

# Report Netherlands

<b>1. Products in reuse packaging .....</b>	<b>2</b>
1.1 Remarks about the survey .....	2
1.2 Distribution of reuse packaging.....	3
1.2.1 Beer.....	3
1.2.2 Soft drinks .....	3
1.2.3 Mineral-, Spring- and Table water.....	3
1.2.4 Milk and dairy products .....	3
1.2.5 Other products.....	4
1.3 Previous reuse packaging systems.....	4
1.3.1 Vegetables preserves.....	4
1.3.2 Returnable bottles for coffee cream.....	5
1.3.3 Fruit juices at the usual food retailer.....	6
<b>2. Distribution and Redistribution of reuse packaging.....</b>	<b>6</b>
2.1 Markets and distribution channels .....	6
2.2 Distribution of beverages to the retailers outlets.....	7
<b>3. Pool management and number of circulations .....</b>	<b>8</b>
<b>4. Pros and constraints to reuse .....</b>	<b>9</b>
<b>5. Legal basis concerning reuse packaging.....</b>	<b>10</b>
5.1 Packaging law and public agreement.....	10
5.2 Public agreement (Covenant) and reuse packaging.....	10
5.3 The 2 %-Regulation.....	10
5.4 Hygiene rules / HACCP.....	10
Sources: .....	11
Litreature: .....	12

## 1. Products in reuse packaging

### 1.1 Remarks about the survey

1. The different types of reuse packaging (sizes, forms) were not further examined. In the case of soft drinks and water, there is the biggest variety of packaging types and shapes. For vegetable preserves, the glass jar is only one size (720 millilitres).
2. The lightweight glass bottle for milk and dairy products (1 litre) has almost been completely replaced by the 1-litre polycarbonate (PC) bottle in the Netherlands. The introduction of this bottle started at the beginning of 1996. The first producer was Campina Melkunie in Woerden, which was immediately followed by other companies immediately. In addition to pasteurised milk, other dairy products are also offered in the PC-bottle: buttermilk, yoghurt and the typical Dutch vla (with chocolate and vanilla taste).

The glass bottle is still needed as an exception, e.g., for fruit yoghurts with fruit pulp (14). A small amount of sterilised milk is being sold in an old-fashioned 1 litre long neck crown cork glass bottle. This bottle only was offered in small scale milk shops.

Only in the green food shops are dairy products sold along with one way packaged goods. There are 1-litre (light weight)- and 0,5-litre (old type, heavy glass) glass bottle and different glass jars with a twist-off cap for curd, yoghurt and so forth.

In the usual retail food shops, ecological dairy products are sold almost exclusively in one-way packaging

3. In the Netherlands, there is a limited number of vegetable and apple purée preserves packed in reuse packaging. However their market share has further decreased because these relatively small companies actually begun to change to one way packaging (see chapter 1.3).
4. Reuse packaging for coffee - in the form of 3 kg tin-plated cans with deposit and resealable plastic closures and 5 kg tinfoil bucket without deposit. The latter is only distributed to HoReCa. For both of these packaging, a deposit is charged.
5. Ever since the beginning of the 90` it has been possible to refill packaging for fluid washing agents and detergents into 1-litre bottles in some of the green shops. (Ecover-products). The consumer generally does so in self-service. Sometimes the bottles can be given back and the shopkeeper will refill the bottles. This system was also introduced as part of an experiment some years ago in some Dutch supermarkets. Since it was not successful, it was closed down again.
6. In Holland, there are some providers/suppliers of reuse dispenser systems for soft drinks, fruit juices and dairy products for use in HoReCa. For this product range one way dispenser systems are the usual, so-called one way bag-in-box-system.

## **1.2 Distribution of reuse packaging**

The statistical data which have been found is generally limited because it is not available or secret. The missing information also caused a considerable problem by the monitoring of the results of the Covenant Verpakkingen I (7).

### **1.2.1 Beer**

In beer packaging a slight increase of one way packaging can be seen. This tendency is even today not lamented by the Produktschap, (see "Netherlands reuse oriented country, with room for one way", in annual report 1997, page 21). In addition there is also no longer any obligation to the Produktschap to keep the standstill agreement which once existed was laid down in the first packaging covenant. Taking this into account, one way might even increase in the future.

Sales data on one-way packaging has not been made available, "because we don't like any discussions about that anymore" (van Reijn). In an interview, Mr. van Reijn stated that the 6,1% figure for one way packaging (1995) include one-way glass as well as beverage cans (see Table NL-1 i.A.).

### **1.2.2 Soft drinks**

Unfortunately, the Dutch secrecy about their beverage packaging statistics could not be lifted. It was not possible to get full statistical data. NFI even maintains that this data might not exist because has never been examined ( 5).

The following qualitative picture results based on the appraisals of the participants: Reuse gradually became less and was somewhere between 80-90% in 1998. According of the Dutch environmental ministry, it is possibly a little less than 90% (2). Other sources estimate a reuse rate of around 80%, similar to Coca Cola in Holland (4).

In order to see what else concerns the current production and consumption data of soft drinks, Kerngegevens 1998. NFI. Vereniging Nederlandse Frisdranken industry will have to be looked at.

### **1.2.3 Mineral-, Spring- and Table water**

The same, "non-information" situation also applies to the water market. Detailed information about the reuse / one way is also not available from these industries. One is left with the impression that one-way for water is less than for soft drinks in the convenience market. The reuse share may just be over 90%.

Source:

Production and consumption data: Kerngegevens 1998. This data differs slightly from those by Gisem-Unesem

### **1.2.4 Milk and dairy products**

Trustworthy statistical data in regard to the market share of reuse and one way packaging is also not available. The data was collected since ten years ago. Actually „nobody asks for these data anymore“ ( 10 ).

From the information obtained from different producers, there is a qualitative appraisal: The polycarbonate reuse bottle led to average sales for fresh dairy products of 15% by the end of 1997. With some milk producers (Coberco in Zutphen, Campina Melkunie in Zaltbommel/Woerden) the market share of PC reuse bottles is even greater than 20% (16). In the case of Campina Melkunie, the share of glass reuse bottles in 1994 was only about 3,5%. Specifications for different reuse packaging for milk, yoghurt, Vla and so forth do not exist. The market share of reuse packaging for dairy products other than milk seems to be much lower.

The milk industry did not expect that the market share of reuse would increase above 15%. Some sources say that 20% will be a limit. The additional cost of 25-40 cent per litre (9) is therefore of utmost importance.

### **1.2.5 Other products**

In the case of all other product ranges called for under 1.1, there are no other detailed statistical figures available. This is the reason why appraisals can not be given. The reuse rates are approximately 10%. For fruit juices, vegetable preserves, wine and fluid washing agents and detergents the reuse rate shall be between 0-5%.

### **1.3 Previous reuse packaging systems**

Some reuse packaging systems which disappeared recently or will disappear in the near future are described. The changes among dairy products from the old-fashioned glass bottle to the lightweight glass bottle and to the refillable PC-bottle will not however be discussed here.

#### **1.3.1 Vegetables preserves**

The disappearance of the reuse glass jars (720 millilitres) is the most important evolution. In Holland, three small producers pack vegetable and apple purée in reuse packaging glass. The exact market share of reuse is unknown; it is small (see 1.2.5) but plays a certain role for apple purée. The producers are:

- Koolen in Mierlo, offers different products and uses only reuse packaging. The use of reuse packaging was closed down at January 1, 1999.
- Aar Koeleman in Ter : previously he filled different products in reuse glass. Now he uses reuse glass only for apple purée, cucumbers and silver onions. He slightly replaces reuse packaging by one way glass.
- Geurts in Dodewaard (very small company) with a relatively small product range in reuse packaging.

There isn't a pool agreement or criteria for the use and handling of the reuse glass between these producers. They all use the same type of glass which can be handled on each of their filling lines.

Reuse at Koolen will be closed down beginning January 1, 1999. From this date on the old reuse glass will be used as one-way packaging and discarded after use.

Some data about Koolen:

- 8.000.000 reusable glasses are in circulation;
- > 80% comes back via retailers;
- precise number of circulations is unknown. After the third circulation, the glass is sorted out.
- annual losses are approximately 0,5% (glass break in the filling line)

The decline in the reuse glass system coincides with the increasing collection rate of one-way glass in bottle banks. Koolen is clearly frustrated to have to close down the reuse system. Reuse provides him with the opportunity to distinguish himself from the other producers. The following reasons are given for the adaptation to one-way:

- Other producers have already changed to one-way glass of the same shape. This means that more and more one-way (light glass) jars are given back in the retail markets, mixed in with the reuse glass. This causes a much greater loss.
- The glass quality has declined. Glass producers provide market with lightweight glass with a reduced weight of about 25 g. The packaging tare weight has been reduced by 9-14% (for environmental reasons). This amounts to a total savings of 812.000 kg for all glass packaging (13). The disadvantage is that there is a greater risk of the reuse glass breaking.  
Koolen considers the "breaking loss" to be too great. Koolen didn't even commission the glass industry to develop a stronger reuse glass jar. This shows once more, that reuse systems, which do not have a strong pool organisation with clear and achievable rights in their own glass brand, can be destroyed depending on the interests of the glass manufacturers (see chapter 5.1).
- The increasing personnel costs in the retake shops;
- Increasing pressure of the supermarkets to change to one-way. Even those supermarkets which had a lot of reuse in the past (e.g. Dirk van der Broek, Jan Linders).
- The retake costs of the retailers might be too high, about 10 cent (0,04 ECU) per glass (however, it might only be 0,01 ECU).

### **1.3.2 Returnable bottles for coffee cream**

There are still reuse bottles for coffee cream in Holland, e.g. from Becel, Nutroma and Friesche Vlag. The old-fashioned returnable bottle was even renewed in 1996 by the Friesche Vlag company (with a modern form, and an easier screw-top cap. Information: Friesland food services, Naarden.

It must be stated that a clear decline of this reuse system occurred in recent years. The bottles with a small volume, are hardly available in the market; in 1997, the last 15 cl bottle was taken off the market by Becel (4). The other bottles of differing volumes are also under pressure, especially in the supermarkets where these packagings are "listed out" rapidly. They are being substituted by one-way glass and beverage cartons.

### **1.3.3 Fruit juices at the usual food retailer**

For fruit juices, the trend is comparable to that of coffee milk. Historically, the reuse systems for fruit juices play a minor role in Holland. The only supplier that has offered juices in reuse packaging for the retail channel is Procter & Gamble (Punica, Dittmeyer's, Valencina). P&G uses an 1-litre bottle (Euro-Juice bottle see chapter Report Germany) with a screw cap, charging 50 cent (0,23 ECU) deposit.

Punica/Valencina was also listed by name in retailer channels, while Dittmeyer's is almost exclusively sold to HoReCa. The bottles are filled in Germany.

Most fruit juices sold in green shops are packed in reuse bottles (predominantly 0,7 and 1,0 l with screw cap, 50 cent deposit). The same is true of the soft drink concentrates (0,5 litre).

## **2. Distribution and Redistribution of reuse packaging**

### **2.1 Markets and distribution channels**

The reuse packaging mentioned in chapters 1.1 and 2.1 are distributed all over the country. At the most, there may be some small differences since some supermarket chains are not represented in all districts.

In the following overview, the products packed in reuse packaging are specified which are distributed via different retail channels. Statistical figures for the different channels of distribution could not be found. The relative importance is indicated.:

**Table NL-1: Distribution channels for reuse primary packaging**

	Food retailers	HoReCa	Others
<b>Beer</b>			
Draught	-	++	-
Glass bottles 0,33l	+	+	-
<b>Soft Drinks</b>			
PET-Reuse bottle	+	+	-
Glass bottles	+	+	-
<b>Water</b>			
PET bottles	+	0	-
Glass bottles	+	+	-
<b>Fruit Juices</b>			
Glass bottles	+	+	+
<b>Milk and Dairy Prod.</b>			
PC bottles	+	0	-
Glass bottle	0	-	+
<b>Vegetables</b>			
Glass jars	+	-	-
<b>Wine</b>			
Glass bottles	+	-	+
Refill in shop	-	-	+
<b>Coffee</b>			
Tin cans	-	+	-

**+** = important

**0** = limited

**-** = unimportant

## 2.2 Distribution of beverages to the retailers outlets

A short description of the distribution of beverages to the retailer's outlets follows:

3 kg tin cans (with deposit) in wood boxes and 5 kg bucket (without deposit) are taken back by the wholesalers or through the coffee roasting companies.

### 3. Pool management and number of circulations

In the description of primary reuse packaging (chapter 1) the figures for circulations were mentioned. Most of these figures are estimated averages. In the following, the pool organisations and their management tools are described along with the statistical basis for the calculation of the circulation figures.

#### **Beer**

Glass bottle 30-50 cl, number of circulations: 40-60; range of variation is dependent on many factors (14).

These standard packagings are exchangeable between all fillers of the pool. There is no particular managing organisation. Everything which has to do with the use of that bottle is dealt with within the national brewers association. However, a central quality inspection which does carried out by TNO exist

#### **Refreshment drinks and water**

PET-bottle, 1 and 1,5 l, number of circulations is: 12-25 (J. Hommes). For bottled water the average number of circulations is around 10.

Since the PET-bottles can easily be filled with other liquids, the risk of impurities and contamination is serious.

The administrative pool manager for the green REF-PET-bottles is PPN (5)

For the 1-IREF PET-bottle, it is: Stichting BBM (5)

#### **Milk and dairy products**

1 litre PC-bottle, the number of circulations mentioned in the literature varies greatly. This could have to do with the fact that this package has only been on the market for a relatively short time. Circulation rates found in different sources:

- about 30 circulations (food management, 18.10 1996)
- 40-60 (food management, 21.4.1995)
- about 50 (Volkskrant, 26.4.1997)

There is no pool organisation. There are only two enterprises running the pool. The replacement of damaged packages is done by the two companies on demand (Kleibeuker, Campina Melkunie).

#### **Vegetable preserves**

Glass 720 millilitres, with screw cap

Number of circulations: 3

No pool management (1).

#### **Wine**

Glass bottle, 0,75 l and 1 l

Number of circulations: 4

No pool management (11).

## Coffee

Tin cans, 3 kg

Number of circulations: 80

No pool management (12).

## 4. Pros and constraints to reuse

In this chapter, the most important considerations and trends are discussed, both those occurring on the market and those governed by legal settings.

The references which are mentioned, the presumptions and the appraisals pro and con are a conclusion of the telephone interviews which were given by different organisations and decision makers. Information from written sources and branches is also included.

In almost every market segment, the share of reuse packaging decreases to differing degrees. The traditionally strong reuse systems (soft drink, beer), have seen a slightly negative trend. In the case of several small systems with a reuse part <10%, the decline is more perceptible (fruit juices) or they are completely closed down and subsidised by one-way (glass jars).

One exception has been the unexpectedly successful Polycarbonate-bottle for pasteurised fresh dairy products. It adheres to a differing packaging concept which the consumers are demanding, not so much because of the positive environmental aspects but because of the convenience:

- the contents are easily visible,
- the light packaging is easy to carry
- there is a resealable closure
- it's easier to handle and store in the refrigerator

Still a greater market share is not to be expected because of the higher prices in comparison to one-way packaging.

The tendency away from reuse is mainly influenced by three aspects:

1. Industry and retailers in particular put a lot of pressure onto reuse. Above all, the large-scale food retailers (especially Albert Heijn), were named by almost all of the interview partners.
2. Between *Convenant Verpakkingen I.* (1991) and *Convenant II.* (1997), the role of the Netherlands (above all Ministerie VROM) has changed. The attitude up until *Covenant I* was: to guarantee a stand-still-principle and to support reuse wherever possible. The attitude now is: to continue to maintain the strong reuse systems, but change to one-way is made possible.
3. Consumer and environmental organisations had an important "correcting" role in the decision making process to the *Convenant* on supporting reuse. In the last few years, packaging has not been in the public interest anymore; which means the public pressure is lower. This would partly explain shifts to one-way.

## **5. Legal basis concerning reuse packaging**

### **5.1 Packaging law and public agreement**

On August 1<sup>st</sup> 1998, the law on packaging came into force in Holland. It is a Dutch 'translation' of the EU directive 94/62/EG. In this regulation, targets and measures with regard to prevention, recycling and recovery are fixed. Those responsible are the producers and importers of the packed products.

The fulfilment of these targets/regulation on an individual basis costs a lot of time and money. Therefore, everyone in the packaging sector is given the opportunity to join the Covenant in which the state and the enterprises declare how the obligations will be carried out. Individual obligations are then no longer valid.

The contractors resolve to guarantee that the total amount of packaging waste in 2001 will be a maximum of 940.000 tons. That is 400.000 tons less than in 1995. This target shall be realised through 10% waste prevention and through an increase in recovery to a minimum level of 65% (recycling = composting, combustion by recovery and recycling).

### **5.2 Public agreement (Covenant) and reuse packaging**

Legal demands and public agreement are, above all arranged to reach the general goal of the 940 thousand tons and to promote recycling. They are not interpreted as a stimulant for reuse packaging.

Even in the detailed agreement for producers/importers (Article 5, product reuse), an obligation is stated that one-way packaging may not take the place of reuse packaging, unless, the criteria recorded under the "product reuse" is fulfilled.

In this document, however, only reuse packaging for beer, soft drinks and water are protected from being substituted by one-way packaging. However, new one-way packages can be introduced if:

1. It can be proven, that this one-way packaging has "a smaller or at the most not a greater impact on the environment than the existing reuse packaging does". This will be possible as long as there are any old fashioned reuse packagings on the market.
2. If with the introduction of a certain one-way package, the overall capacity of reuse does not decline more than 2%.

### **5.3 The 2 %-Regulation**

According to the opinions of the consumer and environmental organisations, this calculation scheme which was determined in the public agreement, is a concrete threat to reuse systems (4, 3).

The outcome currently applies to one-way PET-bottles (0,5 l) in the so-called "grey sale channel's": Service stations, sport and company canteens, newspaper and chip stalls.

### **5.4 Hygiene rules / HACCP**

On December 14th, 1995, the state's regulation dealing with the 'hygiene of foods' and adhering to the Dutch food law came into force. This regulation serves the food industry and

HoReCa-enterprises. It stipulates that every enterprise which produces or deals with foods should have a control system

This system must be based on Hazard Analysis and Critical Control Points (HACCP) or a similar system.

The implementation of these systems promotes the use of much more one-way packaging in canteens because many people think that one-way packaging is more hygienic.

### **Sources:**

- 1 - C. Carlier von Koeleman
- 2 - C. Clement, Ministerie VROM
- 3 - J. L. de Ridder, Consumentenbond
- 4 - H. Blauwgeers, Stichting natuur en Milieu
- 5 - J. Hommes, Vereniging Nederlandse Frisdrankenindustrie
- 6 - Koolen, Produzent von Gemüsekonserven, Mierlo, Tel: 0492-661949
- 7 - personal information C. Adema, SVM.Pact).
- 8 - personal information, Procter & Gamble
- 9 - personal information Kleibeuker, Campina Melkunie und C. Clement, Ministerie VROM
- 10 - personal information Produktschap Zuivel
- 11 - Natuproducs, Harderwijk, in PMA, Milieuhandleiding Catering, 1997
- 12 - Santas Koffie, Schiedam, in PMA, Milieuhandleiding Catering, 1977
- 13 - Stichting verpakkingen en Milieu, Packaging developments 1997. Implementation of the Packaging Covenant, illustrated
- 14 - van Reijn, Produktschap voor Bier)
- 15 - Verpakkingsmanagement 10/97, Seite 8
- 16 - Verpakkingsmanagement, 1/98, Seite 13-14
- 17 - VMT 9.10.1997
- 18 - Windervanck, J., van Lierop, J., Inspectie Gezondheidsbescherming Utrecht, Geur- en smaakklachten over frisdranken, verpakt in hervulbare PET-flessen (1996)

**Litreature:**

- \* European Commission, Notification. Ontheffing PET-flesjes grijze kanaal 1998.
- \* Ministerie van VROM, Informatieblad. De regeling verpakkingen en verpakkingsafval en het Convenant Verpakkingen II. August 1998.
- \* NFI. Vereniging Nederlandse Frisdranken Industrie, Kerngegevens 1998.
- \* Produktschap voor Bier, Jahresbericht 1997
- \* Stichting SVM-PACT, Ministerie van VROM, Convenant Verpakkingen II, zoals overeengekomen en ondertekend te Den Haag op 15 december 1997. Daraus: Anlage II des Teilconvenanten Produzenten/Importeure.

The research in Netherlands was carried out by:

Ronald Jansen, PMA, Nijmegen, NL