

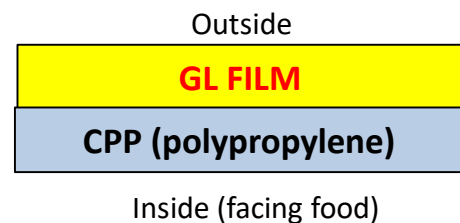
ココナッツサブレ



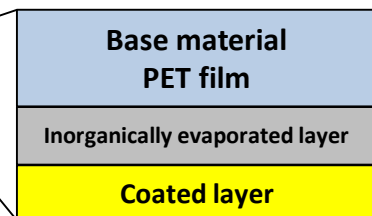
Individual packaging

(Sale) From October 2016

(Composition of individual package)



(Cross-section drawing)



(Improvement of packaging)

- Change to package of 5 fun-size pieces on occasion of renewal sale
- Adopt “GL Film” with high barrier properties



(Reduction of food waste)

- Small-lot packaging improves preservability after opening.
- Packaging material with high anti-oxygen barrier properties and moisture proof properties reduces food waste caused by the degradation of product quality by preventing oxidation and moisture absorption.

GL FILM is a transparent barrier film developed by Toppan Printing Co. adding an inorganically evaporated layer and coated layer to its base film. GL Film exercises high barrier properties against oxygen, moisture, etc.

朝のフレッシュ®ロースハム、 ロースハム塩分25%カット



(Improvement of packaging)

- Use fun-size package for sliced hams
- Adopt thinned film with high barrier properties against oxygen to reduce the used amount of packaging material by approx. 20% (starting in 2017)
- The mouth for opening has been enlarged to 30mm in size from 23mm for easier opening. Emboss processing was also applied for easier grasping.



(Reduction of food waste)

- Household food waste through leftovers is reduced by making small fun-size packages label-connectable

(Sale) From 1997

*From March 2017 for Morning Fresh® Loin Ham Salt Content 25% Cut

チキンナゲット 便利なジッパー付き

(Improvement of packaging)

- Adopt zipper to reseal chicken nugget package
- Curb drops in the texture and quality of chicken nuggets after opening as the package can be resealed for cold storage after taking out necessary number of nuggets



(Reduction of food waste)

- Reduce household food waste due to full use

(Sale) From 2017

「食べきりサイズに対応した製品」

Product examples



(Improvement of packaging)

- The number of slices has been adjusted in response to changes in family configuration such as an increase in single-person households and a decrease in family members per household.
- Packages have been downsized to match a drop in the number of slices in each.

(Reference)

Ratio of single-person households (from 21% in 1990 to 27% in 2015)

Number of family members per household (from 3.1 in 1990 to 2.38 in 2015)



(Conveniently sized and individually packaged)

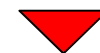
- Reduce out-of-date products (food waste) by introducing fun-size packages such as 3 slices of bread per package or a cut in the number of table rolls to 3 from 5 or 6.

「Cook Do®」2人前シリーズ



(Improvement of packaging)

- Create new series for 2 persons in addition to family series for 4 persons



(Reduction of food waste)

- Lineup of series for a number of family members per household reduces food waste by decreasing leftovers resulting from excess cooking.

(Sale) From March 2013

特選 生わさび



Developed product



Conventional product

(Improvement of packaging)

- Mouth of the tube has been changed to facilitate the squeeze-out of content until all is used up.



(Reduction of food waste)

- Reduce food waste as easy design for full use until the last of content ("wasabi" Japanese horseradish) is used, leaving none inside.

From September 2015

ビヒダス ヨーグルト（4連タイプ）

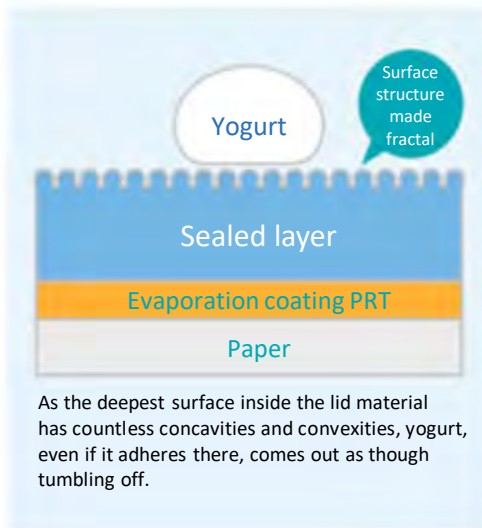


From May 2012

Surface of lotus leaf and its SEM structure

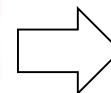


Asperity structured with fine villi



(Improvement of packaging)

- Adoption of a packaging material, which has water-shedding properties achieved by the application of the surface structure of lotus leaf, makes yoghurt and the package more detachable.



(Reduction of food waste)

- Reduce residual in the package as yoghurt does not attach to its lid at the time of opening

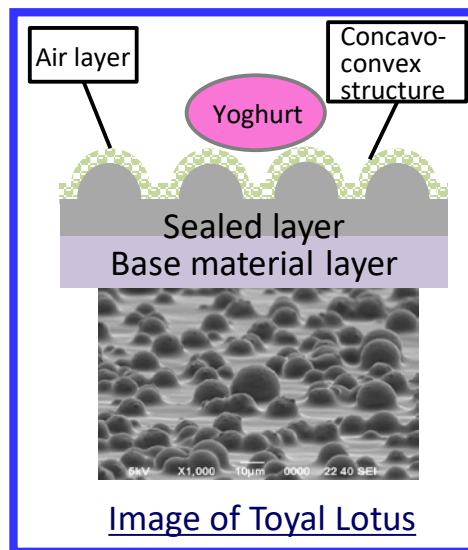
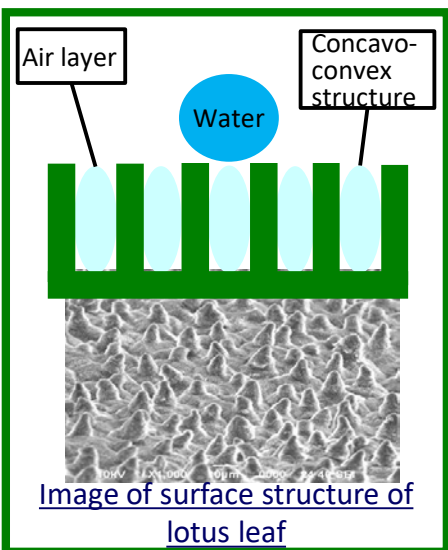
(3Rs, etc.)

- Save time for washing the lid for waste separation after eating

ナチュレ 恵 megumi ブルーベリー＋いちご 70g×4



From September 2015



(Improvement of packaging)

- Adoption of a packaging material, which has water-shedding properties achieved by the application of the surface structure of lotus leaf, in the upper lid makes yoghurt and the package more detachable.



(Reduction of food waste)

- Reduce residual in the package as yoghurt does not attach to its lid at the time of opening

(3Rs, etc.)

- Save time for washing the lid for waste separation after eating

デコレーションケーキ



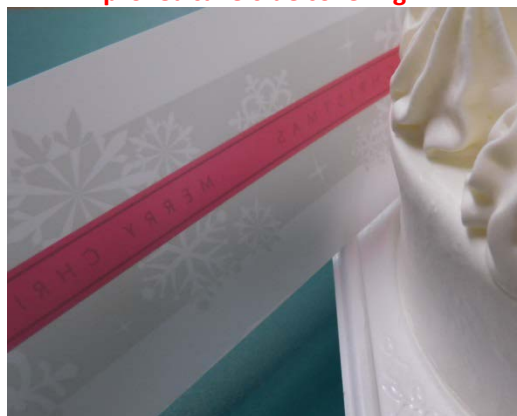
(Sale) From 2016



Conventional cake-side covering film



Improved cake-side covering film



(Improvement of packaging)

- The conventional side covering film takes a considerable amount of cream away from a decoration cake when it is peeled off.
- To address the problem, the improved covering film is given water- and oil-shedding properties, achieved by the application of the surface structure of lotus leaf, so that cream stays better on the cake.

○Image of film (image of reduced scale)

Oil-shedding treatment (Toyal Ultralotus®*)

Special coating

Plastic film

*Production: Toyo Aluminum KK



(Reduction of food waste)

- Food waste is reduced as cream stays on a cake for consumption without waste.

**Win the Minister of Economy, Trade and Industry
Prize as the 2017 Japan Packaging Contest**

「ふわふわスフレ」シリーズ



(Improvement of packaging)

- The conventional packaging has an embossed film inside to prevent souffle from adhering to the pouch. The improved packaging uses a specially coated film inside the pouch.



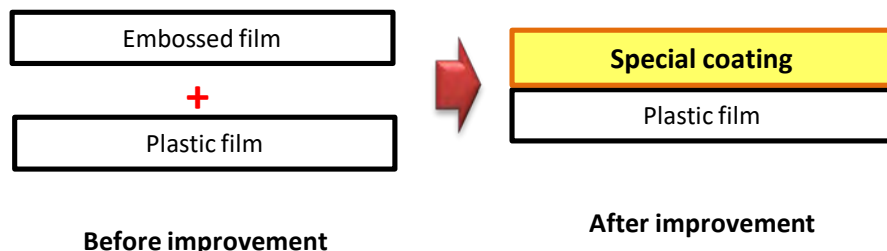
(Reduction of food waste)

- Food waste is reduced as the prevention of souffle from attaching to the pouch has enabled consumption without waste.

(3Rs, etc.)

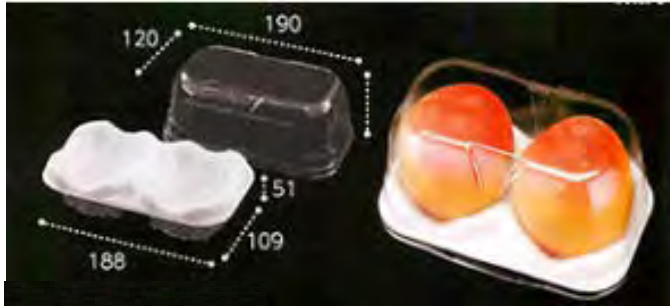
- Dual packaging is no longer necessary due to the prevention of souffle from attaching to the pouch without using an embossed film.

○Image of packaging (image of reduced scale)



(Sale) from 2016

ふわりーと

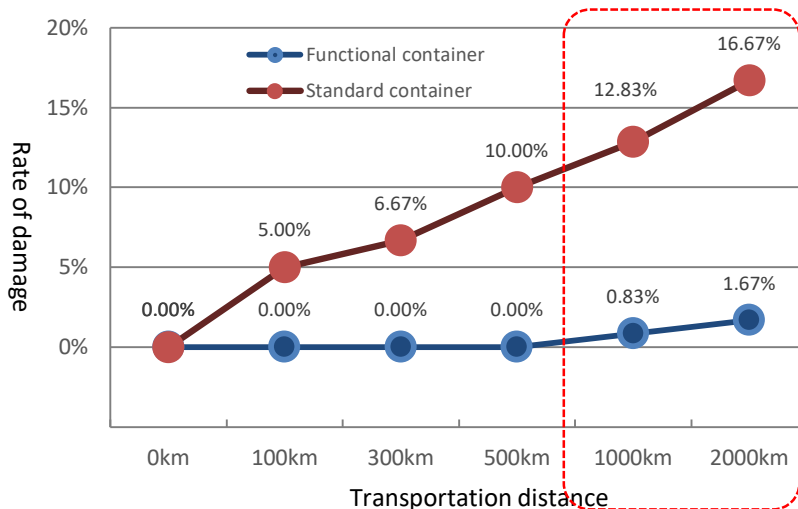


From August 1999

(Improvement of packaging)

- Functional container to reduce damage to vegetables and fruits during transportation
- Consists of unwoven fabric (polyester) to wrap peaches and molded-bottom container

Rate of damage by distance during transportation of peaches



Source: LCA Research and Study Report on Plastic Food Containers (March 2016 by the Plastic Waste Management Institute)

(Curb damage to peaches)

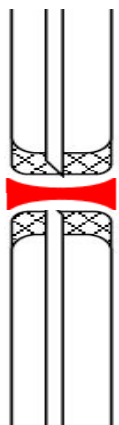
- Elasticity of unwoven fabric curbs damage to vegetables and fruits from shaking and shocks caused by transportation and freight handling.
- The fabric is expected to be used for exports from Japan as it is suitable for long-distance transportation.



アミノバイタル® GOLD



From October 2016



A specially shaped mold in the cutting section of filling and packaging equipment cuts and rounds off the angle of a part shown in the left drawing.



(Improvement of packaging)

- Individually packaged sticks used to be wrapped with a material having sharp angles and damaged during transportation, etc. as they bumped into each other.

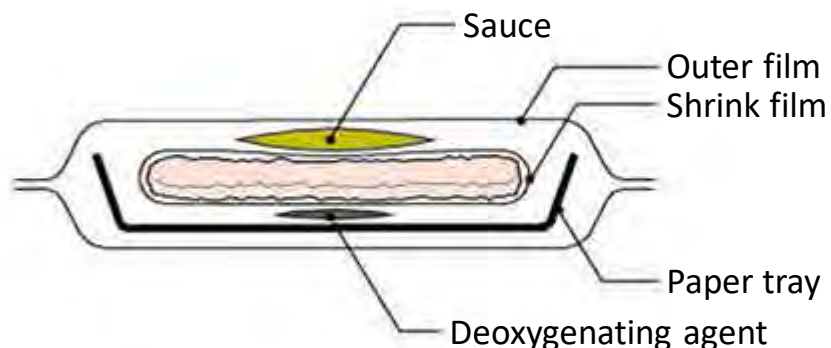
→ Production lines were improved to round off the angles.



(Reduction of food waste)

- Reduction of food waste is achieved by alleviating mutual piercing by sticks.

ラ・ピッツァ



(Improvement of packaging)

- Package consists of a shrink film wrapping pizza dough, sauce and toppings, a paper tray that protects the entire product, a deoxygenating agent, and an outer film having gas barrier properties.



(Reduction of food waste)

- Optimizing the makeup of packaging reduces damage during transportation and cuts back on disposal waste caused by cracks and scattering of toppings at the distribution stage.
- Curbing oxidation realizes a best-before date of around 2 weeks.
- Cut in the volume of waste is possible as the paper tray can be folded into a small piece for discarding.

(Sale) From 2003

「ほんだし®」300g、450g、600g箱



(Conventional product)

Outside

Plastic film
Aluminum foil
Inside film

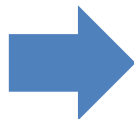
Inside (facing food)

(Improved product)

Outside

Plastic film
Aluminum foil
Internal high-strength film

Inside (facing food)



(Improvement of packaging)

- Using a plastic film, the pouch occasionally developed small holes due to shaking during transportation.
- The use of a high-strength film in place of the plastic film prevents the pouch from developing holes during transportation.

(*Thickness of films is unchanged out of concern about environment load)



(Reduction of food waste)

- Reduce disposal waste by cutting back on disposal and product returns caused by holes created during transportation.

(Sale) From August 2014

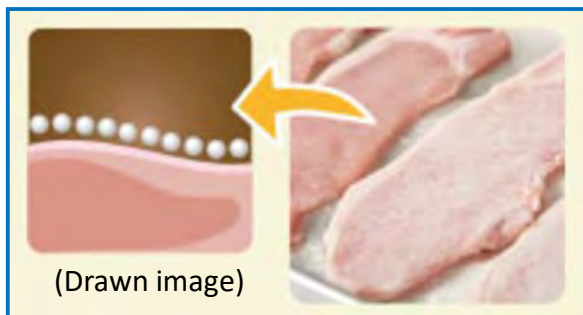
日清 クッキング フラワー®



From 2015



Applicable to mince!



Evenly floured on ingredient



Good for pouring!

(Improvement at food production stage)

- Granulate flour with original method.
Develop flour that avoids clumping

(Improvement of packaging)

- Enhance user-friendliness by downsizing from 1kg bag to 150g bottle
- Use of refillable product contributes to cut in the volume of packaging material used.



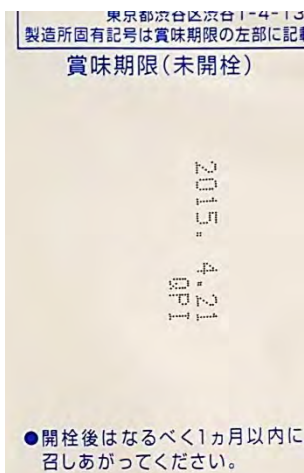
(Reduction of food waste)

- Granulation helps flour avoid clumping and be evenly covered over ingredients. Food waste can be reduced as the small bottle is easy to use and fully consumed without waste.

キューピーマヨネーズ、キューピーハーフ

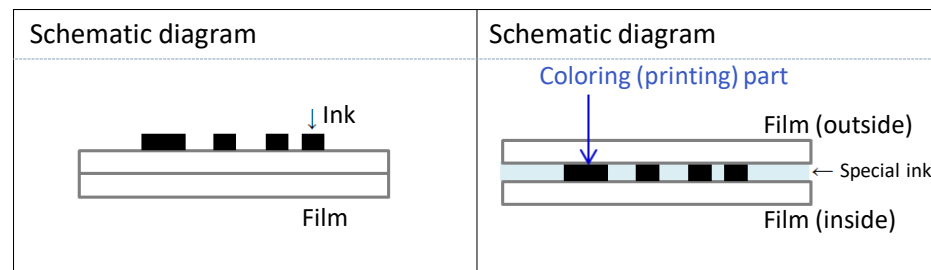


From March 2013



(Improvement of packaging)

- Make characters to show best-before date and other information, printed on outer film, easier to read



- The print does not fade even if touched during distribution
- Printed in higher density after selection of outer film and optimum setting of ink's adhesion strength



(Reduction of food waste)

- Higher visibility of the print reduces disposal in households caused by false recognition of best-before dates.

(株) ロッテ

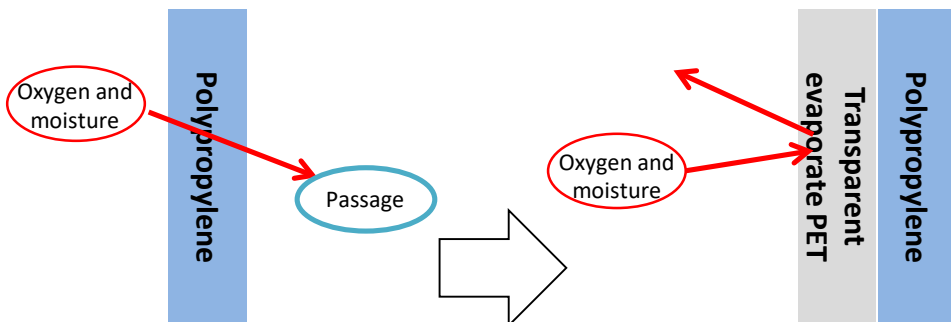
スイーツデイズ 乳酸菌ショコラ アーモンドチョコレート・ビター



Composition of outer film

Conventional

After improvement



From February 2016

Others

(Improvement of packaging)

- Adopt outer film having strong barrier properties against oxygen and moisture

This product is often displayed close to yoghurt and other chilled products because of its name and character. The conventional packaging material often deteriorated the quality of contents due to bedewing, etc. and damaged outer cases, resulting in product returns and disposal.

(Reduction of food waste)

- Improved outer film curbs the degradation of quality and makes it possible to display and store the product under various conditions of temperature and humidity.

ニューコンミート



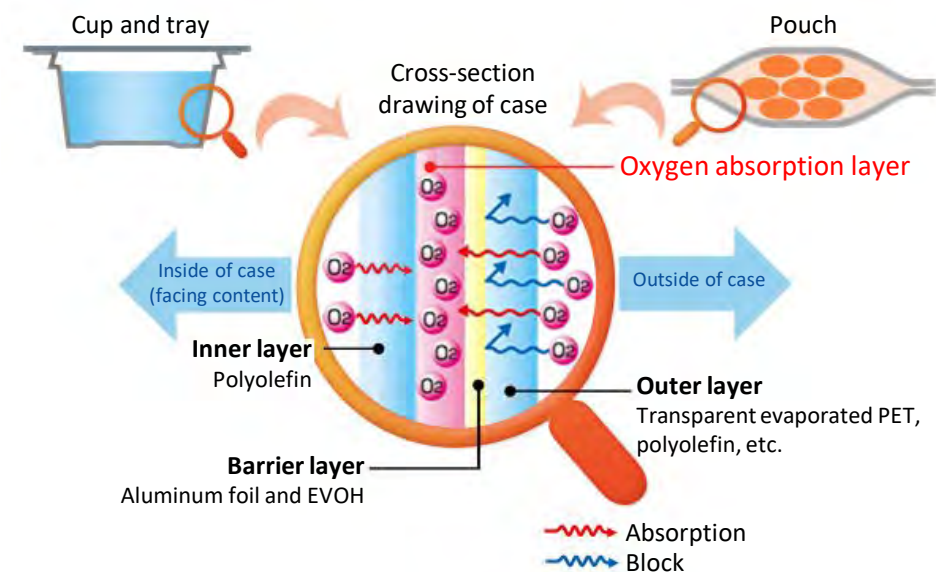
(Compared with metal can)

- While the metal could cause injuries because of sharp edges created during opening, the risk is reduced thanks to the adoption of a plastic case
- User-friendliness is enhanced thanks to easy opening

(Sale) From 2012

(Improvement of packaging)

- Adopt a functional special plastic case that has an oxygen absorption layer and to a great extent limits the generation of moisture and a film with high barrier properties.



(Long-term preservation)

- Prevent oxidation of content and retain the same best-before date as the conventional metal can (3 years at ordinary temperature)

「ほんだし®」120 g 箱



(Conventional product)

Outside

Paper
Aluminum foil, etc.
Inside film

Outside (facing food)

(Improved product)

Outside

Paper
Aluminum foil, etc.
PET film
Inside film

Outside (facing food)

(Sale) from September 2015

(Improvement of packaging)

- The paper pouch tended to tear and unexpectedly developed small holes if a user held a part, with fingers, under which there were granules, to pull out the pouch from the box.
- Adopt a PET film to make the pouch resistant to sticking pressure



(Reduction of food waste)

- In the case where a hole or holes are discovered before opening, the product may be discarded out of concern about possible effects on the content. Disposal waste is reduced by making the pouch resistant to sticking pressure created when it is pulled out.