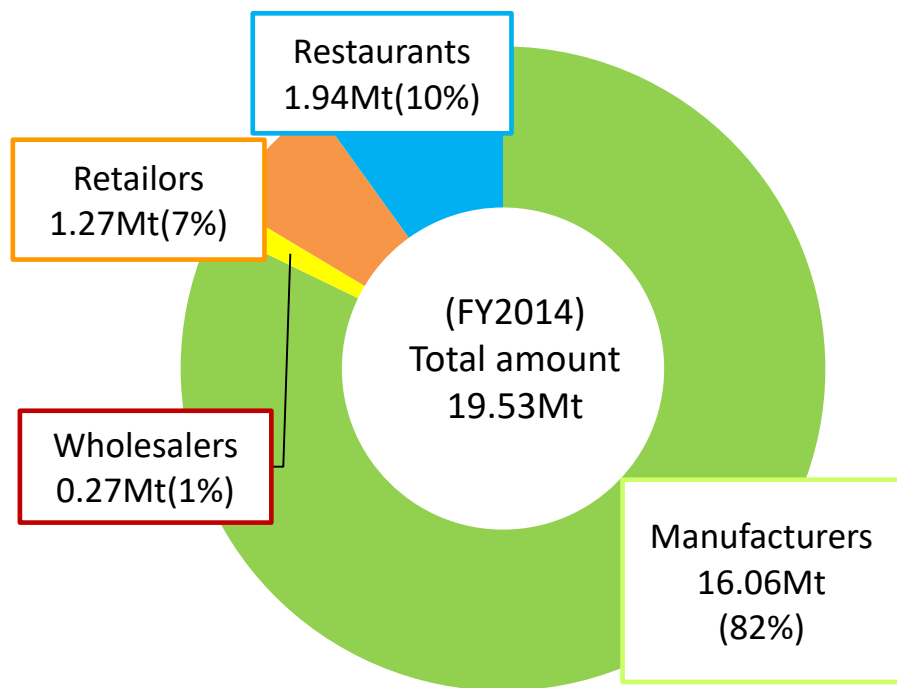


Weight of food loss per person per day:
About 134g
(about that of a bowl of rice)

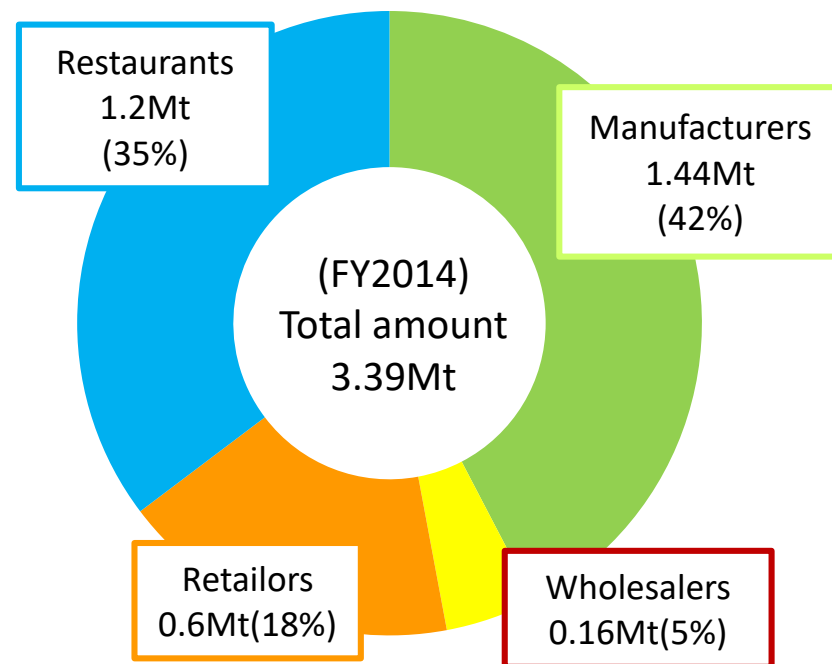
The amount of food business waste (FY2014)

- ✓ The total amount of food waste from the food-related industry was 19.53 million tons (FY2014). Manufacturers accounted for 83% of this.
- ✓ The edible portion of this waste was 3.39 million tons (FY2014). Manufacturers accounted for 42%, and restaurants accounted for 35% of this.

◆ Food waste generation



◆ Edible portion (food loss)



Responsibility of relevant ministers (Minister of the Environment, Minister of Agriculture, Forestry and Fisheries, etc.)

Formulation of basic policy

- Numerical targets
- Measures to promote recycling

Development of criteria for food-related businesses

- Criteria for reducing the generation of waste
- Criteria for reducing waste volume
- Criteria for recycling, etc.

Priorities of initiatives

- Restraining waste generation
- Recycling (highest priority: animal feed)
- Thermal recovery
- Reduction in weight

Recycling rate targets

Food manufacturers (95%)	Food wholesalers (70%)
Food retailers (55%)	Restaurant industry (50%)

Promotion of 3R

- Set **targets on food waste reduction for each industry group.**
E.g. Meat product manufacturing industry: 113kg/1 million yen of sales.
- **Mandatory regular reporting** on the amount of food waste
From food-related businesses which produce large quantities of food waste (**100 tons** of food waste or more in the previous year) to the relevant minister
- Promote recycling in the private sector.
 - Foster recycling business operators through the **“Registered Recycling Business Operator System”**
 - Formulate good practices (food recycling loop) through the **“Recycling Business Plan Approval System”**

Role of the national government

- To all food-related business operators
 - ➔ Guidance and advice
- To operators of recycling who generate food waste over 100t
 - ➔ Advice, announcements, orders, penalties

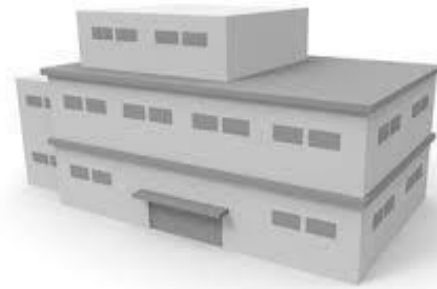
Mandatory regulatory reporting categories

- Amounts of food waste
- Volume of production or sales for manufacturers
 - Sales for retailers and wholesalers
 - Guests in restaurants
- Number (above) per unit
- Amounts of reduction / recycling / thermal / dehydration and evaporation / incineration and landfill
- Recycling rate

Reporting method



Company



Branch office
of MAFF



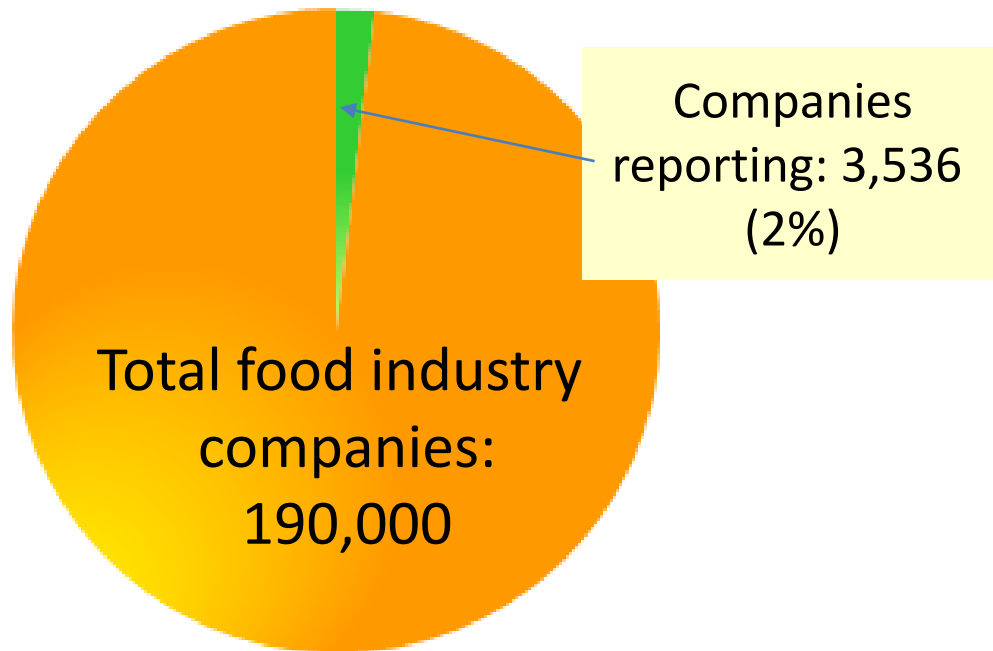
Headquarters

Recycling rates (2014)

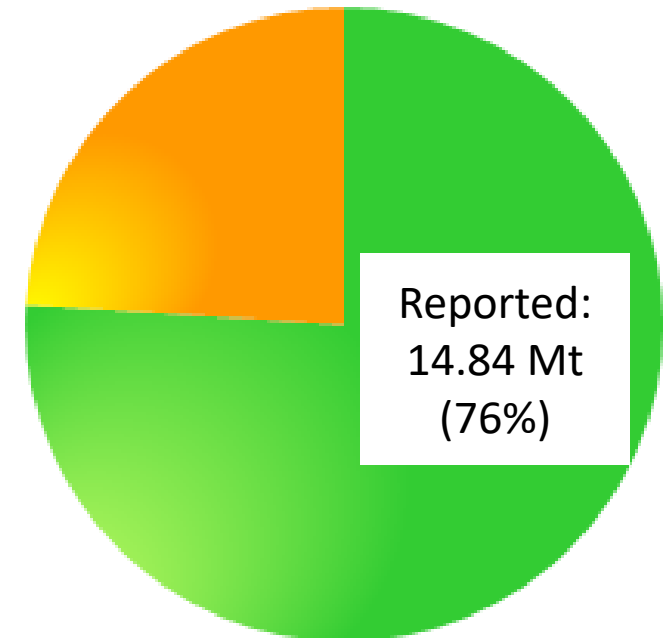
Business Type	Recycling rate target (%)	Recycling rate (%)							
			Control of waste generation	Recycling	(use application)			Heat recovery	Reduction in weight
					Feed	Fertilizer	Others		
Manufacturer	95	95	12	69	76	17	7	2.2	12
Wholesaler	70	57	9	43	33	45	25	0.6	4
Retailer	55	46	13	32	43	34	23	0.1	0
Restaurant	50	24	6	15	23	35	42	0.1	3
Total		85	12	61	73	18	9	1.9	10

Coverage rate in food industry (2014)

➤ From number of companies



➤ From amount of waste



Amount of waste from all industries
19.53 Mt

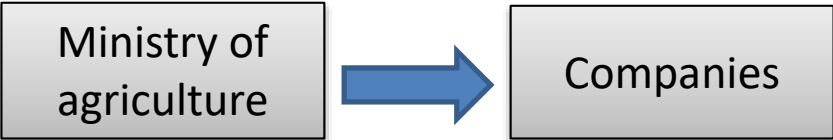
Targets for the control of food waste generation

■ Targets for the control of food waste generation (April 2014 - March 2019)

Business type	Target	Business type	Target	Business type	Target												
Meat product manufacturers	113 kg/1 million yen of sales	Prepared food manufacturers	403 kg/1 million yen of sales	Miscellaneous restaurants	108 kg/1 million yen of sales												
Milk/dairy product manufacturers	108 kg/1 million yen of sales	Sushi/lunchbox/sandwich manufacturers	224 kg/1 million yen of sales	Takeout/delivery food service (other than school lunch, etc.)	184 kg/1 million yen of sales												
Canned/bottled seafood manufacturers	480 kg/1 million yen of sales	Food/drink wholesalers (mainly drinks)	14.8 kg/1 million yen of sales	Wedding halls	0.826 kg/1 person (user)												
Pickled vegetable manufacturers	668 kg/1 million yen of sales	Various food retailers	65.6 kg/1 million yen of sales	Hotels	0.777 kg/1 person (user)												
Miso manufacturers	191 kg/1 million yen of sales	Snack/bread retailers	106 kg/1 million yen of sales	<div data-bbox="1404 682 2059 768" data-label="Section-Header"> <h3>■New targets (July 2015)</h3> </div> <table border="1"> <thead> <tr> <th>Business type</th> <th>Target</th> </tr> </thead> <tbody> <tr> <td>Miscellaneous livestock product manufacturers</td> <td>501 kg/1 ton of sales</td> </tr> <tr> <td>Vinegar manufacturers</td> <td>252 kg/1 million yen of sales</td> </tr> <tr> <td>Confectionary manufacturers</td> <td>249 kg/1 million yen of sales</td> </tr> <tr> <td>Coffee drinks and juice manufacturers</td> <td>429 kg/1 ton of product</td> </tr> <tr> <td>School lunch and hospital food, etc.</td> <td>332 kg/1 million yen of sales</td> </tr> </tbody> </table>		Business type	Target	Miscellaneous livestock product manufacturers	501 kg/1 ton of sales	Vinegar manufacturers	252 kg/1 million yen of sales	Confectionary manufacturers	249 kg/1 million yen of sales	Coffee drinks and juice manufacturers	429 kg/1 ton of product	School lunch and hospital food, etc.	332 kg/1 million yen of sales
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Soy sauce manufacturers	895 kg/1 million yen of sales	Convenience stores	44.1 kg/1 million yen of sales														
Sauce manufacturers	59.8 kg/1 ton of product	Diners/restaurants (mainly offering noodles)	175 kg/1 million yen of sales														
Bread manufacturers	194 kg/1 million yen of sales	Diners/restaurants (other than those mainly offering noodles)	152 kg/1 million yen of sales														
Noodle manufacturers	270 kg/1 million yen of sales	Bars, etc.	152 kg/1 million yen of sales														
Tofu/fried tofu manufacturers	2,560 kg/1 million yen of sales	Cafés	108 kg/1 million yen of sales														
Precooked frozen packed food manufacturers	363 kg/1 million yen of sales	Fast food stores	108 kg/1 million yen of sales														

The way for estimating the amount of edible FLW

Industry



- Questionnaire about Method of measuring the edible/inedible amount of food loss waste (FLW)
- Calculating the ratio of edible portion by each industry group

Households



Research on the amount of food loss and waste from combustible waste.



(grasp & estimate)

Use the answer



(not grasp & estimate)

Use the estimation data from the remaining data & its combustible waste

Amount of the edible FLW

$$\begin{aligned}
 &= \sum_{\text{Industry group}} (\text{Total FLW} \times \text{ratio of edible portion}) \\
 &+ \sum_{\text{Municipality}} (\text{FLW from combustible household waste})
 \end{aligned}$$

Underway Project for detail survey for mandatory report

Industry

Present target

Edible part Inedible part

Total amount in Business category

'17

Survey for setting target of edible part

- Definition and range of edible part
- Measurement for separating edible / inedible part
- Obtain the problem in measuring

'18

Investigate and examine the target

- Select business category for setting target
- Investigate the target by business category

'19

Edible part Inedible part

Set a new target for edible part

Household

No food-related target

◆ Only reducing total amount of garbage

Research the situation in local government

- Grasping edible part by investigating garbage composition

Improve the accuracy
by increasing local government

Edible part Inedible part

Discuss **the definition** of

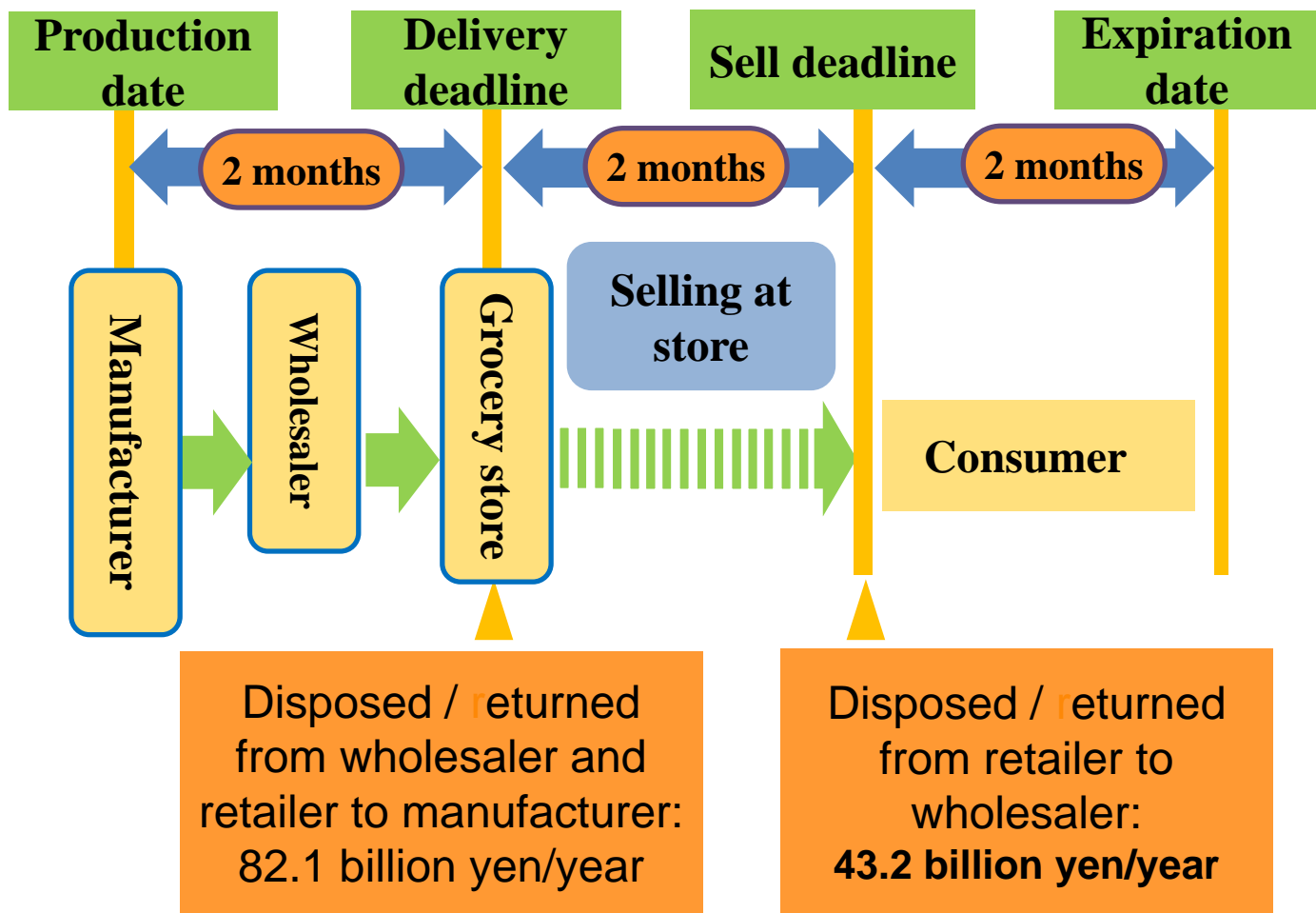
- food loss and waste
(edible / inedible)
- measurement method
(extraction survey / regular report)
- range of reducing action
(which method can be counted?)
<animal feed / fertilizer / anaerobic digestion / thermal usage>

Discuss **the base year** for the target

Efforts in the food industry (1) Review of delivery deadline

✓ The so-called “one-third rule” is one of the factors that create food loss.

**Conceptual diagram of deadline set by the “one-third rule”
(in the case of a six-month expiration date)**



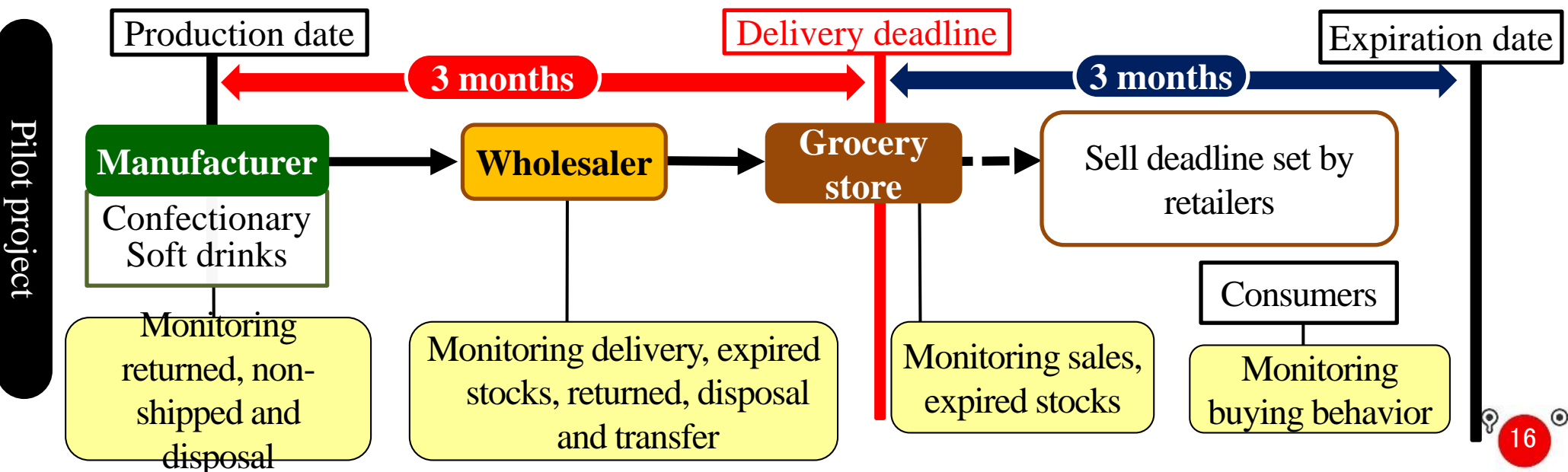
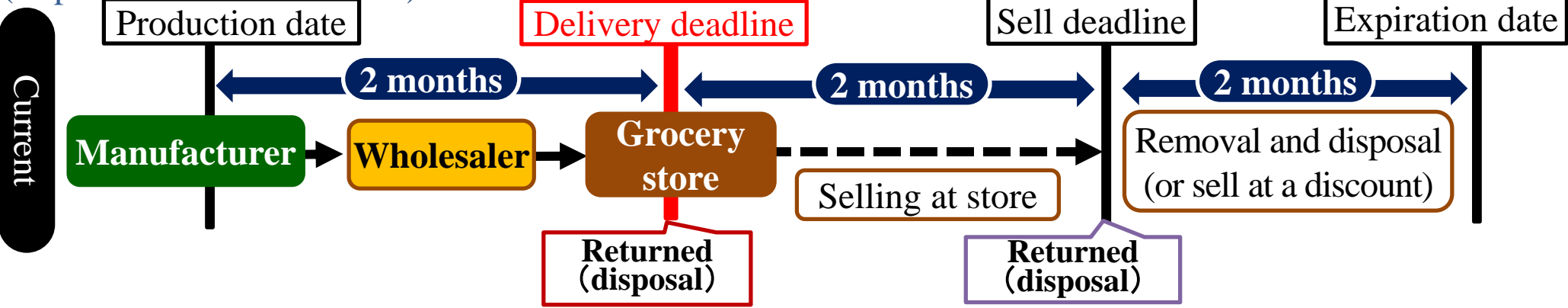
● International comparison

Country	Delivery deadline (Expiration date base)
USA	Leaving 1/2
France	1/3
Italy	1/3
Belgium	1/3
Japan	Leaving 2/3 on average

Efforts in the food industry (1) Review of delivery deadline

- ✓ Modified delivery deadline for soft drinks and confectionaries in trial projects.
- ✓ Total food loss in the supply chain decreased drastically.

(Expiration date six months)



Extending the expiration date

- January 2009 – October 2013
Extended for 958 items
- November 2013 – October 2014
Extended for 199 items
- November 2014 – October 2015
Extended for 163 items
- Future plans
Extended for 587 items



Instant noodles in bag packaging
Expiration date: six months → eight months

Instant noodles in cup packaging
Expiration date: five months → six months

Changing display from expiration date to expiration month

- January 2009 – October 2013
Switched for 50 items
- November 2013 – October 2014
Switched for 159 items
- November 2014 – October 2015
Switched for 115 items
- Future plans
Switched for 107 items



Before

Best before:
January 24,
2019

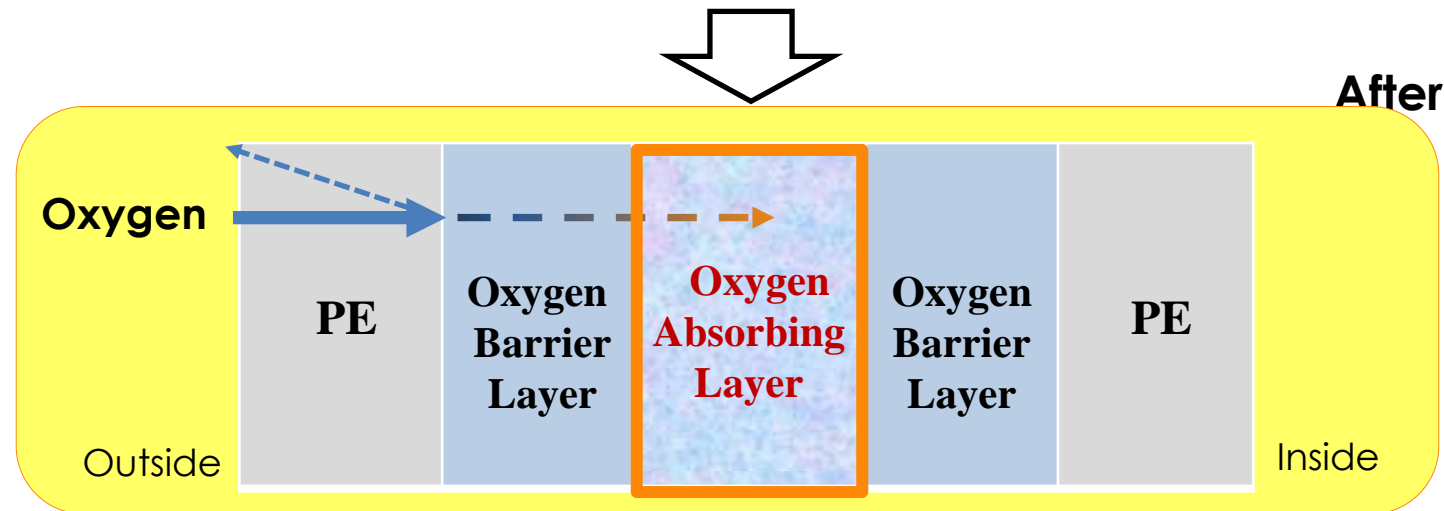
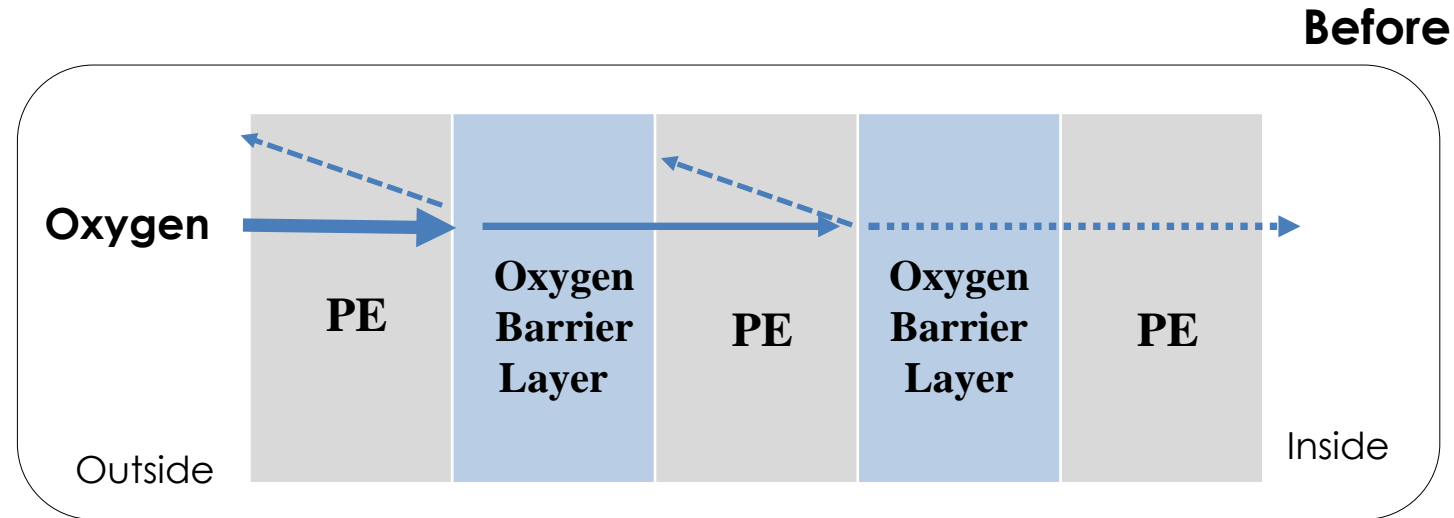


After

Best before:
January 2019

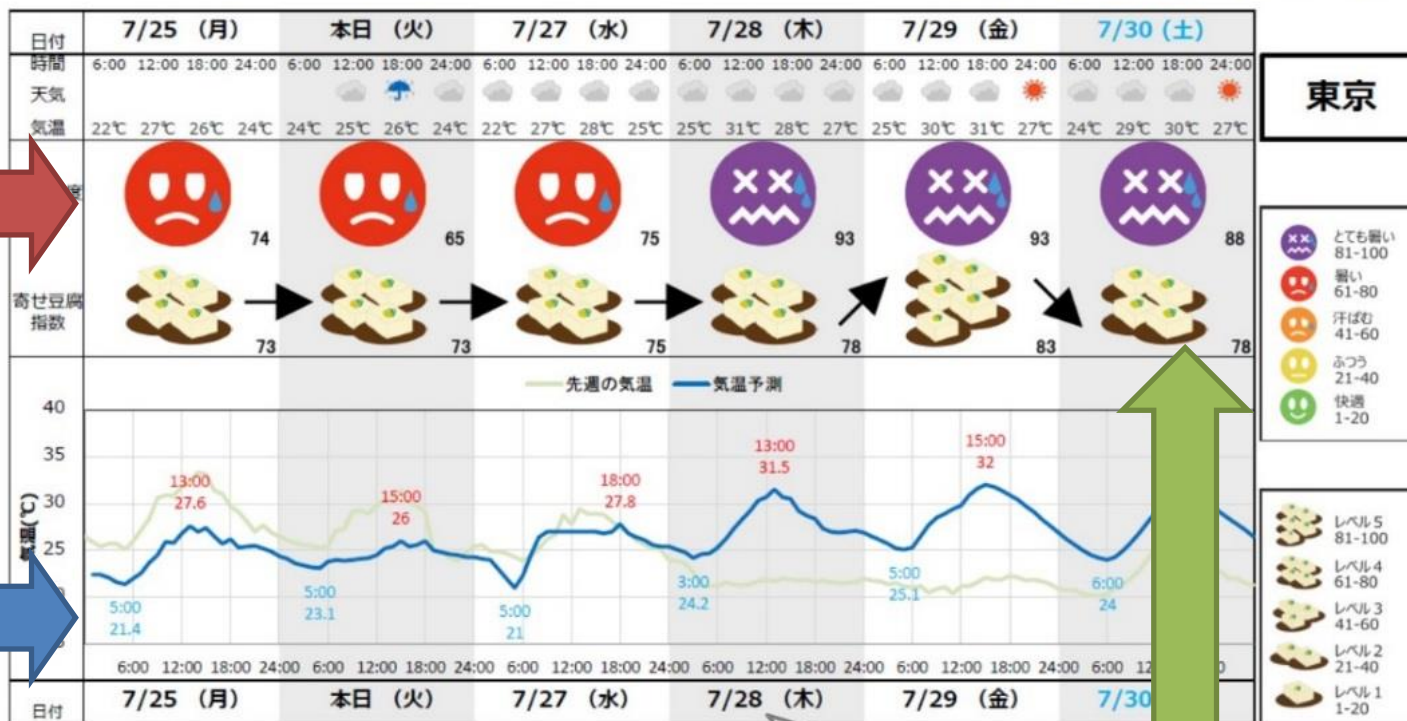
Efforts in the food industry (3) Improved packaging

- ✓ By using a bottle with high oxygen barrier properties, the expiration date of mayonnaise can be extended from seven to twelve months.



Collaboration with weather data companies

7月26日(火)発表 JWA特別気象予測 相模屋食料様 寄せ豆腐



東京

Sensible temperature index

Expected temperature

- ☁️🌧️ とても暑い 81-100
- ☀️ 暑い 61-80
- ☀️ 汗ばむ 41-60
- ☀️ ふつう 21-40
- ☀️ 快適 1-20

- 🍲 レベル5 81-100
- 🍲 レベル4 61-80
- 🍲 レベル3 41-60
- 🍲 レベル2 21-40
- 🍲 レベル1 1-20

関東地方梅雨明け

Tofu index

一般財団法人日本気象協会

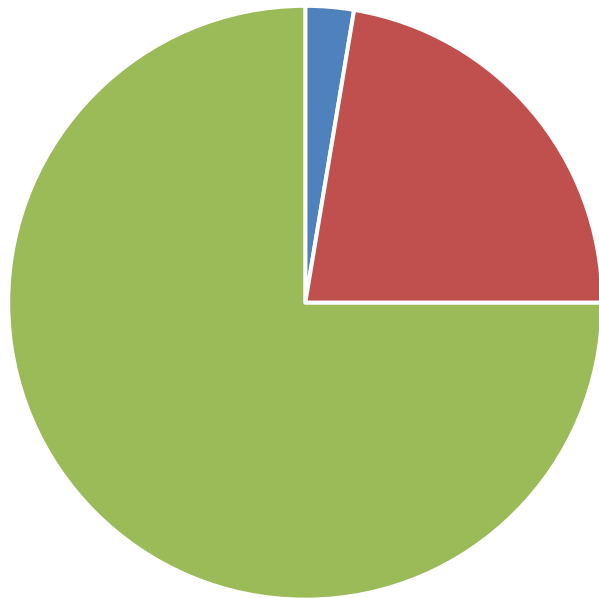
—: 予測気温 —: 前週同曜日気温



Food bank activity in Japan

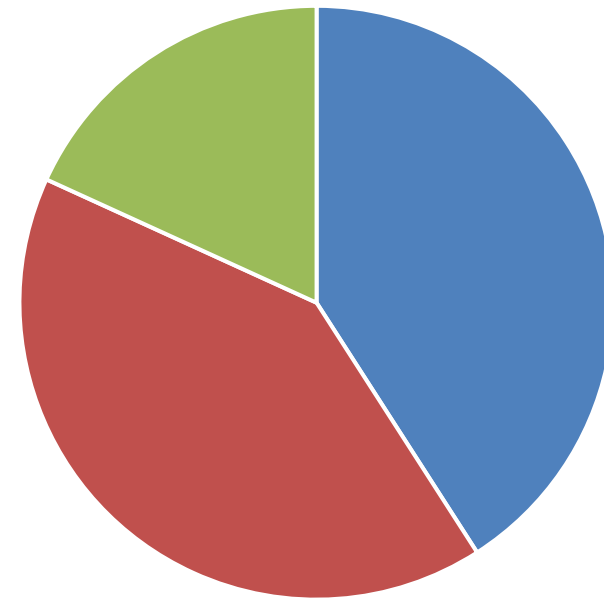
- ✓ Effectively utilize food as much as possible by donating food to welfare facilities.
- ✓ Donated food consists of mislabeled food, dented cans, products nearing expiration, etc.
- ✓ In Japan, there are about 80 food bank organizations
- ✓ They have a relatively short history. (The first one started operations in 2002)

Start time



■ -2005 ■ 2006-2010 ■ 2011-

Volume



■ less than 10t ■ 10t-100t ■ 100t-

Contents

- ◆ Rule on providing and donating
- ◆ Rule-making with stakeholders
- ◆ Quality and hygiene management
- ◆ Record and share information

Promotion of “NO-FOODLOSS PROJECT”

~ NO-FOODLOSS PROJECT ~



“Loss-non”
the PR
character

- ✓ Both the public and private sectors are promoting the NO-FOODLOSS PROJECT to raise public awareness and encourage action by supporting activities in each stage of the food chain.
- ✓ Japan publicizes its activities to the world as the origin of the *mottainai* (a sense of regret concerning waste) philosophy.

【Manufacturers / Distributors / Retailers】

- Test project for reviewing commercial customs
- Support of food bank activities
- *Mottainai* campaign

【Restaurants】

- Ask for “no leftovers”
- Change serving sizes
- Promoting doggy bag usage



Raise public
consciousness
and encourage
action

【Households / Consumers】

Strategic communication by stores, mass media, SNS, etc.

(E.g. Promote understanding of expiration date labeling, environmentally friendly cooking)

Promote useful and effective use of resources across the entire food chain.

Collaboration with Loss-non

Use at sales storefronts for household appliances and in sales catalogs



SHARP



Posting in the beverage sales area



Set up on tabletops in the employee cafeteria to call attention to the "Tabekiri (finish the food) movement"

kikkoman





Thank you

