



Market test report

Sogndal / Norway

2001

Test partner

Lerum Fabrikker A/S
(producer of softdrinks)

v/ Trine Lerum

6854 Kaupanger
Norway

Tel.: +47 – 57 62 80 00
Fax: +47 – 57 62 81 01
mail: trine.lerum@lerum.no

FRANZ DELBROUCK GMBH
(producer of LighTray)

v/ Klaus Delbrouck

Bieberkamp 51 – 59
58710 Menden – Lendringsen
Germany

Tel.: +49 – 2373 – 80 89 0
Fax: +49 – 2373 – 80 89 10
mail: mail@delbrouck.de

EuroSpar Sogndal
(retail shop)

v/ Harry Thomasgård

Hovev. 8
6856 Sogndal
Norway

Tel.: + 47 - 57 67 69 50
Fax: + 47 - 57 67 26 51

PetCon A/S
(consultant for packagings)

v/ Georg Osbakk

Parkveien 6
8250 Rognan
Norway

Tel.: +47 – 7569-1112
Fax: +47 – 7569-1190
mail: go@petcon.com

If you are interested in further information about the progress of this market test or about our development of a LighTray in the size of 12 x 0,5 l, please contact us at mail@delbrouck.de.

Background

LighTray is a natural development of a new type of universal packaging system for non-returnable and refillable bottles, with a history from previous developments, experiences and knowledge from the trays that were launched in 1995 and that today is dominating the market for transport packaging for PET bottles in Scandinavia.

Prototypes of LighTray were first exhibited at the Nürnberg fair in autumn 2000, by the company Franz Delbrouck GmbH, that has long experience and great competence for production of transport packaging, boxes and crates.

The concept was further developed together with the market, where the idea of the LighTray contributes to that the point of sale becomes the point of purchase.

After production tests of the LighTray with recycled PET as raw material and internal tests at Lerum Fabrikker AS it was decided to launch the LighTray and carry out market tests together with Lerum Fabrikker AS, that also earlier was involved in the developing of the existing bottle trays, that now is being used throughout Scandinavia and other countries.

LighTray is an optimal solution for the packing, transport, sale and return of all primary beverage packaging when the sale of several units (multi packs) at a time is desired. The system is particularly suitable for both non-returnable and returnable bottles made of synthetic materials with a volume of 0.2 to 2 litres.

Data of LighTray in the market test

- Unit 6 x 1.5 litres
- Bottle: Norwegian standard returnable PET
- Price for consumers: 53.40 NOK. per LighTray (normal price)
+ 2,50 NOK. deposit for LighTray
- Weight: app. 10 kg
- Contents: Eldorado orange soft drink
- LighTray used in the test are produced from recycled PET materials

Size of LighTray:

- 350 mm height
- 200 x 300 mm length



Form of bottle:
see picture

Size of bottle:

- 335 mm height
- 93,5 mm \varnothing in the middle
- 64 mm \varnothing at the bottom



Packing of soft drinks at Lerum

The production of the company Lerum runs on most modern machine technology by 32.000 bottles per hour (80% 1.5 litre bottles).

First the bottles are packed in crates with 10 bottles. 70 – 80 % of these are repacked again on trays of half pallet size. This procedure has proved to be flexible and practicable for Lerum, especially for the handling of the empty bottles. Use of trays in the size of smaller pallets like quarter pallets hasn't proved its worth and is only practiced in a small number of pieces.

Only 20 % of the crates are directly delivered to the retailer or to other consumer places. The crates are too heavy in its size (10 x 1,5 litres). The sale of crates to consumers is less than 5% of the whole sale of Lerum.

A unity of two bottles is offered at the market for the existing trays. Two bottles of 1,5 litres are connected with carton stripes. This packing system isn't sold very often. The fact of carton stripes lying around shows that the final consumer doesn't accept this manner of packing. He can remove two single bottles very fast and simple from trays and does not need such stripes for two bottles.

For the technique of the LighTray we thought about both ways: it is possible to handle the LighTray on fast running one way packing machines, and on the other way on machines packing from crates into the LighTray, as it is used in the situation of the company Lerum.

The system LighTray is the first useable system that makes possible that both - one-way bottles and deposit bottles - can be packed without a change of bottom technology.

For the market test LighTray was packed manually on to Europallets with 16 LighTray per layer and 3 layers high, altogether 48 LighTrays on the pallet, in total 288 bottles. The pallets were safeguarded for shipment by stretch foil.

Offer of soft drinks at EuroSpar

Sogndal is the centre of a region with approximately 15.000 to 20.000 inhabitants. Sogndal is frequently visited, particularly at the weekend for shopping, by car or by bus.

In Sogndal the shopping centre contains two competitive retailers, on the one hand the chain MEGA, on the other hand EuroSpar, which leads the assortment of higher quality.

EuroSpar offers the full assortment of Scandinavian suppliers of soft drinks. These soft drinks are presented in the usual way of selling by retailers: single bottles on trays or in crates.

EuroSpar offers the full range of common lemonade brands in Norway as Coca-Cola, Fanta and Sprite, Ringnes (Carlsberg group) with Solo, Lerum with Eldorado and other brands.

During the market test of "Eldorado" packed in LighTray there was not any price difference between the price of one bottle and the price of a LighTray or the price of a crate per bottle. The price of one bottle 'Eldorado' with 8,90 NOK. was not higher than the price of LighTray with six bottles with 53,40 NOK. . The deposit for LighTray was 2,50 NOK. in addition to the existing deposit per bottle.



Basic data of the test

For the market test one pallet with LighTray 6 x 1,5 litres “Eldorado” was well placed at EuroSpar Sogndal. And a small folder, which describes the use of LighTray as packaging system for the consumer, was enclosed in every packaging.

Data:

- Running time of the test until now two months
- Test begin: 13. August
- Observed and evaluated time: 25.8.2001 -- 13.9.2001
- Responsible for the test, for consumer interviews and for observing the range of items for sale: Harry Thomasgard



Test conditions

Conditions of the test sale of 'Eldorado' in the arrangement ,LighTray'
EuroSpar Sogndal: 25.8.2001 to 13.9.2001

'Eldorado' (orange lemonade) of Lerum:

- Offer of LighTray 6 x 1.5 litres
- Price per unity: corresponding to the price of single bottles
Single bottle: NOK. 8,90
LighTray: NOK. 6 x 8,90 = NOK. 53,40. + deposit for LighTray of NOK. 2,50
- Evaluated time: 25.8.2001 – 13.9.2001

Orange lemonade of a competitor:

- Offer of a crate with ten bottles
- Price: special price: 30 % reduction at the purchase of a crate with 10 bottles
- Evaluated time: one week during the period of the market test 6.9.2001 – 13.9.2001
- Specially announced in the printed consumer information

Another drink competitor:

- Offer of a packing of four bottles of a coke drink packed by foil
- Price: special reduced price
- Evaluated time: 25.8.2001 - 13.9.2001

Consumer interview

Consumer interviews were made during the test phase of three weeks. The results are supplemented with occasional further interviews of consumers who have brought the six-pack-LighTray back later than during this three weeks.

List of questions of the consumer interview:

- How was the handling of the packaging ,LighTray‘?
- Did it work? Did it convince you?
- In your opinion what are the advantages of this packing system “LighTray” compared with others?
- What kind of problems do you see? What can be improved?

Results of the interview:

The statements of the consumers were concentrated on the detail, that they had order with the bottles by using the LighTray. They had the possibility of a clean and orderly return at the retailer. All of them decided to repurchase “Eldorado” packed in LighTray.

Some people prefer to buy LighTray instead of 2 or 3 loose bottles as they used to do earlier, because it is easier to handle a big volume of bottles with LighTray.

The part of the sale of this lemonade packed in LighTray has until now grown to more than 50 %. This confirms these statements.

In part of technique of the LighTray we got some wishes to form it more rounded and softer.

Improvements by return for the trade in general

By using the LighTray as non-returnable packaging for non-returnable bottles it is necessary to include the price for the LighTray in the price of the bottles. In this case the complete packing unity (bottles and LighTray) goes on the same way to the recycling. The Tomra machine identifies the non-returnable bottles and gives the complete LighTray to the recycling. (The Tomra machines also take care of the deposit in Countries where deposit is used for one-way bottles).

If the LighTray is fitted with deposit bottles, the consumer gets both, the deposit for the bottles and the deposit for the LighTray. Then the LighTray is set by combine stacking on a pallet for the return transport. As upper end of the pallet a tray in half pallet size is put on the LighTrays.



Improvements by return of bottles for Lerum

In the company Lerum the dispatch area is an area of equal size established to unload the trays taken back and to sort the returned bottles on the different crates. There is up to 30 % of bottles which are not working in the own company. This concerns particularly the new beer bottle as well as the bottles of competitors for example of Coca-Cola and Pepsi with their special contour as known.

This complete field of work, after all very labour-intensive and not easy to make automatic, does not exist by a return of bottles in the packing system LighTray. During the test there was hardly any wrong bottle in the LighTrays.

For the system of Lerum they will take back the LighTray with empty bottles, they will cut the cover part of the LighTray by machine from the tray part. The cover part will be recycled, the tray part will be proved about the grade of its cleanness. If it is clean, it will run a next turn, if not, it will be recycled. This procedure can be mechanized as far as possible.

Further progress can also here be reached in cooperation with machine technology suppliers, as described on side four (list of machine technology companies and contact: see next side).

Machine technology for handling the LighTray

<p>APS Automatic Production Systems Corporation</p> <p>Daniel Elpi</p>	<p>Chestnut Commerce Center 15842 Elm Drive New Freedom, PA 17349,USA Delpi@APSAutomation.com</p>
<p>AUTEFA automation</p> <p>Peter Knobloch</p>	<p>Röntgenstraße 1-5 D-86316 Friedberg Peter.Knobloch@autefa.de</p>
<p>BUCK robotic</p> <p>Hermann Buck (sen.) Matthias Buck (jun.)</p>	<p>Schützenstraße 31 D-7257 Bad Urach h.buck@buckrobotic.de m.buck@buckrobotic.de</p>
<p>CHUNG YONG KHS CO., LTD.</p> <p>J.Y. Kim H.W. Kim</p>	<p>5fl. Mun-young Bldg. 9-3 Chungdam 2 dong, Kangnam-Ku Seoul, Korea</p>
<p>KHS MASCHINEN- UND ANLAGENBAU AG</p> <p>Rolf Kaisinger</p>	<p>Enzingerstraße 139 D-67551 Worms Kaisinger.rolf@wo.khs-ag.com</p>
<p>Kisters Maschinenbau GmbH</p> <p>K. – H. Klumpe</p>	<p>Boschstr. 1-3 D-47533 Kleve kh.klumpe@kisters.com</p>
<p>Krones</p> <p>Bruno Schmidt Frank Tierens (Belgien)</p>	<p>S.A. Krones N.V. Rue du Bosquet 17 B-1348 Mont-St-Guibert f.tierens@krones.be</p>
<p>MEYPACK VERPACKUNGSSYSTEMTECHNIK GMBH</p> <p>Gernot Kessel Helmut Klein</p>	<p>WESTA Anlagenbau GmbH Auf'm Wasem 8 D-56715 Polch Meypack@t-online.de</p>
<p>SCHÄFER Förderanlagen- und Maschinenbau GmbH</p> <p>Mr. Schäfer (jun.) Mr. Baganz</p>	<p>Dieselstraße 3 D-85774 Unterföhring bei München Telephone 089 / 9 50 96 - 117 Telefax 089 / 9 50 96 - 185 info@schaeferpal.de</p>

Future possibilities with the LighTray

In principle, the system of the LighTrays is to use corresponding tray parts and the head of the bottles are guaranteeing that a combine stacking is possible. The strength of the bottle has to be taken into account at these considerations.

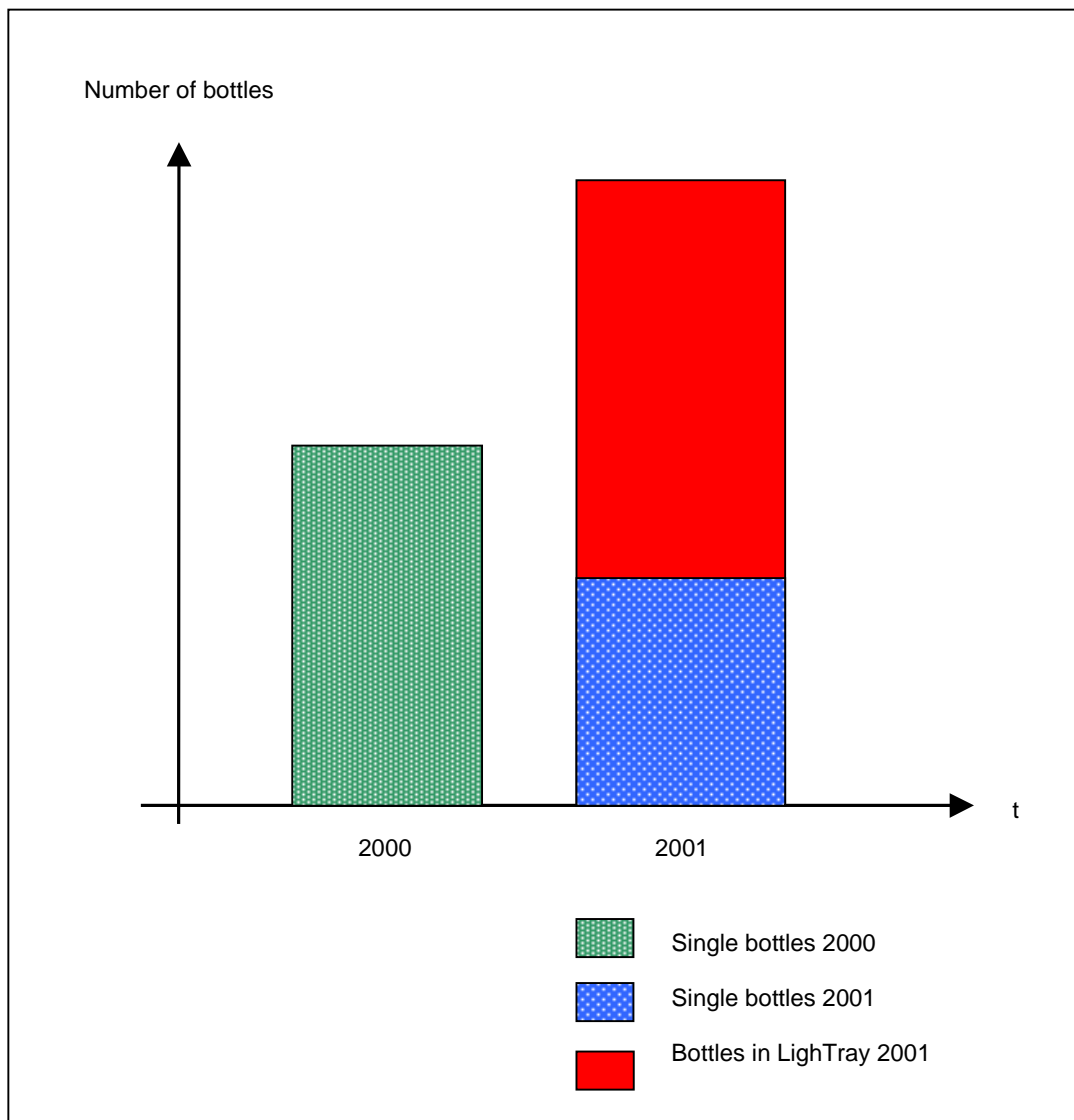
LighTray for 6 x 1,5 litre bottles used in Scandinavia can surely be stacked on euro-pallet and half pallet size.

The system 'LighTray' works in the variety sizes of unities from three bottles, four, six, eight and 12 bottles and packagings with 24 bottles. LighTray can be also used for all common sizes of bottles.

Price comparison between LighTray and existing systems with paper trays together with shrink film shows that LighTray saves costs per unit. It is meant to be an ongoing theme not just an activity.

Results in form of data

Type Soft drinks	Sold last year for the same period total	Sold during the test period			Increase number of bottles
	Number of bottles	Single bottles	Bottles in LighTray	Total number of bottles	
Orange 1,5 l	494	328	$108 \times 6 = 648$	976	482



Argumentation - results

- ⇒ Consumers prefer LighTray as a handy, light and clean system for carrying full and empty bottles
- ⇒ Consumers can buy more bottles in whole
- ⇒ Advantages by handling empty bottles: returns without wrong bottles
- ⇒ LighTray saves costs: less cost per unit and less needs for personnel handling empties
- ⇒ LighTray makes possible best presentation of the brand
- ⇒ LighTray makes the packing variable
- ⇒ LighTray helps to increase the volume

LIGHTRAY
The PET-Set