

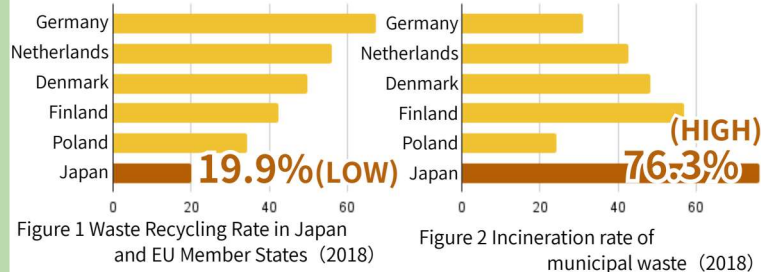
# A Study on a Circular Waste Management System between Urban and Rural Areas

Topic : Japan's garbage disposal system

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## 1.Introduction

### Recent Situation



Japan's recycling rate is much lower **Why** heavy dependence on incineration

## 2.Aim & Methods

### Aim

- Increasing waste recycling rate
- Reducing incineration reliance
- Creating circular waste system to connect regions

### Research Process

- Fieldwork of methane fermentation facility
- Interviews with city officials
- Analysis of waste management system effects

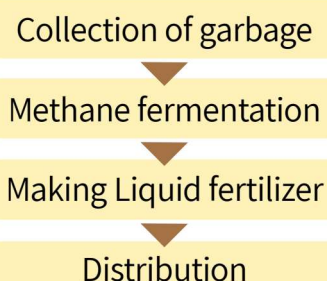
## 3.Results

### Precedent case

A garbage disposal system operated by Maniwa city



Figure 3 Our visit to Maniwa city's facility (December 2024)

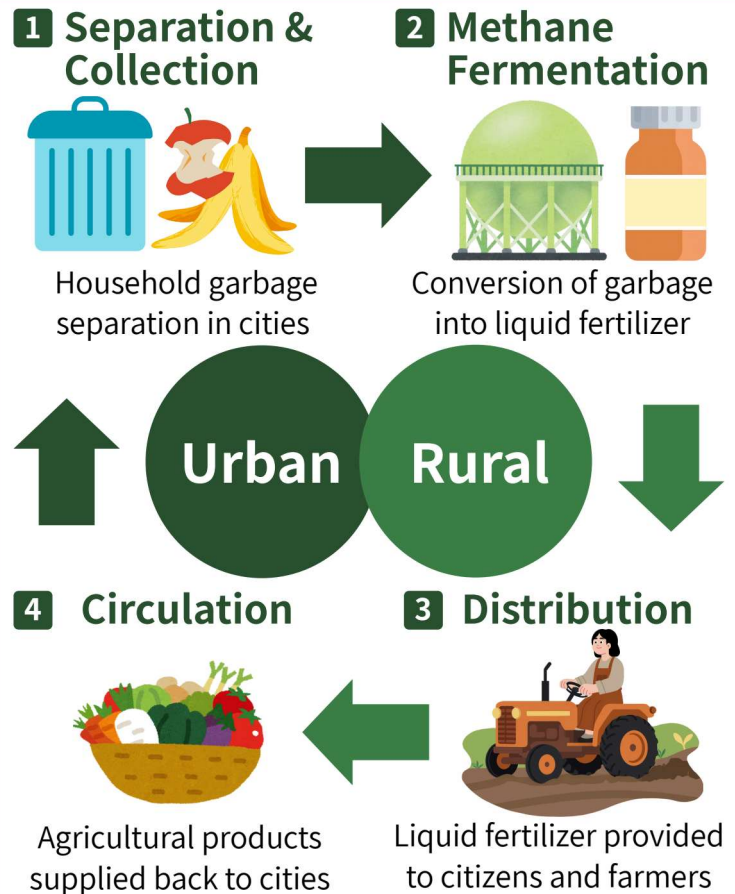


### Findings from Fieldwork

- The facility is kept clean, and odors are controlled.
- Contaminants in garbage are removed manually.
- Liquid fertilizer is concentrated to enable to apply fertilizer efficiently.

## 4.Discussion

### A new circular system we propose



### Original Points

- **Urban and Rural Partnership**  
Shared facilities and resources across regions
- **Promotion**  
Awareness raising through SNS campaigns  
Environmental education for children

### Benefits

- Reduction in agricultural product prices
- Lower dependence on imported chemical fertilizer
- Stronger cooperation between urban and rural areas

### Challenges

- High costs of facility construction and operation
- Difficulty in introducing new separation rules
- Hygiene control in cities

### sources

• Maniwa Agri Garden. <https://maniwa-agurigarden.com/>  
• Ministry of Agriculture, Forestry and Fisheries (MAFF). Situation of Fertilizer Raw Materials. [https://www.maff.go.jp/tohoku/syokuryou/attach/pdf/221017-13\\_](https://www.maff.go.jp/tohoku/syokuryou/attach/pdf/221017-13_)

• MAFF. Fertilizer from Domestic Resources. [https://www.maff.go.jp/j/pr/aff/2312/spe1\\_04.html](https://www.maff.go.jp/j/pr/aff/2312/spe1_04.html)  
• Kawai, K. Issues and Prospects of Recycling Rate of Municipal Waste. [https://www.jstage.jst.go.jp/article/jkg/71/2/71\\_60/\\_pdf](https://www.jstage.jst.go.jp/article/jkg/71/2/71_60/_pdf)