

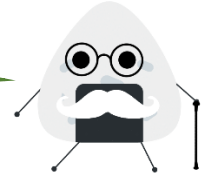


Know! Reduce! Food Loss!



~Study Check Worksheet~

I have prepared a worksheet.



Thank you! Let's all stick together!

Musubi

* Current status of the problem and countermeasures *

- A large amount of food loss (5 to 6 million tons) is generated every year in Japan.
- Japan's food self-sufficiency rate in FY2021 is (38)%.

The remaining (62)% of food is dependent on imports, which means that a large amount of food that is deliberately imported from overseas using money and energy is wasted.

☆ In Japan, food loss is roughly classified into two categories: "business-related" and "household-related."

- Household food loss accounts for (about half) of total food loss.

○ Business food loss

The stages at which food loss occurs can be divided into three: (manufacturing stage), (wholesale/retail stage), and (food service industry).

Of these, the food manufacturing and food service industries account for the majority.

1 . Manufacturing Stage

(I) Stringent quality standards

- Disposal of substandard products

Substandard products are those that fall outside the "standards" for (size), (shape), (quality), and (color) set by the market.

Ex. The amount of vegetables discarded as substandard is approximately (30)% to (40)% of the total production.

- The practice of "shortage penalty" in the food industry.

If a manufacturer is unable to respond to the retailer's order quantity and causes product shortages, the retailer, who values opportunity loss and customer satisfaction due to product shortages, may be forced to "stop doing business" with the manufacturer or pay a fine to the ordering party. To avoid such a situation, manufacturers overproduce food products to avoid shortages.

⇒ Thus, more food is produced than ordered, and the surplus is disposed of.

(II) Planned mass production

- Japan's (mass production) · (mass consumption) economic system

Maximize profit by producing as many products as possible and selling as many as possible

Ex. 2019 "ehomaki problem"

😊 Measures taken at the manufacturing stage

- Selling irregularly shaped or numbered products at low prices, or processing out-of-spec products and selling them as new products.
- Some companies are working to increase the shelf life of food products and extend shelf life by developing new containers and packaging materials and by devising new package structures.

2. Wholesale and retail stage

- Delivery and sales deadlines are set according to the "one-third rule"

First one-third: "delivery deadline"

(the period during which wholesalers must deliver to retailers)

Next third: "sales deadline" (the period during which the retailer must deliver the goods to the store)

(the period during which the retailer is allowed to keep the product on the store shelves)

Last third: "best before" date.

(the period during which the food can be enjoyed by the consumer)

- Japan's delivery time is by far shorter than France's ($\frac{2}{3}$) and the UK's ($\frac{3}{4}$).

😊 Measures at wholesale and retail stages

- 7-Eleven, Tokyu Store, Aeon Market, etc. have relaxed (or are planning to relax) delivery deadlines.
- The government is calling for a review of the one-third rule by soliciting and publicizing food business operators that are working on reviewing these business practices and setting a "National Day of Review of Business Practices" in 2021.

3. Food Service Industry

- Causes on the restaurant side

Excessive preparation in advance and response to diverse menus

- Causes on the customer's side

Ordering without knowing the quantity of food, leaving food uneaten by customers who want to "look good" on SNS, ordering a large amount of food at a party with a large number of people in a good mood.

😊 Countermeasures in the food service industry

- Prediction of stocking quantity

When ordering raw materials, restaurants use (data) such as names of products sold in the previous week, prices of products, number of products, time of purchase, etc., to predict the appropriate

amount to be shipped.

- Review the quantity of meals served

Restaurants cooperate with producers of raw materials and food recycling companies to form a recycling loop to process food that would otherwise be disposed of into dry ecofeed.

○ Household food loss

It can be divided into three categories: "leftovers," "over-removal," and "direct disposal."

☆ Impact of food loss

1. increase in environmental impact

(I) Impact on Climate Change

- Main means of disposal of food loss in Japan: (Incineration)

Disposal of food loss with high water content causes (greenhouse gas) emissions.

In addition, the methane gas generated when food is landfilled is said to have a greenhouse effect about (25) times greater than that of carbon dioxide, and has a significant impact on climate change.

This causes droughts, floods, and other (extreme weather) events that affect the environment in which food is produced.

A lot of manpower and energy is used in the supply chain to raise livestock, grow rice and vegetables, and transport them until food loss occurs.

⇒ Food loss means wasting all of these resources.

(II) Virtual water and food loss

- (Virtual water): An estimate of the amount of water that would be required if a country produced the food it imports in its own country.

Japan currently has a low food self-sufficiency rate, so it can be said to be (dependent on) water from foreign countries.

- The amount of water that can be used as drinking water does not meet (0.01)% of the total amount of water on the earth.

⇒ About ()billion people in the world today lack drinking water.

◎ Water problems such as water shortage and water pollution that are occurring in the world today are not unrelated to food loss problems in Japan.

- (Blue Water Footprint): The total amount of water used in the process from production to disposal of agricultural products used as raw materials for food.

◎ Waste of food means waste of water used for these agricultural products, so reducing the amount of food wasted will also save water that would otherwise be wasted, thereby helping to solve the water shortage problem.

2. economic loss

- The amount of food loss per household per year is (65,000) yen/year/household.

- Japan: Households lose 11.1 trillion yen due to leftover food ≐ total output of agriculture and fisheries industry

- In 2019, approximately 188.4 billion yen in taxes was used to dispose of food loss.

* Global Food Losses *

○SDGs: "Sustainable Developments's Goal

The SDGs are a common set of goals for the international community decided by world leaders at the United Nations Summit held in September 2015.

Goal 12 "Responsibility to use and responsibility to create"

"By 2030, halve global per capita food waste at the retail and consumption levels and reduce food losses in production and supply chains, including post-harvest losses.

In order to achieve this goal, efforts to reduce food loss are underway around the world today.

○Global measures for food loss

About (1.3) billion tons of food loss is generated in the world every year.

This is about (1/3) of the world's total food production per year.

😊United States

- (Wal-Mart): Aiming to sell all the food it purchases.
- Training for employees

😊China

- Establishment of "No Leftovers Law"

○Developed and developing countries

< Stage of food loss generation

- Developed countries: Processing, distribution, and consumption stages
- Developing countries: Production stage