

 ^{2nd} International GI Conference Worldwide Perspectives on GIs
 Innovations and Traditions for Sustainability
 Session 1b: GI Sustainability Performance Feb. 18, 2025 at FAO in Rome, Italy

Seeking Sustainable Performance of GI Beef in Japan: Innovations Suggested by Alternative Beef Production Systems

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1. Introduction

Background

- ◆ Livestock production: one of the most criticized sectors
- Japanese Beef (Wagyu): iconic product protected under GIs
- Reputations: culinary, drinking beer, massage
- ◆ **Reality**: limited connection with local resources → questioned sustainability









1. Introduction

Research question

- What are the challenges in GI Japanese Beef's sustainability?
- What are innovations made by alternative beef production systems?

Methods

Literature review, statistical analyses, interviews with Gl and organic beef producers in 2010, 2018, 2020, 2022-2024





Photo: Sekine 2010

2. GI Systems in Japan

Table 1. Registration Systems of GI and Origin Products in Japan

Certifications	GI for Alcohol	Collective Trademark	GI for Agri-food	Honbano Honmono
Year of Start	1995	2006	2015	2005
Certification Body	National Tax Agency (Public)	Japan Patent Office (Public)	Ministry of Agriculture, Forestry and Fisheries (Public)	Japan Food Industry Association (JFIA) (Private)
Legislation	Liquor Tax Law	Trademark Law	Sui generis GI Law	-
Logo	-	地域団体商標 特許庁	OGRAPHICAL 地理的表示 NPAL	<mark>杰</mark> 瑞
No. of products (No. of beef)	30 (0)	781 (59 Beef)	154 (12 Beef)	59 (0)

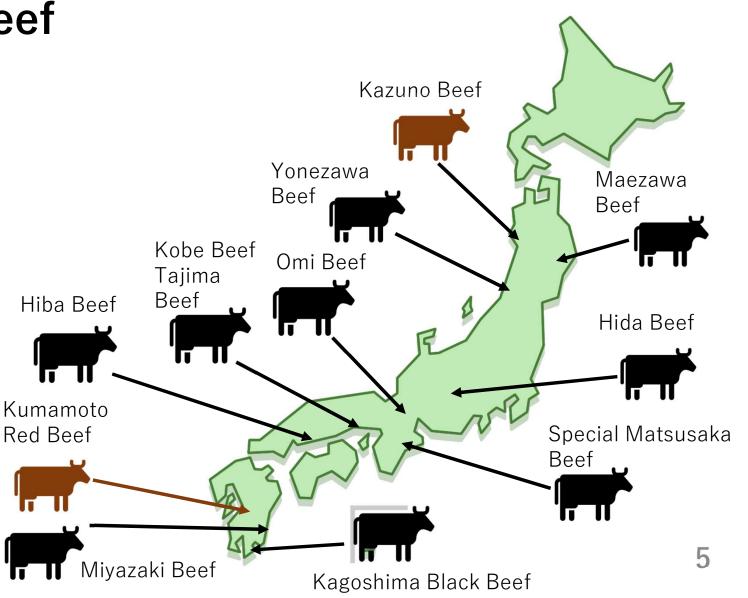
Source: Elaborated by the author based on the websites of the certification bodies (Accessed on February 12, 2025).

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3. GI Japanese Beef

Figure 1. GI Japanese Beef and Their Production Sites

Source: Elaborated by the author based on the website of MAFF (Accessed on February 12, 2025)



4. Challenges in GI Japanese Beef's Sustainability

Low genetical diversity and limited organic practice: Environment

- ♦98% of Japanese Beef is Japanese black due to quality standards and related pricing systems, and productivism (Sekine & Feuer 2022)
- **Degradation of cattle health**: stillbirth, sterility, abortion, extinction of some rare strains

Limited local connection: Environment/Social

- High dependency on feeds based on imported GM crops causing concerns on safety and farms' profitability (Araki 2019, MAFF 2019)
- ◆ Limited pasturing and local sourcing of feeds (Feuer & Sekine 2018)

Non-mandatory regulation of animal welfare: Social

- Consumer awareness remain underdeveloped (Sekine 2023, 2024)
- ◆Limited code of practice refer to requirements

Economic concentration and management risks: Economic/Governance

 price hike of feed and energy, heavy investment, lack of successors/labor, agri-food business cost squeeze and vertical integration, limited participation in policy making, gender inequality

5. Innovations Made by Alternative Beef Production Systems

- Genetical diversity and organic/agroecological practice: Environment
 - Favor marginalized races: Japanese red, short-horn, polled
 - Create new quality standards and alternative pricing systems
- Encouraging local connection: Environment/Social
 Pasturing: lower production cost, improves breeding performance
 Limited beef produced in Japan is certified as organic

Voluntary animal welfare certifications: Social

High economic performance in small family farms: Economic/Governance

◆ Higher profitability than large farms

6. Discussions and Conclusions

Challenges of authenticity/sustainability of GI Japanese Beef

- Productivist, industrial, and technocrat orientation
- New technologies: genome editing, robotics, AI, low methane feeds
- Export: higher GHG emissions

Suggestions derived from alternative beef

- Integrating pasturing, local sourcing, organic, animal welfare in GI code of practice
- Possible outcomes: lower production cost, higher profitability, generational renewal, revitalization of rural communities

Implications for policymakers and GI stakeholders

- Create PDO equivalent GI classification to favor local sourcing/pasturing
- Encourage to adapt sustainability codes in GI code of practice
- Educate stakeholders on sustainability dimensions: environment, economy, social, governance
- Improve gender inequality: mutual aid for maternity/paternity leaves of farmers



Thank you!!!!

Photo: Sekine 2024

Acknowledgement: This work was supported by JSPS KAKENHI Grant Number 18K14542, 24K90612242 and Daiko Foundation Grant Number 11116. The author appreciates these supports and the cooperation of all informants that made this publication possible. 9