



**Asia-Pacific
Economic Cooperation**

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Agenda Item: 7, 10

A Cold Chain Proposal for Food Losses – Learning from the Past and Present of Japan

Purpose: Information
Submitted by: Japan



**Policy Partnership on Food Security Meeting
Jakarta, Indonesia
25-26 January 2013**

APEC Policy Partnership on Food Security

Jakarta, Indonesia January 25-26, 2013

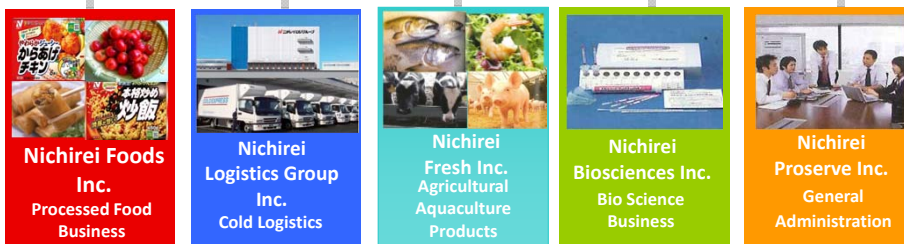
A Cold Chain Proposal for Food Losses
 ~ Learning from the Past and Present of Japan ~



Presenter : Mr. Naoji **KATO**
 Executive Vice President
 Nichirei Foods Inc.



Corporate Profile Nichirei Corporation

Nichirei Corporation (Holding Company)
 Group Statement : **Networking "Good Taste" and "Freshness"**

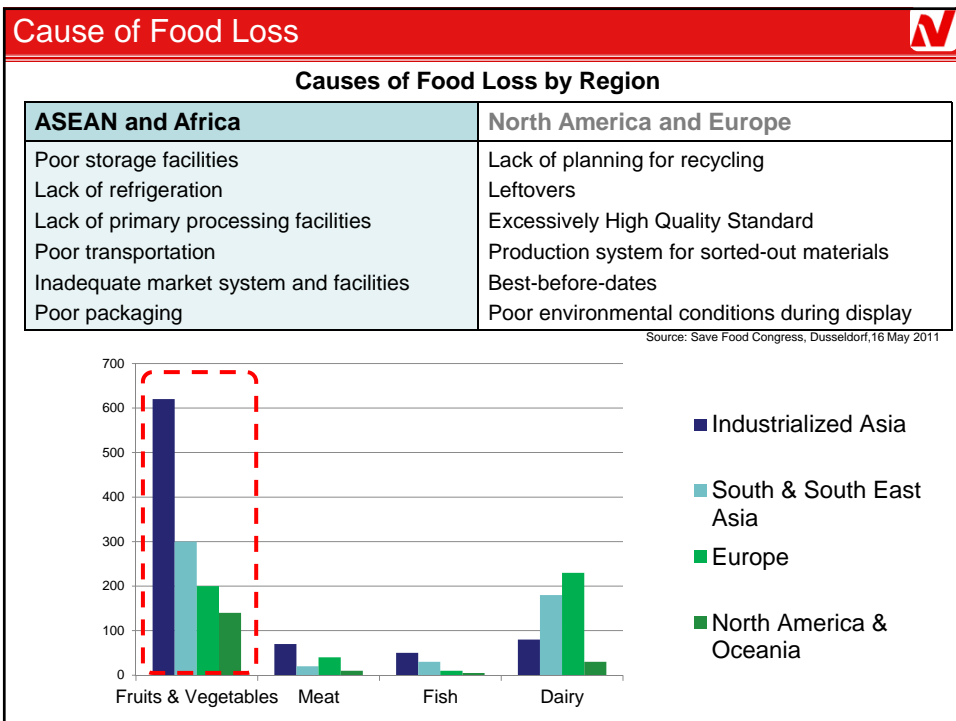
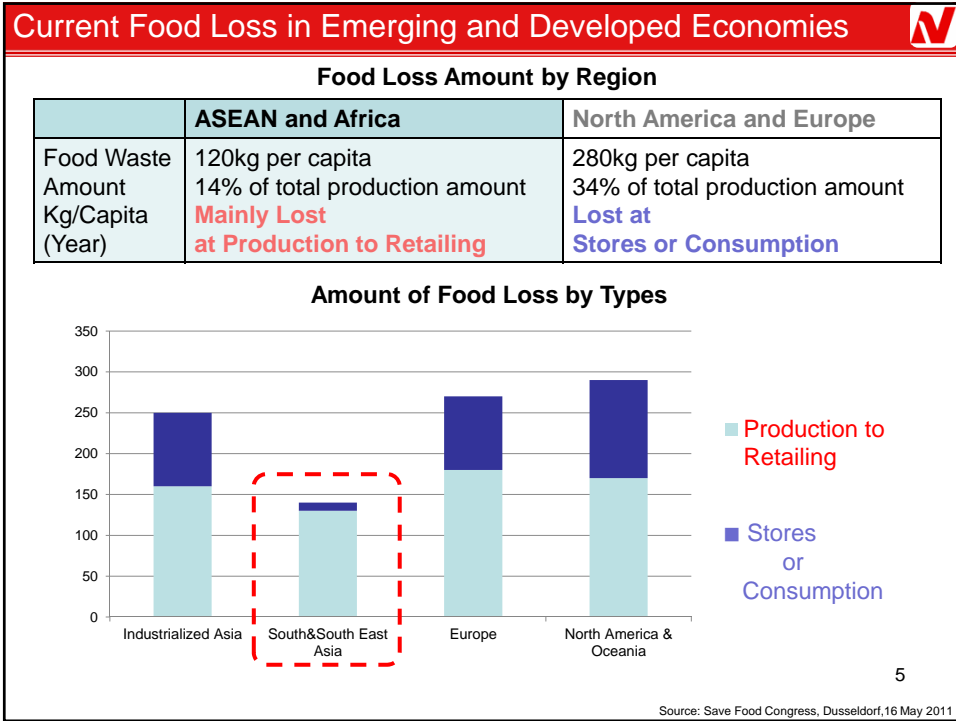


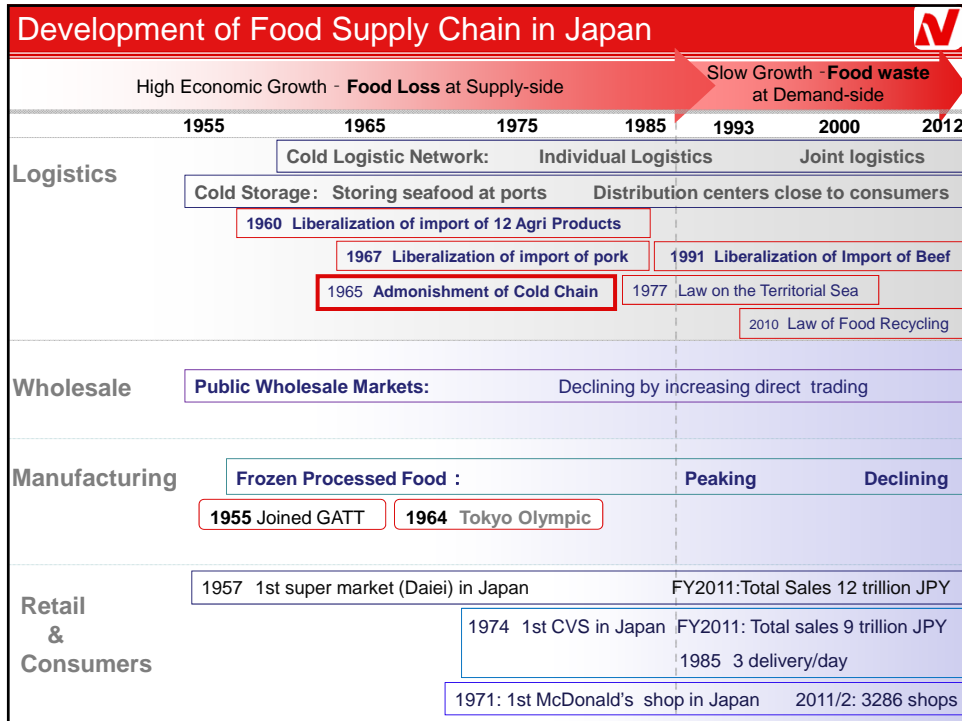
Established in	1942
Head Office Location	Tsukiji Tokyo, Japan
Net Sales	\$5.5 billion (@ JPY 85/\$)
<small>(FY2011 ended March 2012)</small>	



About us – Nichirei Logistics and Nichirei Foods.		
Company	Nichirei Logistics Group Inc.	
Business	Refrigerated Warehousing and Transportation	
Network	Japan 80 locations 1,380 thousand cubic meters	
And	Europe 9 locations 500 thousand cubic meters(Frozen)	
Storage capacity	China 3 locations 3 thousand cubic meters(Frozen)	
Revenue (F/Y2011)	1,648 million USD	
Market Share	No.1 in Japan and No.5 in the World	
		
Company	Nichirei Foods Inc.	
Business	Manufacturing and Selling of Frozen Food Retort-Pouch Food, Wellness Food and Acerola Fruits Ingredients.	
Network Abroad	Japan Thailand Viet Nam China Australia Brazil USA Netherland	
Subsidiary	19 companies	
Revenue (F/Y2011)	2,116 million USD	
Market Share	No.1 in Frozen food Market in Japan(Source:Fuji Keizai 2010)	
  		
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Current Food Supply in the World		
- Rapid Growth of World Population and ASEAN Countries		
- World	2011: 7 billion	2050: 9 billion
- ASEAN	2010: 600 million	2050: 750 million
Source: Census and Daiwa Souken		
<i>“Is this sustainable for the World?”</i>		
- Starving and Malnourished people		
- World	: 900 million people are starving	
- ASEAN:	17% of Children suffering malnutrition	
- Food Losses• Waste		
- About 1.3 billion tons a year,	1/3 of total food production in the world	
- Largest for fruits & vegetables	(Around 20% at Producing Level)	
- Substantial gaps in knowledge	throughout the food chain	
- Reduction as an important option	to increase food availability	
- Emerging economies	: Upstream of the supply chain (at Producer level)	
- Developed economies	: Downstream of the supply chain (at consumer level)	
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Source: Save Food Congress, Dusseldorf, 16 May 2011		





Solution in Past M

Period of High Economic Growth— Food Loss at Supply-side


Solution: Public-Private Partnership

- **Public Wholesale Market to Foster Small Farmers**
 - ▶ Protecting small farmers with little bargaining power
 - ▶ Pricing agri-products
 - ▶ Centralizing demand & supply in the region
 - ▶ Localizing of loading in and out of agri-products

- **Cold Storage Facilities**
 - ▶ Preserving domestic and imported agri-goods for a long period.
 - ▶ Preventing food poisonings

- **Facilities of Primary Processing of Agri- Products**
 - ▶ Supporting development of processing food industry.
 - ▶ Balancing of supply-demand
 - ▶ Minimizing post harvest losses

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Potential Solution in Present

Period of Slow Growth Economy - Food Waste at Demand side

Problem	Potential Solution
<ul style="list-style-type: none"> - Excessive Production over the demand - Cost of Recycling > Cost of food waste - Best-before- date <ul style="list-style-type: none"> -Mandatory waste of foods even consumable -waste by guarantee of freshness of products - coffee, lunch box, cakes - Specification set by Sellers <ul style="list-style-type: none"> -Desired shape of vegetable -Too many products variety -No use of whole raw material - Consumers' Abundant Life-Style <ul style="list-style-type: none"> - Purchasing more than consumed - Remains in buffet, restaurants. - Food waste: <ul style="list-style-type: none"> Japan- 19million tons (incl. consumable 5-9 million tons) USA- \$ 165 billion (NRDC) 	<ul style="list-style-type: none"> - Food Recycling <ul style="list-style-type: none"> e.g. Food Bank (Second Harvest) - Setting of "Total required calorie x Nutrition Balance" of each Economy - Setting of required amount of food import for each Economy - Review of Business Practices – <ul style="list-style-type: none"> Traditional "1/3 rule" in the retail outlets that forces to shorten the shelf life by 1/3 from the original Best-By period resulting in disposing the foods by food manufacturers. - Matching Mechanism - Common platform to share the annual food demand of food-service with farm producers : new 6th industry model

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What is Cold Chain Logistics?

Cold Chain Logistics

OIt enables to expand the area to deliver nutritious food by keeping it under -18°C

In 1965 , **Admonishment** by the Ministry of Science and Technology of Japan implemented expansion of **Cold Chain Logistics** in Japan.

Under rapid economic growth, unbalance in taking nutrition was major concerns and Cold Chain Logistics was recommended to increase accessibility to a variety of foods.

⇒ It contributed to the development of Food Service Industry.
 ⇒ It enabled to minimize usage of pesticide on vegetables and to supply safe food to people.

Imported Amount from Abroad ⇒ Japan		
1960		2010
Agriculture Products	7.7 billion USD	60 billion USD
Husbandry Products	1.8 billion USD	15 billion USD

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Source : Trade Statistics of Japan

What is Frozen Food?



Frozen Food

○ Quick Frozen

⇒ Keeps its quality same as before frozen due to less destruction of food cells

○ Preserving products under -18°C

⇒ Enables to preserve food at high quality for a long period.

⇒ Enables to develop frozen food industry now at \$ 10.0 Billion in Japan

⇒ Enables longer average human life due to a lower salt intake resulting from no need of salt for food preservation

○ Frozen Condition

⇒ Micro Bio Activity is hibernated which is effective to prevent troubles (e.g. food poison)

⇒ Quality of food stays at high level.

⇒ Usage of preservative or chemicals could be substantially curved.



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Acerola Business in Brazil



Complete Forward & Backward Supply-Chain Strategy

- Scheme of backward supply-chain built in a long term

- Competitive in Quality Control as 'Pioneer of Acerola'

Breeding Research, Cultivation Training and Pesticide Control

- Acerola raw material business has general versatility, large potential and growing market

(Beverage, Processed Foods, Health Care, Supplement, Cosmetics,)



NICHIREI
Acerola
Quality

A lecture to Co-Growers



Acerola



Proposal to 2 types of Economy 

1. Emerging Economies:

Cold Infrastructure, Primary Processing, Public Wholesale Market

- Provide a sustainable growth to the farm producers in the Food Supply Chain and a better life to consumers.
- Enable to establish an EcoSystem which can reduce food loss and control supply & demand at stable prices which improve farm producers' income regardless of changes of climate or economy.

2. Developed Economies:

Frozen Processed Food

- Reduce food losses in the supply chains and provide high-nutrition food to make people's life better and happier. Targets anyone, sick or poor can reach the happiness of enjoying food.


Strong Leadership of Public Sector for Food Waste

- Implement a strong leadership in such areas as public awareness, review of food business practices including "1/3 rule", new tax incentives for minimizing food waste, and etc. Japan has several success cases including Admonishment of Cold Chain in 1965.

Matching System of Supply & Demand

- Create a common platform to share information of annual demand of retailers/food services with farm producers to match supply & demand for avoidance of food loss/ waste- e.g. Nichirei Agri Inc

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Proposal :Public Private Partnership 

- Food Losses is a common problem in the Developed & Emerging Economies
- Sharing Developed Economies' technology innovated in the past to save food losses in Emerging Economies. This will minimize Post Harvest Losses and deliver High Quality Food efficiently to people under sustainable growth of economies.

Developed Economies' technology to save food loss.

Emerging Economies' Food Loss Problems

○ Proposal : Public Private Partnership

Public Sector	Private Sector
<p>Infrastructure</p> <ul style="list-style-type: none"> -Roads -Markets -Energy (e.g. electricity) <p>Public Awareness (e.g. Education)</p>	<p>Cold Logistics</p> <ul style="list-style-type: none"> - Refrigerated Transport <p>Facilities</p> <ul style="list-style-type: none"> -Cold Storage -Frozen Processed Food Plant -Freezer at Retail Stores

Save Food! Save the World

Thank You for Your Attention!



Presenter : Mr. Naoji KATO

Executive Vice President
Nichirei Foods Inc.

www.nichirei.co.jp