

# Greening the agri-food supply chain for enhanced food safety, competitiveness, and sustainable agriculture development

In the agri-food industry, many food processors and exporters of fresh products are working closely with their suppliers and supporting them with state-of-the-art technologies and advice on the choice of seed, disease control, use of appropriate chemical inputs, preservation of biodiversity, prevention of soil/water pollution/contamination, etc. Many examples provide concrete evidence that greening supply chains (GSC) has led to improved environmental conditions and more efficient use of scarce natural resources, notably water and energy, by companies in several countries. These examples also demonstrate the benefits to companies which include economic benefits from lower costs through reduced waste, improved product quality and safety, improved public image, and greater competitiveness.

The APO, in cooperation with the Japan Association for International Collaboration of Agriculture and Forestry, organized a multi-country study mission in Japan, 24–31 January, on greening the agri-food supply chain. The study mission was organized to review successful cases of GSC among agri-food firms in Japan and examine the current and prospective role of GSC in enhancing the quality and safety of agri-food products and competitiveness of agri-food companies while at the same time contributing to more sustainable development of agriculture and a cleaner environment. Twenty-one participants from 17 member countries from government, NPOs, academia, and private industry chambers joined the mission. Three resource persons from the Netherlands, Malaysia, and Japan made presentations on “Framework for GSC,” “Tools and principles for GSC,” and “Building partnerships and managing risks in supply chain management in Japan.”



*Participants inspecting organic fertilizer produced at Hotel New Otani*

During the mission, participants visited the Hotel New Otani, Tokyo; AEON Company, Chiba; JA Tomisato Company, Tomisato; Ajinomoto Company, Kawasaki; Wagoen Farmers' Cooperative, Katori; and Bio-recycle Research Project of the Ministry of Agriculture, Forestry and Fisheries, also at Wagoen in Chiba prefecture.

Participants were particularly impressed with the recycling system of the Hotel New Otani, where 5,000 kilograms of raw waste materials produced every day by the 50 kitchens in the hotel are processed into high-grade organic compost. The compost is sold to farmers, and vegetables produced by them are purchased by the hotel for its restaurants. This system results in 100% composting of raw refuse and saves the hotel ¥30 million annually, the cost previously incurred for thermal disposal of the raw kitchen refuse.

AEON Company has already achieved a high green level in its supply chain and established product marks informing customers that fewer pesticides and chemicals, antibiotics, or artificial additives went into the item. It is currently promoting the “My Bag, My Basket” campaign, to reduce the use of plastic shopping bags by encouraging customers to bring their own.

JA Tomisato Company is engaged in the contract growing of fresh vegetables and assembling products supplied mainly to the AEON chain of supermarkets. JA Tomisato extension specialists supervise the use of selective fertilizers and chemicals in the production phase. Packaging relies on reusable plastic containers instead of nonrecyclable packing materials.

The Wagoen Farmers' Cooperative has its own biomass and waste recycling center where livestock waste and vegetable residues are transformed into high-quality compost. Every point of the supply chain incorporates the greening process. One of the success factors for greening is the receptivity of cooperative farmers, most of whom are in their 30s, to green concepts.



*Wastewater purification system explained at Kawasaki Plant, Ajinomoto Co., Inc.*

The Ajinomoto Company has established a “bio-cycle” system whereby products generated during its amino acid production process are returned to the farm in the form of fertilizers and other organic materials sold to farmers. The adoption of the bio-cycle system enabled a 99% resource recovery rate of the byproducts from fermentation processes.

The visits illustrated different methods and tools that can be used for greening the agri-food supply chain, resulting in a win-win situation for companies, suppliers, and consumers. 🌱