

Regular Reporting in accordance with the Food Waste Recycling Act

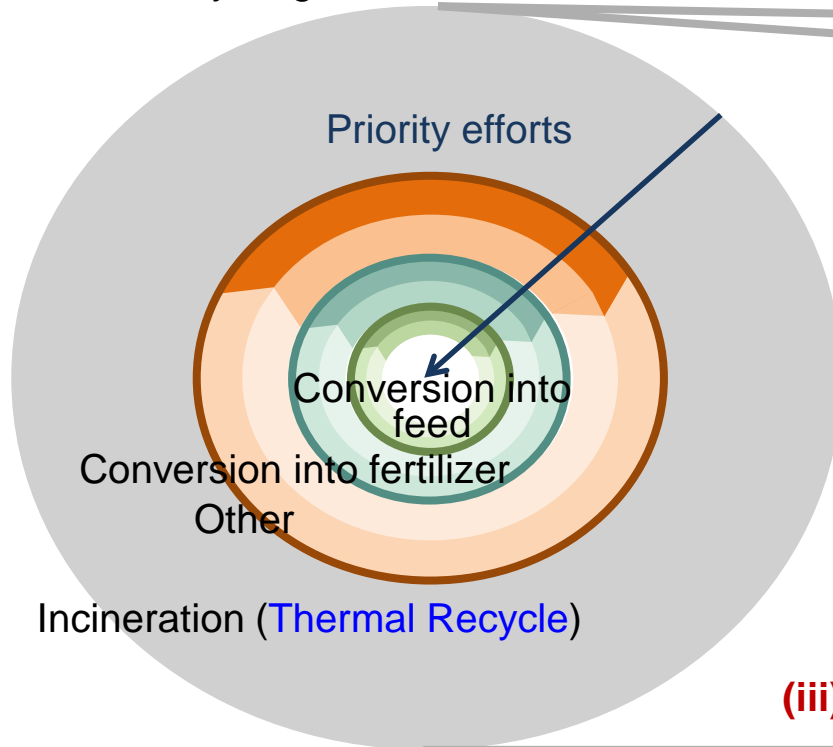
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Food Waste Recycling Team, Food Industrial
Policy Office, Biomass Policy Division,
Food Industry Affairs Bureau, the Ministry of
Agriculture, Forestry and Fisheries

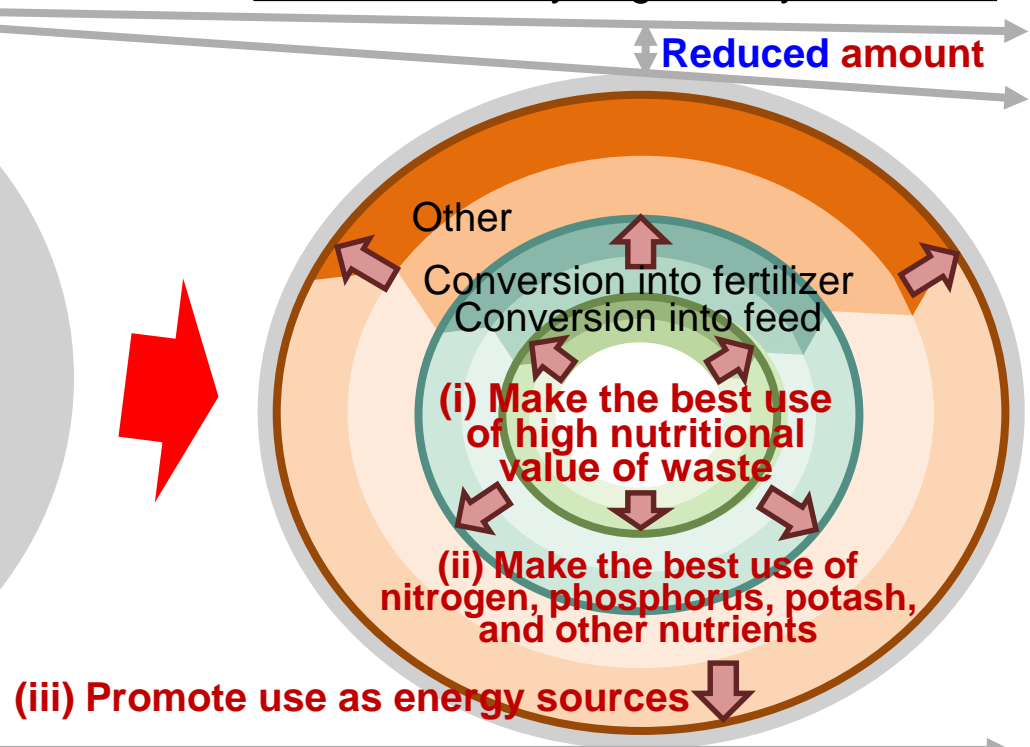
Food Waste Recycling: Priority

- “Material-to-material” recycling, that is, recycling waste materials into new materials enables the continuous reuse of resources, reducing environmental burdens. Hence, this type of recycling has priority.
- There are several ways to recycle food waste. **Conversion into feed** must be the first choice because it makes the best use of food waste’s high nutritional value. **Conversion into fertilizer** should be the second choice (including the case in which digestive juice generated in the process of methanation is used as a fertilizer).
- Food waste that can be turned into neither feed nor fertilizer needs to be converted into **other usable forms** (e.g., methane as an energy source).

Food Waste Recycling: Current State



Food Waste Recycling: Priority and Vision



● Food Waste Recycling Act: Overview (i)

(Act No. 116 of 2000 (Revised in December 2007))

○ **Basic Principles Developed by the Minister concerned**

- Basic policy for the promotion of recycling food waste
- Goals pertaining to the amount of food waste that should be recycled, etc.

○ **Promotion of Recycling**

- Criteria suggested by the minister concerned (Ministerial Ordinance)
 - Criteria for food waste that should be recycled
 - Setting goals of efforts by each business operator
 - Setting a target for reduction of food waste
- Mandatory regular reporting of the amount of generated food waste to the minister concerned
(business operators who annually generate more than 100 tons of food waste)
- Facilitating recycling by business operators
 - The Registered Recycling Business Operators Program as an incentive to set up and continue recycling businesses
 - Developing best practices through the Recycling Business Plan Certification System (i.e., creating a food waste recycling loop)

● Food Waste Recycling Act: Overview (ii)

(Act No. 116 of 2000 (Revised in December 2007))

○ Guidance, advice, and other measures

● Providing guidance and advice for all food-related business operators

- Advice and order are given to business operators who generated more than 100 tons of food waste during the previous fiscal year; their names are published; and fines are imposed if their efforts are obviously inadequate



Promote the reduction of environmental burdens and effective use of resources

Efforts must be made

○ Roles of stakeholders (responsibilities)

National government

- Secure funds needed to promote recycling.
- Collect, organize, and use information.
- Support research and development; publish the results for wide use.

Local governments

- Encourage recycling in line with the circumstances of the region.

Consumers; Business operators

- Change how they buy and cook food to generate less food waste.
- Use recycled products.

Recycling Rate (Target by Business Type)

- The basic principles specify the targets of recycling rates by business type that should be achieved by FY2019: Food manufacturers: 95%; food wholesalers: 70%; food retailers: 55%; food service businesses: 50%.
- The targets by business type have been set at the levels that are considered attainable when each business operators reach its target of the recycling rates calculated individually (i.e., standard executing rate).

Formula for calculating the recycling rate

$$\text{Recycling rate} = \frac{\text{Reduced amount} + \text{Recycled amount} + \text{Amount used for thermal recycle} \times 0.95(*) + \text{weight-saved amount}}{\text{Reduced amount} + \text{Generated amount}}$$

(*) The rate is equivalent to that of food waste excluding residues (ash).

● Standard Executing Rate

(Target Recycling Rate for Each Food-related Business Operators)

Formula for Calculating the Standard Executing Rate (the Business's Target Value)

Standard executing rate = Previous year's standard executing rate + percentage point(s) to add according to the previous year's standard executing rate

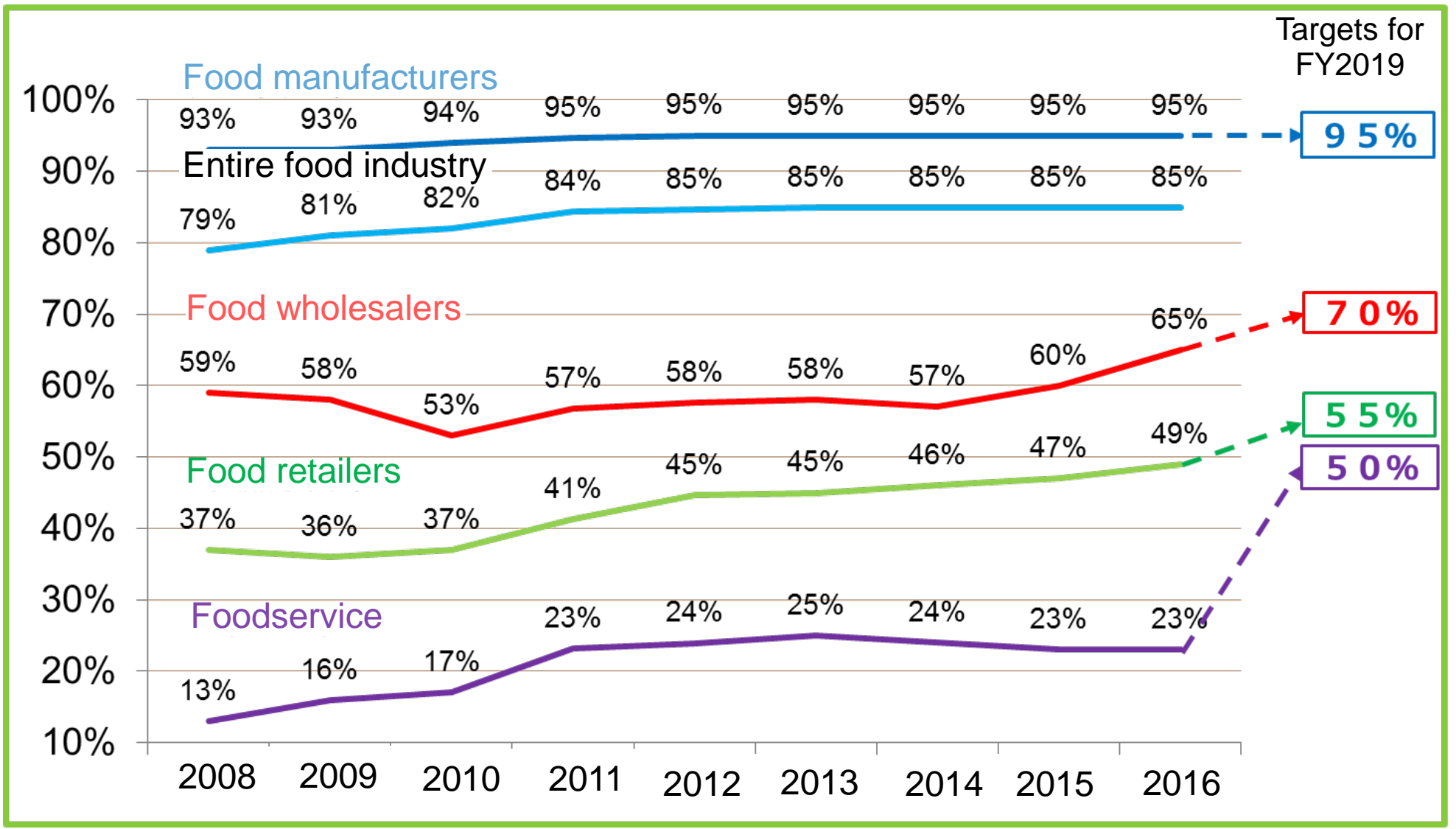
Range of Previous Fiscal Year's Standard Executing Rates	Percentage Point to Add
20% to less than 50%	2%
50% to less than 80%	1%
80% or more	Maintain or increase the percentage

- The standard executing rate for FY2007 shall be the recycling rate for FY2007.
- Standard executing rates of less than 20% shall be considered 20% for calculation.
- A business that was launched in FY2008 or thereafter shall use the recycling rate for its first fiscal year as the standard executing rate for its first fiscal year.

Examples of Standard Executing Rates

	FY2007 (base year)	FY2008 (1 year later)	FY2009 (2 years later)	FY2010 (3 years later)	FY2011 (4 years later)	FY2012 (5 years later)	FY2013 (6 years later)	FY2014 (7 years later)	FY2015 (8 years later)	FY2016 (9 years later)
Business Operator A	75.0%	76.0%	77.0%	78.0%	79.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Business Operator B	45.0%	47.0%	49.0%	51.0%	52.0%	53.0%	54.0%	55.0%	56.0%	57.0%
Business Operator C	12.0% -> 20.0%	22.0%	24.0%	26.0%	28.0%	30.0%	32.0%	34.0%	36.0%	38.0%
Business Operator D	(Business launched in FY2011)				49.0%	51.0%	52.0%	53.0%	54.0%	55.0%

Food Industry's Recycling Rates



The Food Waste Recycling Act revised in 2007 stipulates that food-related business operators whose business activities generated more than 100 tons of food waste during the preceding fiscal year must report to the minister concerned the amounts of food waste and how much of it was recycled.

- **Food-related business operators**

- (i) Those who manufacture, process, wholesale, or retail food as business

- Food manufacturers, food wholesalers, food retailers

- (ii) Restaurants and other foodservice businesses defined by the government ordinance

- Restaurants and other foodservices businesses, coastwise passenger transport, inland water transport, wedding halls, hotels

- **About the use of data in regular reporting**

About 3,500 food-related business operators across the country submit regular reports each year in accordance with the Food Waste Recycling Act. The Ministries of Agriculture, Forestry and Fisheries and of the Environment use the data provided in the regular reports as basic data for various documents they refer to while developing policies. The Ministries expect that the business operators also use the data for self-checking by each business type to reduce the amount of food waste and promote recycling.

- **Results of regular reports**

The website of the Ministry of Agriculture, Forestry and Fisheries publishes the results of regular reports submitted in accordance with the Food Waste Recycling Act.

Items in regular reports

Table 1 Amount of Food Waste Generated

Table 2 Values Closely Related to Amount of Food Wastes Generated

Table 3 Basic Unit of Generation of Food Wastes

Table 4 Controlled Quantity of Food Wastes

Table 5 Amount of Recycling of Recyclable Food Waste

Table 6 Amounts of Generated and Recycled Food Wastes by Prefecture

Table 7 Amount of Heat Recovery of Recyclable Food Waste

Table 8 Amount of Volume Reduction of Food Wastes

Table 9 Amount of Reuse other than Recycling of Recyclable Food Waste

Table 10 Amount of Food Wastes Disposed as Wastes

Table 11 Recycling Rate of Recyclable Food Waste

Table 12 Outsourcee of Recycling or Transferee Vendor of Recyclable Food Waste

Table 13 Quantity of Heat Recovered

Table 14 Status of Compliance with Standards of Judgment

Table 15 Advanced Approaches to Recycling of Recyclable Food Waste, etc.

Table 16 Agree or Disagree with National Publication

Amount of Food Waste Generated (Tables 1 and 6)

- What is “food waste”?

- (i) Food that is wasted after or before it is served

- (ii) By-products that are produced in the course of manufacturing, processing, or cooking food, and cannot be served



- Not limited to “waste” as defined by the Waste Management and Public Cleansing Law, e.g., articles traded for money

- Includes liquid waste (i.e., substances in the form of liquid is not excluded), e.g., wasted edible oil, beverages

- Includes waste that was originally food in muddy form but excludes sewage sludge

- How to measure an amount of generated food waste

- The Guidelines for Measuring the Amount of Food Waste Generated and Food Waste Recycling Rate is available on the website of the Ministry of Agriculture, Forestry and Fisheries.

● Reduced Quantity of Food Wastes (Tables 2 to 4)

○ How to calculate a reduced quantity of food waste

(i) The List of Values Closely Related to Food Waste Generated by each Business Type is available on the website of the Ministry of Agriculture, Forestry and Fisheries. Enter the “Name” and “Unit” shown by business type in Table 2: Values Closely Related to Amount of Food Wastes Generated.

(ii) The basic unit to enter in Table 3: Basic Unit of Generation of Food Waste is automatically calculated according to the values entered in Table 2.

If the standard basic unit of generated food waste, which is the target amount for the business type, is already set, it is automatically shown.

If the year-on-year basic unit of generated food waste exceeds 100%, or the basic unit exceeds the standard basic unit, specify the reason(s).

(iii) The value to enter in Table 4: Reduced Quantity of Food Wastes is automatically calculated by entering the basic unit of generated food waste for FY2007.

● Recycling of Recyclable Food Waste (Tables 5 and 6)

- What is “recyclable food waste”?

Food waste effectively utilized as feed or fertilizer

- What is “recycling”?

(i) Using recyclable food waste as raw material for **feed, fertilizer, or other products specified by the government ordinance (carbonized fuels or reducers, oil or oil products (including biodiesel), ethanol, or methane), or outsourcing the use.**

(ii) Transferring recyclable food waste so that it will be used as raw material for feed, fertilizer, or other products specified by the government ordinance.

The Basic Principles and the Ordinance on Criteria specify that conversion into feed, fertilizer, or methane must be the primary choice.

(iii) Sort the amounts of generated food waste by prefecture where the waste-producing offices are waste are located, and enter the quantities in Table 6.

(iv) Sort the amounts of recycled food waste by prefecture where the places of business that conduct recycling are located to complete Table 6.

● Thermal Recycle (Tables 7 and 13)

○ What is “Thermal Recycle”?

(i) **Using** food waste **to generate heat, or outsourcing the use.**

(Limited to the case in which it fits the criteria in the Ordinance of Ministry concerned, as it intends to contribute to effective use of food waste.)

(ii) **Transferring** food waste **to be used for generating heat.**

○ Criteria set forth in the Ordinance on Thermal Recycle:

(i) **No facilities capable of recycling the food waste are located in the vicinity (within a 75-km radius).**

Even when such facilities are located within a 75-km radius, business operators may opt thermal recycle of food waste, if those facilities are unable to take on the waste due to capacity issues or to the type or inherent properties of the food waste.

(ii) **The thermal recycle must ensure the generation and use of energy (e.g., electricity) at a level of efficiency higher than that of methanation.**

The heat or quantity of electricity generated must be **at least 160 MJ per ton.**
(In the case of waste edible oil, at least **28,000 MJ** of heat.)

*** Please note that we might contact business operators to inquire about the details above if there are entries in Table 13: Quantity of Heat Recovered in the regular report.**

● Reduced Amount of Food Waste; Amount of Food

○ What is “weight saving in food waste”?

Reducing the amount of food waste by dehydrating or drying it, or by other means specified in the Ministerial Ordinance (fermenting and carbonizing)



To admitted officially as “weight saving in food waste,” food-related business operators must reduce the amounts of their food waste themselves by removing moisture from the waste. Just decreasing the volume of the waste is not included.

○ “Food waste reused by means other than recycling”

Food waste counts as “being reused by means other than recycling” when it is used for mushroom beds or as material for cement, when oil produced as a byproduct of the disposal of it is used as a fuel for boilers while the waste does not meet the requirements for thermal recycle, or when it is used as a resource that can be neither recycled nor used for thermal recycle.

○ “Amount of food waste disposed of as waste”

Calculate the amount of food waste disposed of as waste by subtracting the recycled amount, amount for thermal recycle, weight-saved amount, and amount reused by means other than recycling from the amount of generated food waste.

● Status of Compliance with Standards of Judgment (Table 14)

Check the compliance status of each item in Table 14 pertaining to the details of the Ministerial Ordinance to Provide Food-related Business Operator with Criteria pertaining to the Promotion of Recycling Food Waste set forth in accordance with the Food Waste Recycling Act.

The Ministerial Ordinance was partially amended in January 2017 to prevent the recurrence of incidents similar to the illicit resale of food waste occurred in January 2016. Please use the guidelines for food-related business operators available on the website of the Ministry of Agriculture, Forestry and Fisheries as a reference.

● For Regular Reporting

(i) Business types

The regular report requires that data should be entered for each business type.

Measure the amount of generated food waste, reduced amount, and recycled amount for each business type for reporting.

(ii) Name of the person responsible for the preparation of the report

Enter the name of the person whom the Ministry of Agriculture, Forestry and Fisheries (the regional agricultural administration office) may contact to inquire about the details in the submitted regular report and/or about the business's efforts to control the quantity of food waste and recycle the waste.

The Waste Management and Public Cleansing Law stipulates that business operators are “responsible for properly managing waste generated from their business activities.” To prepare the regular report, keep track of the food waste from the company's business, how much of the waste has been recycled, and other relevant information.