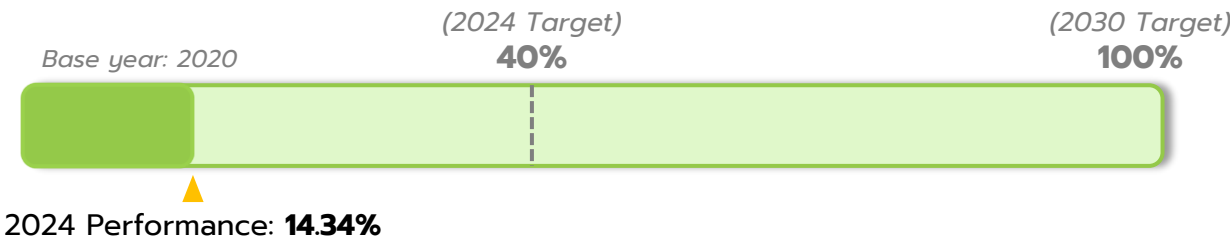


Circular Economy

Target and Performance

Long-term target by 2030

Zero waste and food waste sent to landfill.

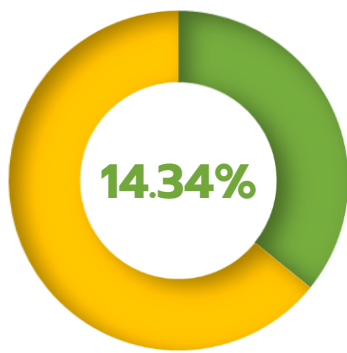


100% sustainable packaging.



2024 Target

- Reduce food waste sent to landfills by at least 40% of total food waste



Of Target

2024 Result

- Reduce food waste to landfill **14.34%**
 - > Food surplus 526.75 tons
 - > Animal feed 2,709.88 tons
 - > Composting 2,796.27 tons
- Waste intensity per revenue **0.10** tons per million Baht
- Reuse and recycle **169,765.42** tons (71.02%)
- sustainable packaging **99%**






Waste and Food Waste Management Plan and Result

As the setting target to be Zero waste and food waste to landfill by 2030 and minimum 40% reduction in 2024.
The Company has approach and action for waste management and reduction as follow;

- Waste audits to identify opportunities for improving waste performance.
- **100%** areas or function where waste is generated are identified, collect data, analysis, action plan and monthly monitor.
- Shrinkage minimization to prevention the waste generate, the cross function working team conduct weekly basis monitoring.
- **100%** employee has trained the waste reduction policy and instruction.
- Food waste & waste utilization.
- Invest innovation and R&D to minimize waste such as near-expired food products are discounted or cooked and sold as ready-to-eat products. digital shrinkage management system, Black soldier fly feeding (Research with universities).
- Integration of recycling programs within every facility to reduce the waste sent to landfill.
- Waste diversion from landfill is certified by an independent accredited body.
- 5Rs to reduce the total waste to landfill.



Zero Waste and Food Waste to Landfill Projects

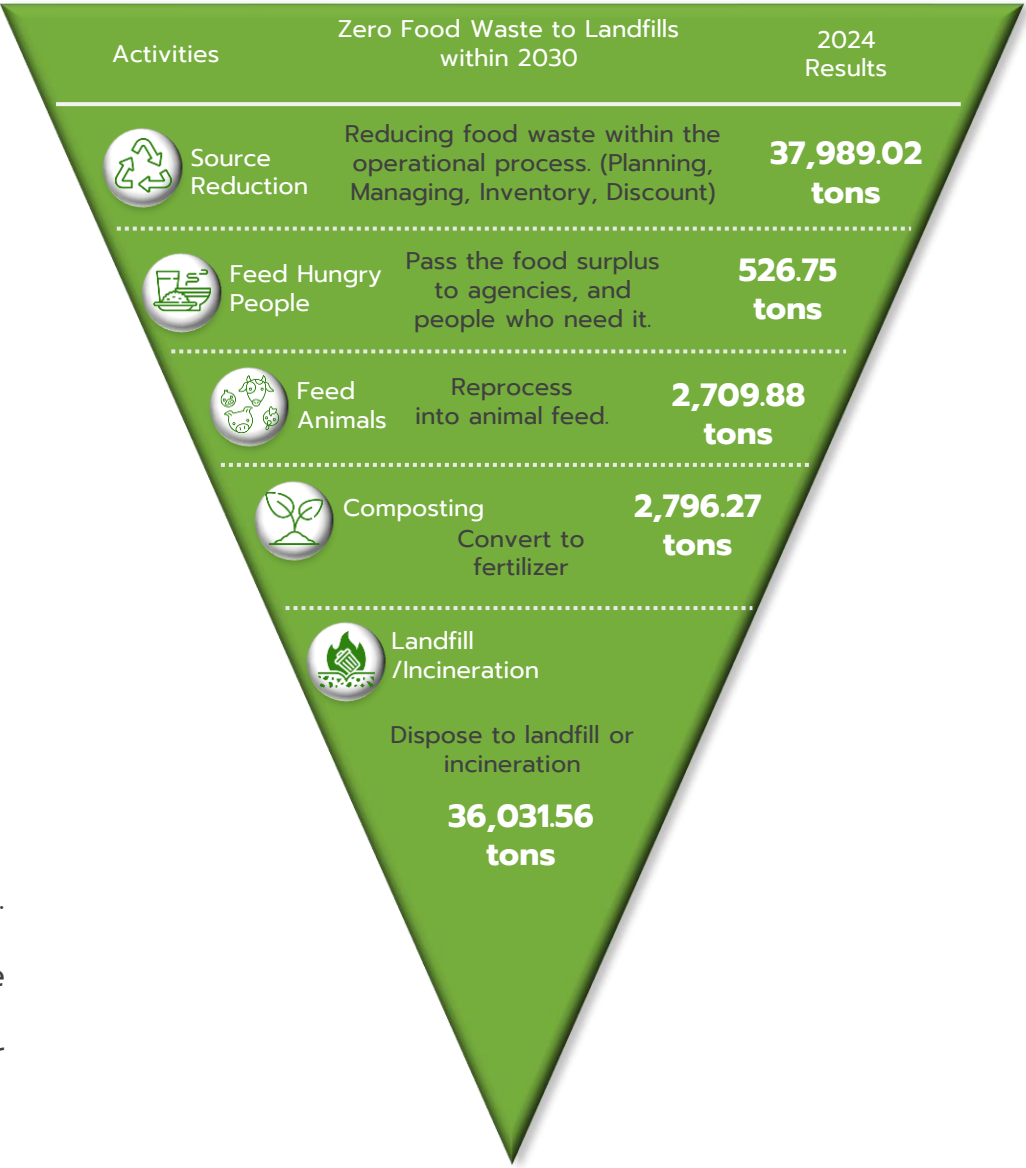
5Rs Strategy		Actions	2024 Results
Waste prevention/reduction project	 Reduce	<ul style="list-style-type: none"> • Not provide free plastic shopping bags to customers. • Not selling deoxy plastic, products contain plastic microbeads and cap seals on beverage bottles. 	<ul style="list-style-type: none"> • 100% implemented at every store. • 100% No product contains deoxy plastic, plastic microbead, and cap seal of beverage bottle.
	 Reuse	<ul style="list-style-type: none"> • Reuse material in operation i.e. plastic wrap, paper boxes, and palettes at stores and distribution centers. 	<ul style="list-style-type: none"> • 101,527.63 tons general waste are reused. • 6,032.91 tons food waste are utilized.
	 Refuse	<ul style="list-style-type: none"> • Replace with recyclable PET plastic tray for sliced meat or fruit. • Biodegradable material (Banana stem) as the packaging "Local Organic Vegetable". • Utilized plastic bags that a thickness not less than 40-micron (recyclable). 	<ul style="list-style-type: none"> • 1,794.60 tons. replacement of recyclable PET can reduce non-recyclable polystyrene packaging. • 6.74 tons of banana stems are used to substitute the plastic packaging and sale amount is 17,354,476 Baht. • 100% utilized the recyclable material (wholesale business).
Reduce waste sent to landfills	 Recycle	<ul style="list-style-type: none"> • Plastic and material from own operation are collected, segregated, and sent to recycling process (Wholesale 620.28 tons Retail 14,277.60 tons). • Drop point at the store for collecting the plastic packaging from employees, customers, and communities total 77.12 tons (Wholesale 65.01 tons Retail 12.10 tons). 	<ul style="list-style-type: none"> • 14,974.98 tons of plastic and • 2,595.30 tons of paper waste from stores are sent to the recycling process.
	 Renewable	<ul style="list-style-type: none"> • 63.82 tons of PET plastic bottles from stores and offices are collected and shifted to recycling and upcycling process to be the new uniform shirt for every employee. Besides, are donated to Jak Daeng Temple to produce PET monk robes. • 1.19 tons are upcycling by collaboration with Indorama Venture Public Company Limited to produce the 100 sport T-shirt and donate to school which locate nearby the store. 	<ul style="list-style-type: none"> • 65.01 tons are upcycling to new materials or goods.

Food Waste Management

The Company's target to be Zero waste and food waste to landfill by 2030. The Company has an approach and action for food waste management and reduction as follow;

- 1) Measuring food loss & waste with the acceptable method and breaking down volumes by category and/or lifecycle stage or processing flow to identify the critical area for improvement.
 - 2) Define appropriate action plan and target that may have economic, environmental, or social benefits instead of being discarded without any value creation such as the appropriate inventory planning, destinations, and repurposing actions may include any utilized for other processes including the alternative uses of waste and food waste which based on food safety practice.
 - 3) Train and communicate to raise awareness related to food loss & food waste reduction actions and targets to the employees, temporary workers, contractors, and suppliers in the supply chain.
 - 4) Collaborate and encourage the up/downstream partners, service providers, and contractors among production, transportation, storage, distribution, and trading to reduce the amount of food loss & food waste in the value chain.
 - 5) Publicly disclose the status of the food waste & food loss reduction program and performance compares targets as annual basis.
 - 6) Collaborate with other organizations such as government, education institutes, community, etc. to find opportunities for corporative solutions the food loss & waste such as The World Business Council for Sustainable Development.
- The action to reduce food waste, which company are prioritized step through;
- 1) Shrinkage prevention: reducing food waste within the operational process. (Planning, Managing, Inventory, Discount)
 - 2) Feed hungry people: Passing the food surplus to agencies, and people who need it.
 - 3) Feed animals: Shifting to animal feed
 - 4) Composting: Convert to fertilizer or EM solution.

Zero food waste to zero landfill Projects



Example of Waste and Food Waste Management Projects

"Mai Tay Ruam-waste and food waste segregation" Project

In 2024, All wholesale and retail store signed the collaborate MOU with Bangkok Metropolitan Administration to join the "Mai Tay Ruam" project which the segregated food waste and general waste. The food waste will be composted and utilized in all public parks in Bangkok and the general waste is sent to recycling or energy converting process. Furthermore, the Company's "Segregation is Reduction" project continue the campaign for color code garbage bags to promote the waste segregation behavior among customer and community.



2024 Results

- Reduce food waste to landfill **6,032.92** tons (wholesale 3,991.71 tons, retail 2,041.21 tons).

"3rd year of Food Waste Donation to the Wildlife Conservation Centers" and "Food Waste for Black Soldier Flies Feeding" Project

Wholesale and retail store continue the third year of food waste donation to feed the animal in zoo and national park. As the collaborative MOU with Ministry of Natural Resource and Environment, by Department of Environmental Quality Promotion, The Department of National Parks, Wildlife and Plant Conservation, the Zoological Park Organization of Thailand under the Royal Patronage, and Forestry Industry Organization. The Company's supports the 37 Wild Animal Reservation and Protection Centers upcountry. In 2024, Both The company received the award the from Department of National Parks, Wildlife and Plant Conservation. Furthermore, stores in the Northeast cooperated with Khon Kaen University to pass the food surplus to farmers within the Khon Kaen University network as feed for Black Soldier Flies (BSF), a protein insect, safe towards plants and communities. Furthermore, Makro store at Mahachai and Phetchaburi also collaborate Phetchaburi college for study the research studies the food waste from stores for black soldier flies feeding to find out the proper food waste formula, yield production and nutrition from BSF.



2024 Results

- **2,709.88** tons are donated for animal feeding (wholesale 1,797.62 tons, retail 912.26 tons).

Example of Waste and Food Waste Management Projects

"Food Surplus & Food Waste Donation" Project

This project aims to reduce food waste from retail store which cannot sale but still eatable to community nearby Lotus's store (main format) in Bangkok and vicinity and foundation such as Scholars of Sustenance Foundation, V-VShare Foundation initiated from the pilot project.



2024 Results

- **526.75** tons donate as food surplus to people.
- **2,796.27** tons food waste donation from convert to compost for community (wholesale 2,194.08 tons, retail 602.19 tons).

"EM Fermentation from Food Waste" Project

To reduce food waste to landfill by fertilizing the organic food waste, such as citrus fruits and pineapples, into bio-fermented water (EM) used to chemical free deodorize and degradable grease and oil in the sewer and floor at stores. Presently, 116 makro stores continue convert food waste to EM fermentation. In 2024, makro also donate EM to Bangkok metropolitan administration for their cleaning and river in Bangkok areas.



2024 Results

- **44.23** tons of food waste are convert to EM fermentation.

Example of Waste and Food Waste Management Projects

"Transition to Sustainable Packaging and Promotion of Circular Economy" Project

CP AXTRA Public Company Limited, signed a Memorandum of Understanding (MOU) with four key partners: Nestle (Thailand) Co., Ltd., Thai Namthip Corporation Limited, Haadthip Public Company Limited, and Patum Vegetable Oil Co., Ltd. This collaboration marks a significant step toward sustainable business operations, with a shared vision of reducing environmental impact through the adoption of a circular economy and sustainable packaging solutions. The MOU highlights a commitment to transitioning towards the use of 'sustainable packaging', including recyclable, biodegradable, and reusable materials, as well as packaging that incorporates recycled content. Including the advertisement PP plastic board at store has changed to paper or biodegradable material. This joint initiative aims to drive positive change in Thailand's wholesale and retail sectors, setting a new standard for sustainability in the industry



Packaging Made from rPET

Packaging Made from Paper

2024 Results

- Sales of **560,948,842** baht, increase of 49% from the previous year.

"Sustainable Packaging Product" Project

All stores announced to stop the single-use polystyrene (foam) food box in 2019. Together with continuously educating, promoting, and campaigning to the food business customers, and end consumers with the variable design and accessible prices biodegradable packaging. With a collaborative partnership, can provide more than 530 designed items. Become the centre of in Thailand and motivate sustainable consumer trends.



Biodegradable packaging



Made from recycled content

2024 Results

- Biodegradable packaging product is sold in **4,406.83** tons, or income increasing sales of **12.93%** and income of **45,655,619** baht.
- **2,684** tons of plastic waste from store is sent to be recycled content of new products (rPE garbage bag) and sold in the store. Improved recycled content rate **218%** compared to last year (2023 = 1,890 tons) and increased sales = 109,322,243 bath.

Example of Waste and Food Waste Management Projects

Activities	2024 Results
	<ul style="list-style-type: none">• 63.82 tons of PET plastic bottles from stores and offices are collected and shifted to recycling and upcycling process to be the new uniform shirt for every employee. Besides, are donated to Jak Daeng Temple to produce PET monk robes upcycling by collaboration with Indorama Venture Public Company Limited to produce the 100 sport T-shirt and donate to school which locate nearby the store.• 14,974.98 tons of plastic and 2,595.30 tons of paper waste from stores are sent to the recycling process.
	<ul style="list-style-type: none">• 101,527.63 tons of paper from distribution center and store are collected to SCGP recycling process. Additional, improve collecting that able to shifting the recycling to reuse for better retaining the value of material.
	<ul style="list-style-type: none">• 1.19 tons of PET plastic (PCR) from makro's store are sent to Indorama Venture PCL PET recycling process.
	<ul style="list-style-type: none">• Lotus's joins hands with True Corporation Plc. Forging ahead the "e-Waste TinkTookTee D TorJai" project, expanding e-Waste points available at 20 Lotus's branches throughout Bangkok and the vicinity area.

Innovation project "Sustainable packaging with banana stems"

Create quantitative benefits for society and the environment by replacing single-use plastic packaging with packaging trays made from banana stalks. It can reduce plastic waste by 6.74 tons in 2024 and help farmers in Chachoengsao Province increase their income by 15 million baht per year.



2024 Results

- **6.74** tons of banana stem tray replace plastic tray
And sale amount **17,354,476** Baht per year.

Example of Waste and Food Waste Management Projects

"C2 X aro for Sustainability"

The company establishes a sustainable packaging policy. There are operational guidelines covering various issues such as creating engagement with stakeholders to manage packaging in a complete manner. Design and selection of packaging for aro (Own Brand) products to be environmentally friendly. According to the concept of the circular economy (Circular Economy) This project has selected quality mineral water that is good for health, certified to GMP and ISO 22000 standards, and also designed the packaging to be environmentally friendly. By reducing the use of plastic in PET plastic packaging that is unnecessary. By researching and developing packaging to maintain its properties. But using a reduced amount of material. Modify label format and do not use ink to print the date of manufacture on the bottles so that the bottles are 100% recyclable. Change plastic packaging to PCR plastic to reduce the amount of waste created from new plastics. According to the concept of material recycling (Recycled Material/Recycled Content). This project are launching in wholesale distribution centers throughout the country in the first quarter of 2024



2024 Results

- Sale amount **1,196,441 Baht.**
- Reduce use of plastic **83,780 kilograms.**

ผลิตภัณฑ์เพื่อความยั่งยืนของเรา

 รีไซเคิลได้ 100%

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ปี 2567 ลดการใช้พลาสติก **83,780 กก.**



