

PACKAGING TECHNOLOGIES OF COCONUT PRODUCTS IN THAILAND: EQUIPMENTS USED, DESIGN AND BRANDING

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Thailand is one of main countries in the world which has coconut plantations and famous coconut products to support global consumption.

Since long time ago Thai foods have been well known by many people in the world because of their tasty, spicy and attractive appearance. Most famous Thai foods have Coconut ingredient in the recipe, for example: coconut milk, coconut meat, coconut water etc.

In line with the Thai government policy which promotes Thai foods and Thai food manufacturers to be "**Kitchen of the world**", Thai food will be further promoted. This will encourage people to try Thai taste. Good quality ingredients in recipe are important to make great and tasty foods, therefore Research & Development of coconut products in order to make good ingredients in Thai foods are challenging for coconut product's manufacturers.

Thailand has many major coconut manufacturers and famous Global brands. Technology and quality management are major key success factor for this business. The global trend needs convenient consumption, environmental care and natural ingredient usage. Those elements are important points to consider when manufacturing new products.

Packaging is the key point for customer to buy products in the market. The attractive packaging is the main consideration when starting to design new products.



Packaging Technologies of Coconut Products in Thailand

Long history of exporting Coconut products of Thailand to the world market makes Thai coconut milk and coconut water are famous in the world. The food processing technologies have come from USA and Europe since long time ago. Thai coconut manufacturers have imported these processing technologies and developed them to match with coconut products.

Now local machine manufacturers can conduct a research and development on processing technology and make some machines. For new technology we must find form Europe and USA.

Tin Can history

The first coconut product or other agricultural products in Thailand start from canning technology. Can is convenient to use, easy to process and this technology needs low investment.

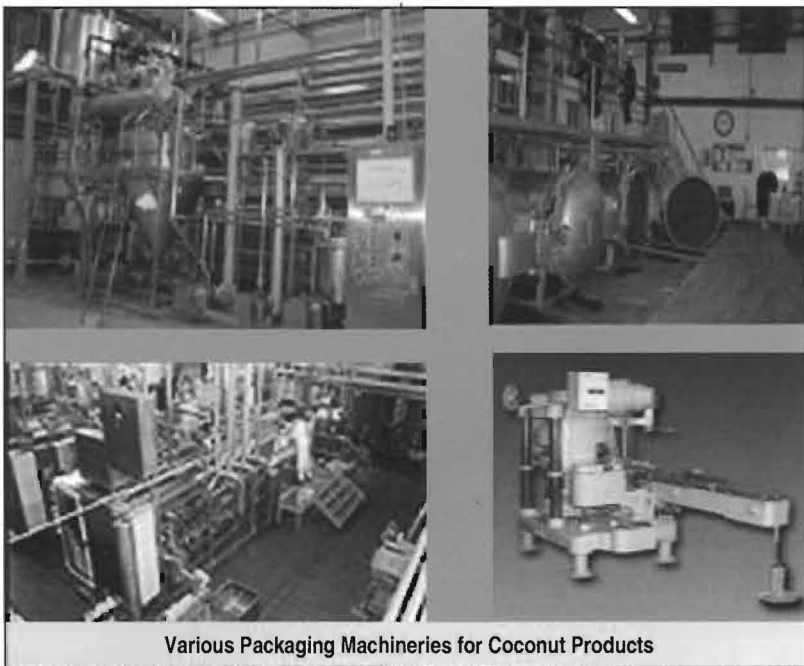
We use can to pack coconut milk and coconut water but it will be substituted by new packaging. In Europe canned products are not appreciated and EU push packer to use new technology and new packaging that is lighter than can and environmentally friendly.

Aluminum can technology

Aluminum can comes after Tin can, it is famous for beverage products. The shelf life of Aluminum can is only half of Tin can and it does not have its own strength, Co₂ or Nitrogen must be added to stabilize the shape and strength. Cost of investment is higher than Tin can technology. It is mainly used in beverage, carbonated drink beer, soft drink etc.

The requirement of high minimum printing for Aluminum can may pose a problem for small manufacturer to use this technology.

UHT technology



Various Packaging Machineries for Coconut Products

Retortable Multilayer Paper Box.

This technology is provided by Tetra Pak. It is a new concept to substitute canning technology. The cost of investment is very high therefore it is not widely used. The requirement of high minimum printing is a problem for a small manufacturer. In addition, it has higher cost of packing compared with UHT packing. Thailand has only 1 manufacturer which uses this technology to pack sweet corn.

Packaging and Products Design of Coconut Products in Thailand

Domestic Products.

Thailand coconut products are mainly produced for export to foreign countries. The high demand for local consumption is on fresh nut, young and mature nut. Domestic consumption of processed coconut products is mainly in UHT coconut milk. These products are sold in the market more than 10 years. The design does not change so much. The designer puts all detail in square box shape. Most designs have not changed since they were launched.

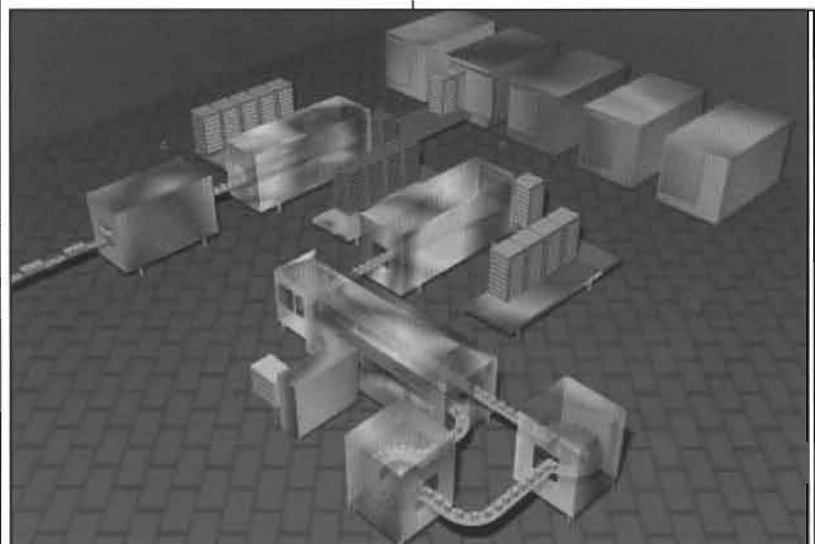
The high demand of metal in the world makes short supply of can. Some of European countries provide UHT technology to substitute can technology. The high cost of start-up investment is a problem for small manufacturers to invest in this technology. The UHT claims that as it uses high temperature and short time processing, it results in higher quality products than canned products.

The shelf life of UHT products cannot be compared with canned products. They only have half life of canned products. Packaging cost per unit is lower than can packaging. UHT Processes can pack big bulk packaged products, for example: 20 liters - 1,000 liters. Europe accepts UHT packaging as is environmentally friendly and easy to recycle and the shape has more varieties than can. This technology is faster to develop than can technology.

High barrier plastic cup technology

It is the newest technology to substitute canning technology. This packaging concept is for sterilized products similar to

canning processes, but it uses plastic to substitute Tin can and Aluminum can. The shelf life is same as that of Aluminum can and UHT which is not longer than one year after production. High barrier plastic cup technology is first used in USA, now it is used for high value products for example: ready meal, soup, tuna etc. This technology solves the Tin can short supply in some seasons or high demand of metal. The cost of investment is similar to Tin can technology.



Multilayer Paper Box Flow Diagram

Export Products.

The design concept of products & packing for exported coconut products has been following the global trend. The change is very dynamic following the change of global trend. The global trend now requires the manufacturers show most details and benefits of products in packing in order to make the customer easy to read. Thailand exported coconut products are mainly as follows:

- Canned Coconut Milk
- Canned Coconut water
- UHT Coconut Milk
- Aseptic Coconut Milk in bulk packed
- Coconut Milk Powder
- Most designs follow customer requirements

Branding of Coconut Products in Thailand

Coconut product manufacturers in Thailand have 2 kinds of players.

1. Self Branding manufacturers

One type is Self Branding manufacturer, for example: Chao-kao, Aroy-D. This manufacturer has a long history and has been established for more than 20 years.

The business is bigger than OEM manufacturer and has more varieties of products than coconut products, for example: canned vegetable, can fruits, dipping sauce, ready meal etc.

New players are difficult to compete in the market. It needs high cost of promotion and advertisement to promote branding in the market. The major players spend high budget to advertise and promote their brands to customers maintain their market shares. The major players are "Chao-Koa VS Aroy-D brand" The owner of Aroy-D brand has a major brand of coconut water, "FOCO brand" No1 of canned coconut water in USA market.

2. OEM Companies

OEM (Original equipment manufacturer) is a company that uses a component made by a second company in its own product, or sells the product of the second company under its own brand.

Thailand has many kinds of OEM companies which produce many types of coconut products mainly for export market. Coconut milk is

main products for OEM products. The factory is a small-medium size industry. Major brands in the global market packed in Thailand by OEM companies, for example: Goya, Blue Dragon, Lafe, Thai Kitchen, Tesco, Eldorado etc.

Coconut water is also famous Thai coconut products. The Major brands packed by Thai coconut manufacturers are, for example: Goya, Jumex, Lafe, Laguna, Juscool, Chaba, The cococool, pacific, etc. Lower price and good quality are the key success factor for the manufacturers who compete in price war. Research & development will drive this business to survive in price war in the future. All manufacturers have to do research and development before launching potential value added products.

The new products design must take care of internal and external factors. If the manufacturers do not have new value added products, they will find it difficult to survive in Thailand coconut business.

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IN MEMORIAM – DR. RAY WIJEWARDENE

Dr. Ray Wijewardene, the recipient of the Plaque of Appreciation awarded by the Asian and Pacific Coconut Community in 2008 at the XIV Ministerial Session held in Colombo, Sri Lanka passed away on August 18th 2010.

Dr. Ray Wijewardene as he was fondly known, graduated from the University of Cambridge and got his Master's degree from the prestigious Harvard Business School. He was an accomplished engineer in three disciplines of engineering aviation, mechanical and agricultural. Being a man of many talents Dr. Ray's contributions spread across a wide canvass.

Those in the coconut sector in Sri Lanka remember him as the greatest coconut planter. He served as a member of the Coconut Research Board and the Coconut Cultivation Board and was also associated with the Coconut Growers Association. He had his coconut plantation about 50 miles from Colombo where he successfully experimented with organic fertilizer and produced 7500 nuts per tree as against the 2500 national average. He introduced gliricidia in place of urea and added local dolomite to get the calcium carbonate and magnesium. While the gliricidia leaves enriched the soil, the twigs were used to produce his own electricity to meet the needs of the estate. Dr. Ray Wijewardene took much pride of his estate and the delegates at the XIV APCC Session will recall the field visit they made to this estate.

Dr. Ray Wijewardene was one time the Chancellor of the University of Moratuwa and was also honored by the Government of Sri Lanka twice with the conferment of titles Vidyajhoti and Deshamanya.

Dr. Ray Wijewardene's passing away is mourned by many particularly those of the scientific community and the coconut industry. *(By Dr. P.G. Punchihewa, Former Executive Director, APCC and Former Secretary, MPI, Sri Lanka)*