

Wagyu feeding technique for high quality beef production

Beef Cattle Symposium

**Antalya / Turkey
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**Belltree Australia PTY LTD
Takao Suzuki**

Farm Location

- Blue Mountains – 100km west of Sydney



Belltree Australia Operation

- Fullblood Wagyu Breeding : 70 head
- Fullblood Wagyu Feeding : 80 head
- Angus F1 production : 40 head

Work Experience

- Dairy farm in Japan 1997
- Japanese feedlot (7,500head) 1990 ~ 1991
- Australian feedlot (35,000head) 1991 ~ 2006
- Establish Belltree Australia PTY LTD in Blue mountains 2007 ~

What is Wagyu?

- The word 'wagyu' is a Japanese-language '*wa-gyu*', which simply means 'Japanese produced beef cattle'. It does not describe any single breed.
- Japanese Black >90% of Wagyu trade in Japan



Japanese Black



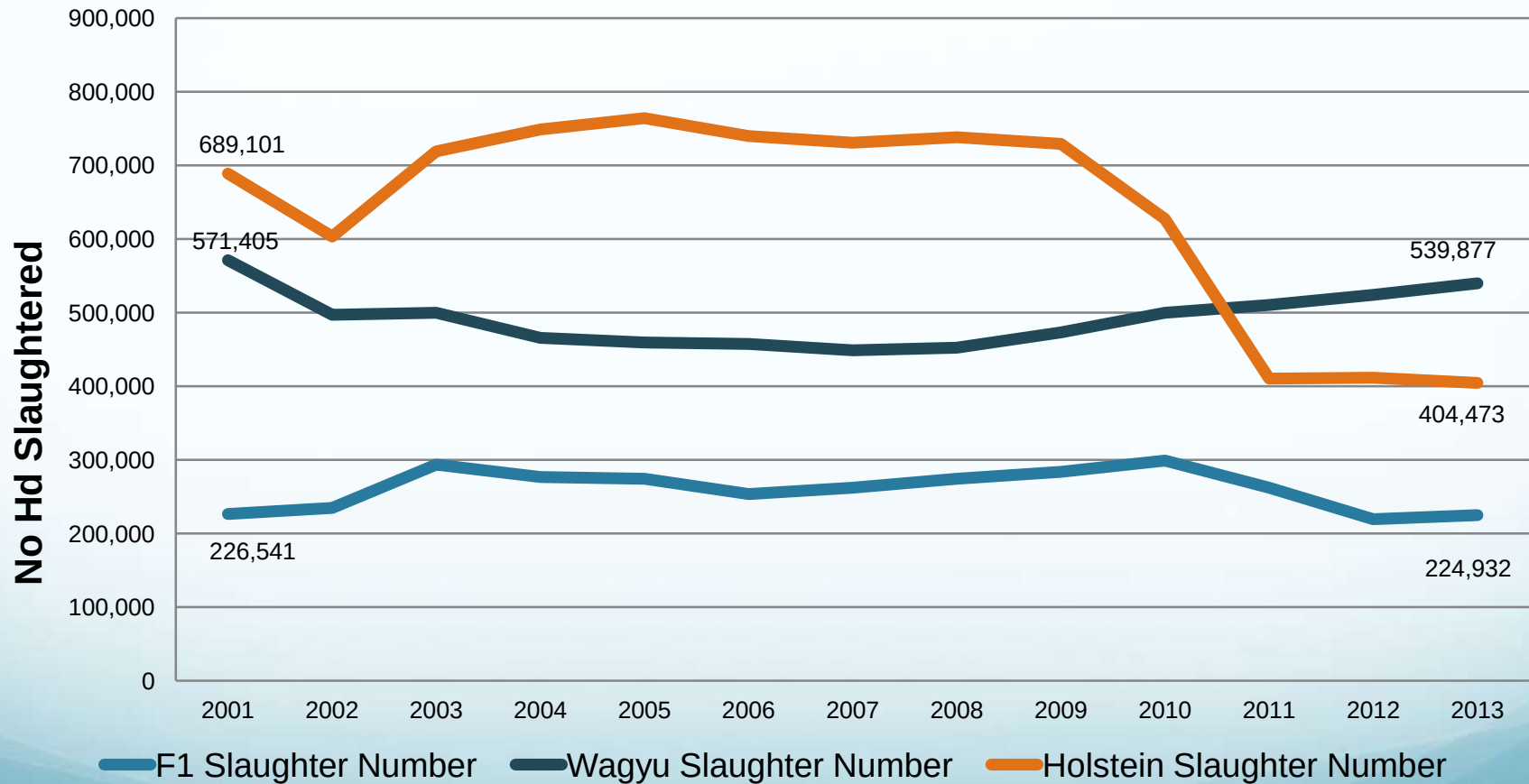
Japanese Brown



Japanese Shorthorn

Beef Production Trend in Japan

Beef Cattle Slaughter Number in Japan



Beef Retail Price in Japan

JPY/100g

	Wagyu	F1	Holstein
Chuck	617	441	299
Brisket	616	464	313
Sirloin	1, 157	844	599
Butts	602	439	332

Australian Wagyu

- Semen & embryos exported from Japan to USA in 1995
- Wagyu livestock and semen were imported from USA to AUS from 1996~
- “Wagyu” infused cattle feeding is popular through domestic/export market
- Wagyu is registered to Australian Wagyu Association database with DNA profile
- Mainly feeding at western style feedlot or grass fed

Wagyu Beef

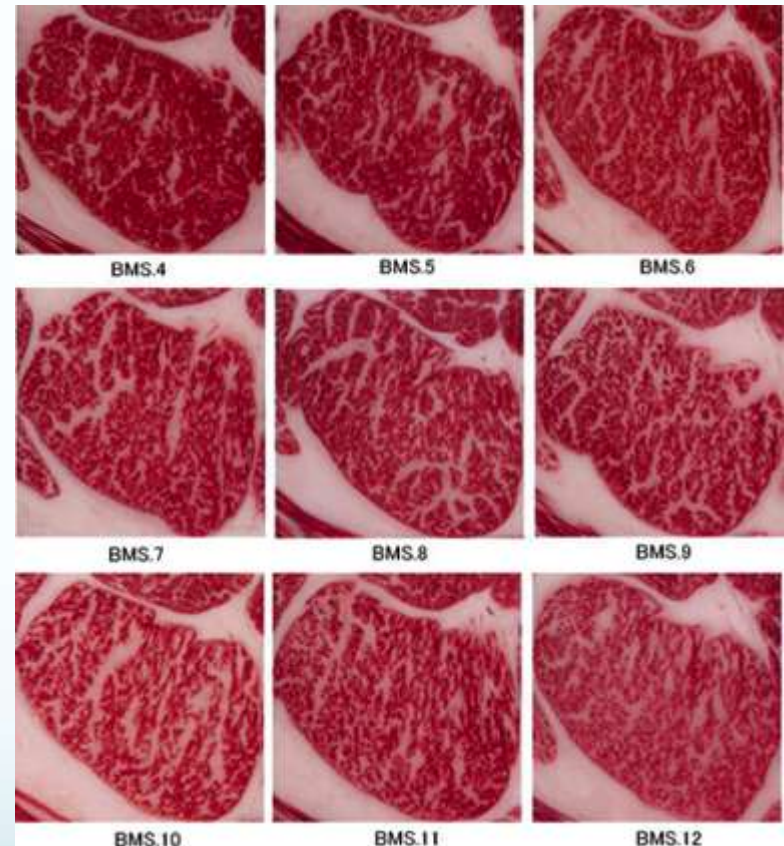


Wagyu Beef



Wagyu Beef Characteristics

- Marbling – Intramuscular Fat
- Fatty Acid Composition
 - High MUFA (Approx >53%)
 - High Oleic Acid (18:1)
 - Low Melting Point (<26°C)
- Texture – Firm
- Tender
- Unique Flavor



Wagyu Production



Japanese Style Feeding





Japanese Style Feeding

- Total growth management to meet nutritional requirements of cattle at each stage
- Specially formulated ration
- Selected feed ingredients for fatty acid composition and flavor
- Feeding up to 30 month old
- Minimize cattle stress
- Managing small group

Feed Ration

- **STARTER** - Pre/Post weaning
 - CP ~ 22%
 - TDN 78%
 - ADF 14%
 - Ad-rib Hay Feeding
 - Target Consumption 0.5 ~ 2kg
- **GROWER** - Post Weaning ~ 13 month Old
 - CP ~16%
 - TDN 76 ~ 78%
 - ADF 12%
 - High Roughage Contents(Pasture Hay, Alfalfa etc)
 - Target consumption 2 ~ 6kg (60% Ration, 40% Hay)
- **FINISHER** - 14 ~ 30 month old
 - CP ~12%
 - TDN 78%+
 - ADF 12.5%
 - Roughage with No Vitamin A (Straw)
 - High Grain Contents (70% +)
 - Target consumption 7 ~ 10kg (80% Ration, 20% Straw)

Example of Wagyu Feed Ingredients

- **GRAIN**
 - Barley – High Crude Fibre
 - Steam Flaked – High Digestibility
 - Corn – High Energy, Good Fat
 - Steam Flaked – High Digestibility
 - Hominy Feed – High Crude Fiber



Example of Waguyu Feed Ingredients

- **PROTEIN**
 - Soybean Meal – high in lysine
 - Canola Meal



Example of Wagyu Feed Ingredients

- **BY-PRODUCTS**

- Wheat Bran – High Fiber
- OKARA (By-Products of Soy Milk) – High Crude Protein
- Nuts Husk – High Fiber
- Barley Husk – High Fiber



Example of Wagyu Feed Ingredients

- **Mineral**
 - Salt – Balance Mineral
 - Lime Stone – Balance out P : Ca to 1 : 2 (prevention of Kidney Stone)

Example of Wagyu Feed Ingredients

- **ROUGHAGE**

- Grasses Hay (Ryegrass, Bermuda)

- Soft fiber and easy to digest



- Alfalfa Hay (Lucerne)

- High CP, Rich in Vitamin A



- Rice Straw/ Wheat Straw

- High Fiber
- No Vitamin A



Example of Wagyu Feed Ration

	Starter	Grower	Finisher
Corn	25.00%	22.00%	35.00%
Barley	25.00%	22.00%	25.00%
Wheat Bran	10.00%	15.00%	19.00%
Soybean Meal	13.00%	11.00%	8.00%
Barley Straw	0.00%	7.00%	0.00%
Nuts Husk	0.00%	0.00%	3.00%
Alfalfa	15.00%	7.00%	0.00%
Alfalfa Meal	10.00%	10.00%	0.00%
Wheat Straw	0.00%	4.00%	4.00%
Wheat Husk	0.00%	0.00%	4.00%
Limestone	1.00%	1.00%	1.00%
Salt	1.00%	1.00%	1.00%

****The rations are example only**

Feeding Program

- **0 – 3 month – Grazing/ Starter Ration**
 - Early weaning to ensure their growth and getting ready for grain feeding program



Feeding Program

- **3 – 13 month – Weaners/ Grower Ration + Hay**
 - Ensure the roughage consumption to develop rumen size and muscle growth



Feeding Program

- **14 – 30 month – Feeders/ Finisher Ration + Rice Straw**
 - Restrict Vitamin A consumption and maximize feed consumption until last minutes to develop marbling



Why Japanese Style??

- **Managing animal in small group**
 - ✓ Minimize variation in feed consumption
 - ✓ Managing by age group to control ration changes
- **Managing animal in shed**
 - ✓ Minimize stress of environment effect
 - ✓ Minimize feed wastage
- **Japanese Style Feed Ration**
 - ✓ Maximize marbling ability
 - ✓ Maximize eating quality by control fatty acid composition (MUFA : BMW 57.1% VS Angus 49.6)

Key Point of Wagyu Feeding

- **Start at Young Age**

- Early weaning and supplement nutrition is essential for Wagyu calf growth because milk production of Wagyu cow is limited.
- Muscle development at young age will determine beef yield

- **Develop Rumen Condition with good quality Roughage**

- Rumen conditioning at post weaning age (4 ~ 9month old) is essential to enhance high feed consumption for later stage
- Roughage consumption will increase rumen sizes and maintaining rumen bacteria population

- **Maintain Feed Consumption**

- Maintaining feed consumption as long as possible is key to increase marbling score. Irregular feed consumption will induce gastrointestinal problem and hence low meat quality.

