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COMMERCE ACT 1986: BUSINESS ACQUISITION SECTION 66: NOTICE SEEKING CLEARANCE

Date: 22 November 2002

The Registrar
Business Acquisitions and Authorisations
Commerce Commission
PO Box 2351
WELLINGTON

Pursuant to s66(1) of the Commerce Act 1986 notice is hereby given seeking **clearance** of a proposed business acquisition.

PART I: TRANSACTION DETAILS

What is the business acquisition for which clearance is sought?

Clearance is sought for the proposed purchase by Brambles New Zealand Limited ("Brambles") of the business and assets of GE Capital Returnable Packaging Systems Limited ("GECRPS") comprising principally the hiring of plastic crates and bins.

The Person Giving Notice

This notice is given by:

Brambles.

The applicant requests that all correspondence and notices in respect of this application be directed in the first instance to:

Miriam Dean
Barrister
Ground Floor, KPMG Centre
9 Princes Street
PO Box 4111
Auckland

Telephone: (09) 377 8959
Facsimile: (09) 377 8960

Confidentiality

Do you wish to request a confidentiality order for:

The fact of the proposed acquisition?

Confidentiality is claimed for the fact that this notice is made for a limited period of 2 days from receipt of this application. This is in order for CHEP/GECRPS to inform affected parties, including employees, before public notice of this application.

Specific information contained in or attached to the notice?

Confidentiality is sought for information contained in square brackets and marked "Confidential" in the margin. Confidential information is deleted in the "Public Copy" of this notice.

If so, for how long?

Confidentiality is sought for all confidential information for the earlier of a period of five years from the date of this application or until Brambles advises the Commission it may disclose the information.

Why?

The information that has been deleted from the public copy of this application is, in the main, commercially sensitive and valuable information that is confidential to Brambles. Disclosure of this information could result in material financial loss and prejudice to the competitive position of the applicant. Confidentiality is also sought for certain sensitive information obtained from third parties for the purposes of this application.

The applicant relies on section 9(2)(b) of the Official Information Act 1982. The foregoing applies equally in respect of all additional information (expressed to be confidential) that the applicant may provide in relation to this application.

Details of the Participants

Who are the participants (ie the parties involved)?

The participants are Brambles and GECRPS.

The contact details for Brambles are as follows:

Brambles New Zealand Limited
C/- Spicer & Oppenheim
Level 8, Westpac Tower
120 Albert Street
Auckland

Telephone: (09) 279 2929
Facsimile: (09) 279 3939
Attention: John Judd, General Manager

The contact details for GECRPS are as follows:

GE Capital Returnable Packaging Systems Limited
37-41 Prospect Street
Box Hill
Melbourne
Victoria

Telephone: 61 3 9843 3700
Facsimile: 61 3 9843 3703
Attention: Jason Proposch, Chief Executive Officer

Who is interconnected to or associated with each participant?

Acquirer group/associates

Brambles is ultimately a wholly-owned subsidiary of Brambles Australia Limited¹ which is part of the world-wide group of Brambles companies. Brambles' businesses in New Zealand include CHEP (New Zealand) (unit load equipment hirer), Recall Total Information Management (records management) and Enviroway Limited (a 50/50 joint venture waste business).

Target company group/associates

GECRPS is a New Zealand incorporated company. There is an Australian incorporated entity of the same name, which is ultimately 86% owned by General Electric Company ("GEC"), a US listed corporation. GECRPS is 100% owned by General Electric Capital Corporation, which is in turn ultimately owned by GEC.

In New Zealand, GEC is represented through a range of businesses as discussed in Decision 461 (GE Capital Finance/AGC).

GECRPS trades under the name GE Weck-Pack in New Zealand. GE Weck-Pack is the only packaging business owned by GEC in New Zealand.

Does any participant, or any interconnected body corporate thereof, already have a beneficial interest in, or is it beneficially entitled to, any shares or other pecuniary interest in another participant?

The applicant understands that GEC has a funds management division which manages an extensive investment portfolio. There is a prospect that Brambles may be a company in which an investment is held by GEC. However, inquiries of GECRPS

¹ A copy of Brambles Industries Ltd's latest Annual Report is available at www.brambles.com

indicate that it is difficult to obtain this information from the United States. Nevertheless, any interest in Brambles would be very minor.

Identify any links, formal or informal, between any participant/s including interconnected bodies corporate and other persons identified at paragraph 5 and its/their existing competitor/s in each market.

N/A

Do any directors of the 'acquirer' also hold directorships in any other companies which are involved in the markets in which the target company/business operates?

No

What are the business activities of each participant?

CHEP

- 9.1 Brambles owns a range of businesses in New Zealand, including CHEP (New Zealand) ("CHEP"). CHEP, which was established in New Zealand in 1974, is involved in the supply of packaging systems (or equipment) and related services for the handling of unit loads in New Zealand.² A unit load is a load consisting of items or packages held together by one or more means, and shaped or fitted for handling, transportation, stacking and storing as a unit. A unit load can be formed on a platform, around the unit itself, or in the form of a box, cage or container or a combination of these.
- 9.2 More specifically CHEP provides customers – for hire by way of a pooling system – with access to a range of products in the nature of pallets or containers. Pallets are platforms on to which products are assembled and secured by shrink wrapping or bands to form a unit load. CHEP's pallets are of varying sizes and typically made of timber, although plastic pallets are also available for hire. Pallets are often used to transport products packed in containers, eg plastic crates and cardboard boxes. The company's pallet operation is by far the largest part of its business.
- 9.3 Containers are predominantly reusable plastic containers ("RPCs") in the form of plastic crates and bins ("crates"), pallet cages ("cages") and Intermediate Bulk Containers ("IBCs"). Crates are manufactured from rugged polypropylene and can be rigid (fixed wall) or foldable (collapsible). They are reusable and nestable and are available in a wide range of sizes (with the CHEP bins essentially being large-size crates for bigger volume product, harvesting and transportation).
- 9.4 CHEP's crates are used predominantly by the produce industry. (Until very recently, approximately [] of CHEP's crates were supplied to the produce industry.) The

² This is how CHEP has previously described its business (and the relevant market) to the Commission: see Submission from CHEP to the Commission, "*Acquisition by CHEP New Zealand of the Fruit Case Company Limited – Market Definition*", 21 January 1998 (and referred to in the Commission's investigation report of 27 February 1998 (CHEP/Fruit Case Company)).

balance of CHEP crates are used by the meat industry and to a very small extent by manufacturing and retail industries. (Approximately [] of CHEP's crates were supplied for meat/small goods and [] for manufacturing and retail industries.)

- 9.5 Crates are used in the produce industry by three main customer groups, ie growers, produce wholesalers ("wholesalers") and major retailers, more particularly the supermarkets. Crates are hired to growers as required and then transferred along the supply chain to wholesalers and supermarkets. On return, the crates are washed and made ready for re-hiring (or issue).
- 9.6 Cages are platforms with metal and wire mesh side sections and can be assembled to build a structure for products that are not easy to self stack, eg bottles, cans and also some produce. IBCs are large bulk containers made from steel and plastic and used to transport a range of bulk products (granules, liquids, engineering materials, bulk food lines) without the need for intermediate packaging such as drums, bags or cardboard boxes. IBCs are generally not used for produce.
- 9.7 CHEP also supplies a range of associated systems or products. These include the CHEP palift which is a unit load elevating and lowering device designed to eliminate the need for workers to bend while loading or unloading pallets. CHEP also provides a repair service for wooden product bins owned by manufacturers and growers.

GE Weck-Pack

- 9.8 GE Weck-Pack ("WECK") is the trading name of GECRPS's container packaging business in New Zealand. The WECK business was established by a Mr Graeme Weck in the early 1990s and was purchased by GECRPS in November 1997. WECK is involved in the supply – by way of a pooling system – of a range of plastic container products, ie crates (including bins) and also a small number of wooden container boxes/bins and steel cages³. These container products are supplied almost exclusively to the produce industry. (A very small number of container products is supplied to vineyards and removal companies.)
- 9.9 WECK also supplies – for hire by way of its pooling system – a limited number of pallets. However, these pallets are solely used for transportation of its own crates and boxes. They are not available for general hire.⁴

³ WECK supplies a plastic econo box which is a collapsible plastic walled box. Although it is available in New Zealand for supply none are in use.

⁴ This is consistent with the Commission's findings in its investigation report *CHEP/Loscam – 27 November 2000*, para 45.

What are the reasons for the proposal and the intentions in respect of the acquired or merged business?

- 10.1 There are a number of reasons for CHEP's acquisition of WECK. CHEP is a minor operator – [] – in the supply of crates. CHEP has approx [] crates available for hire; cf Fruit Case Company Limited (“FCC”) [] and WECK [] crates.
- 10.2 A merged company would provide CHEP with the size and scale to compete more effectively with FCC – as its direct competitor in the supply of crates – as well as the suppliers of alternative container packaging, eg cardboard boxes and paper/plastic bags. A merged company would enable CHEP to achieve significant synergies and a commercially acceptable return.
- 10.3 A related reason is to alleviate segregation problems for growers, wholesalers and retailers. Segregation problems arise for growers, in particular, because some wholesalers and supermarkets insist that growers using crates – as opposed to alternative container packaging – use a particular brand of crate. For example, Turners and Growers (“T&G”) generally requires all produce sold through T&G to be supplied in crates by FCC which is a wholly-owned subsidiary of T&G (see further section 41 below).
- 10.4 Similarly, the supermarkets generally insist on one crate only being used for the supply, and in some cases the display, of produce sold through their businesses. Progressive Enterprises Limited (“Progressive”) generally uses WECK crates. Woolworths (NZ) Limited (“Woolworths”) – until now – has used all three crates (CHEP, WECK and FCC), although predominantly CHEP crates. The Foodstuff companies (Auckland, Wellington and South Island) (“Foodstuffs”) generally use FCC crates as they acquire a large volume of produce through T&G. As T&G will only invoice FCC crates (along with the produce) to Foodstuffs – and not other companies' crate deposits – this effectively prevents other crate companies selling through T&G (refer also para 41.4).
- 10.5 Customers regularly complain about the inefficiencies which arise as a result of having to deal with different crates along the supply chain. For example, a grower has to pack 1000 lettuces for ultimate destination to one or more supermarkets. The grower's dilemma is that he/she does not know what brand of crates to pack the produce in until orders are finalised. If the grower did not have to deal with segregation issues, produce could be packed in the field into one particular brand of crate. All 1000 lettuces could then be supplied in these same crates to the wholesaler and then on-supplied to the supermarkets.
- 10.6 However, because of the general policy of wholesalers and supermarkets to use particular brands of crates, the grower – if packing in the field into crates as opposed to wooden bins or cages – will pack in one particular brand of crate and then have to repack in the packaging shed into the required brand of crate once he/she knows the ultimate destination of the product. This is inefficient and costly for the growers and unnecessary repacking can sometimes damage the produce (and raise food safety issues). Segregation difficulties also encourage growers to use cardboard container packaging rather than crates. All supermarkets accept produce in cartons.

10.7 The wholesaler has similar segregation problems. For example, a wholesaler orders 1000 lettuces. These lettuces are supplied to the wholesaler in CHEP crates. An order is then received by the wholesaler from Progressive for 800 lettuces. Progressive will generally only use WECK crates. Accordingly, the wholesaler has to repack 800 of the 1000 lettuces into WECK crates – again inefficient and costly.

10.8 Indeed, costs can effectively ‘double’ for participants in the produce industry as a result of this problem. For example, a wholesaler buys 500 WECK crates of a particular fruit or vegetable. The wholesaler is then advised that a particular retailer wants 300 CHEP crates of this product with the result that the wholesaler has to repack 300 of the 500 WECK crates into CHEP crates for delivery to the retailer. The end result is that an effective doubling of cost is incurred by the supply chain, eg the cost of the original 500 WECK crates plus the additional 300 CHEP crates for repacking purposes. (An alternative decision to order 300 CHEP crates from the grower – rather than repacking – can result in unnecessary added inventory for the wholesaler.)

10.9 Segregation is a particular issue for the supermarkets as the last entity in the supply chain. It is the supermarkets which are generally responsible for the return (or de-hiring) of the crates to the particular supplier. It is also the supermarkets which will bear the liability for the crate deposit if the crate is not returned to the supplier (see section 11).

10.10 Because of the administrative and deposit liability issues associated with segregation, supermarkets (not surprisingly) prefer, where possible, to deal with one crate supplier only or to use cardboard container packaging instead. A preferred supplier agreement with one crate supplier has the benefit of reducing multiple invoicing and provides for better ability to track and control equipment through the supply chain – from the field to the shop shelf. For supermarkets, a considerable amount of management time can be spent in resolving crate issues (ranging from lost crates to disputed paper work), which also causes supermarket distribution centres and transporters to be diverted from their core business to resolve crate queries at a significant cost in time and money.

10.11 It was in order to resolve some of these problems that CHEP was recently able to negotiate a successful three-way preferred supplier agreement involving MG Marketing Limited (“MG”), the produce distribution and purchasing agent for all Woolworths’ produce departments throughout New Zealand, and the Woolworths’ supermarkets. It was, however, a preferred supplier agreement only so that Woolworths still received produce in non-CHEP crates.

10.12 []

10.13 In summary, segregation is a timely and costly exercise for all customers along the supply chain and encourages the use of cardboard container packaging as opposed to plastic crates. One of CHEP’s objectives is to improve crate competitiveness overall by alleviating part of the segregation problem created by having three competing crate systems.

10.14 []

10.15 []

10.16 []

10.17 []

10.18 []

10.19 []

PART II: IDENTIFICATION OF MARKETS AFFECTED

Horizontal Aggregation

1. Are there any markets in which there would be an aggregation of business activities as a result of the proposed acquisition?

11.1 This acquisition results in aggregation in the national market for the supply of reusable and disposable container packaging, particularly for any or all of the storage, transport and/or display of fruit and vegetables (“produce”).⁵

11.2 No aggregation results in the national market for the supply of pallets. As already noted (para 9.9), WECK does not compete with CHEP for the general hire of pallets. WECK’s pallets are solely used for transportation of its own crates and boxes. As the Commission is aware, Loscam New Zealand Limited, which was 60% owned by the Australian incorporated GECRPS, sold its pallet business to CHEP in 1999.

Market Definition Principles

11.3 A market should be defined in a way that best assists the analysis of the competitive impact of the acquisition under consideration. The relevant market will ultimately be determined, in the words of the Act, as a matter of fact and commercial common sense. The appropriate market(s) must accord with commercial realities, take account of the activities of the parties involved and expose the constraints on individual firms (*Power New Zealand Limited v Mercury Energy Limited* [] 2 NZLR 669).

11.4 The applicant considers that the market definition set out above (para 11.1) is consistent with these principles. The applicant particularly emphasises the importance of fact and commercial common sense substitutability, especially in relation to the very real competition between plastic and cardboard containers (also wooden boxes/bins and paper/plastic bags) for the storage, transportation and/or display of produce.

Product

⁵ The market definition set forth in para 11.1 and subsequent paras of section 11 is put forward for the purposes of this application only, and is simply a practical recognition of the Commission’s conservative approach to market definition, ie to start with a more narrow market definition. Brambles does not want this to be taken as suggesting in any way that the wider market definition (ie a unit load systems market, as described more fully in para 9.1 above and in previous submissions from CHEP to the Commission) is inappropriate, especially when it is feasible to substitute between a wide range of different forms of unit load packaging.

11.5 The applicant says that the appropriate product market definition for the purposes of analysing this particular acquisition is the supply of (reusable and disposable) container packaging (or containers). Since, however, WECK specialises in the supply of containers (crates and boxes) to the produce industry – it supplies reasonably little container packaging to other industries – this acquisition can be conveniently assessed in relation to the produce industry only.

11.6 Defined in this way the market includes the supply – by hiring – of reusable containers and the supply – by sale and purchase – of disposable containers.

11.7 Reusable containers include:

- Crates (including plastic bins)
- cages
- wooden bins/boxes

11.8 Disposable containers (sometimes referred to in the industry as “one-way” containers) include:

- cardboard boxes
- plastic bags (including plastic netting bags)
- paper bags
- polystyrene trays/boxes
- lightweight (disposable) wooden boxes.

11.9 Of these various products it is, however, predominantly crates, cardboard boxes and bags (plastic/paper) that are used by the produce industry. Wooden boxes are now only used to a very small extent, having been largely displaced by plastic crates, cardboard cartons and bags. A considerable number of growers, however, will pack in the field in large wooden bins as an alternative to crates and then repack in their packing sheds into crates, cardboard boxes or bags. (Enza has thousands of wooden boxes/bins in use – see also para 11.58.) Polystyrene boxes/trays are used only in small quantities for produce such as mushrooms, beans and courgettes.

11.10 Although very relevant to the issue of constraints, this product market definition excludes for present purposes industry-owned containers. A number of industries or companies own containers (crates, wooden bins and cages) for their own use (“own-use supplies”). A number of industries or companies also operate small equipment pools for suppliers and industry members, such as Johnny Appleseed Limited, NZ Mushrooms Limited and MG (see further section 41).⁶

⁶ The applicant’s view is that the market should include own-use containers. However, as the Commission has on a number of times excluded own-use containers from the

- 11.11 The applicant says that this market definition is broadly consistent with previous Commission decisions (see section 15). In *CHEP/FCC* and *CHEP/Loscam* – September 1999 the Commission recognised that it was appropriate to include disposable and reusable packaging systems in the relevant market, but excluded industry-owned packaging systems from the market.
- 11.12 Consistent also with the Commission’s most recent investigation report, *CHEP/Loscam* – November 2000, the market definition for the purposes of this acquisition excludes pallets which Commission staff did not consider were substitutable for containers for the transport, storage and/or display of produce. In any event, as already indicated, no issue arises in relation to pallets since WECK’s pallets are used solely for the transport of its own crates, ie own-use supplies.

Geography

- 11.13 The geographic market is national. All major suppliers of container packaging trade nationally and compete nationally for customers. This is not to exclude, however, the ability of regional suppliers to compete. There is a number of small regional-based packaging suppliers to the produce and other industries.

Function

- 11.14 The relevant functional level is blurred. CHEP competes on one level with FCC and WECK as competing suppliers of crates. On another level, it is competing directly with the cardboard box manufacturers (eg Carter Holt Harvey Packaging Limited, Amcor Kiwi Packaging Limited and Visy Board Limited) who distribute their cardboard containers either through a distribution network to co-operatives or pack houses or directly to growers. CHEP adopts a functional market definition of the supply of container packaging.
- 11.15 The following information is provided to explain and support the above market definition.

The Customers’ Requirements

- 11.16 All three customer groups in the produce industry – the growers, wholesalers and retailers – require safe, convenient and cost-effective container packaging for the storage, transport and/or display of produce.
- 11.17 The principal concern of growers is to have available for supply a container that is the correct size and suitability for their produce; protects the produce from damage; and avoids segregation issues, if possible. Similarly, wholesalers want a commercially acceptable container package that delivers fresh produce with extended shelf life into retail outlets.
- 11.18 Supermarket requirements are a little different because they are concerned with the display (as well as the supply) of the produce sold through their stores. Supermarkets

relevant market definition – see section 15 – the applicant has taken the pragmatic approach of excluding these again for the purposes of this application. They remain, however, important to the issue of constraints.

will display produce consistent with their particular marketing philosophies. A supermarket that wants to portray the image that the produce has “come straight from the farm” may prefer to display (and will even repack where necessary) in plastic crates. This tends to be the Progressive supermarkets’ (Foodtown, Countdown and Three Guys) policy. Progressive supermarkets have specially designed shelving into which crates can be placed.

- 11.19 Woolworths supermarkets (Woolworths, Big Fresh and Price Chopper), on the other hand, had a policy of generally unpacking all produce supplied into their supermarkets and displaying it in units and on shelves. Similarly, Foodstuffs (New World, Pak ’N Save) largely unpacks and displays the produce loose on shelves. Although, because individual supermarkets are owner operated, some will merchandise special deals in crates. The practice of the smaller retailers differs – some display in crates, some unpack and display loose in units or on shelves.
- 11.20 Traditionally, growers have determined the type of container packaging used for their produce, and where crates are used, the particular brand of crate. But more recently, wholesalers and retailers have exerted more influence on packaging and, in particular, what crates they will accept (see also section 41).

Crates

- 11.21 CHEP, WECK and FCC all supply – by way of a pooling system – crates for the storage, transport and/or display of produce. Each company supplies crates (including bins) of generally the same size and footprint, eg 23/25, 35, 47 and 75-litre crates and 650/700-litre bins. The distinguishing feature is colour. CHEP crates are green and orange; FCC crates are blue, green and red; and WECK’s crates are yellow.
- 11.22 Appendix 1 lists the full range of CHEP crates (and other containers) available for hire, including dimensions, capacity and particular uses for the produce industry. WECK and FCC crates are identical to CHEP’s crates except for colour. WECK and FCC do not have direct equivalents to the CHEP collapsible Ropak and shuttle bins. Rather, they have fixed wall bins. FCC also provides, unlike CHEP, a range of wooden bins (including Cantabins) (which are discussed at para 11.58 below). Photographs of a sample of each company’s crates are supplied in the folder of photographs accompanying this application.⁷
- 11.23 Each of CHEP, WECK and FCC all operate on a national basis with company controlled depots and agencies located throughout New Zealand. CHEP has 28 depots/agencies and believes that FCC has a similar number of depots/agencies, with WECK having a smaller number (17).
- 11.24 Pooling involves a customer hiring a crate that is later returned or de-hired to CHEP (or FCC or WECK) at another location. For example, a crate is issued to a grower but returned to CHEP generally by a supermarket as the final customer in the supply chain. (Sometimes the wholesaler will be the final customer in the supply chain especially where repacking is required.) This enables produce to be packed by a grower in the same crate (sometimes in the field but more often in the packing house)

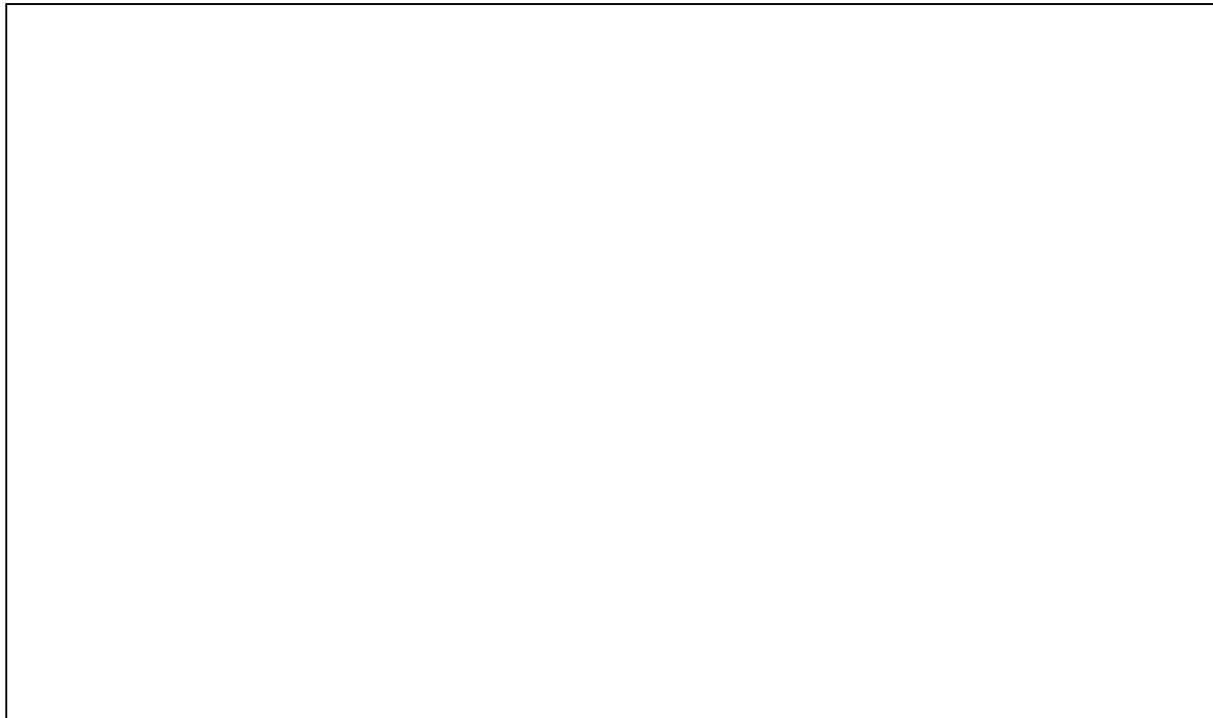
⁷ See also the FCC produce range at www.turnersandgrowers.com and for the WECK product range at www.gecrps.com.au. Note that the GPAK and Dolav boxes are not available in New Zealand.

which is supplied to the wholesaler and, provided repacking is not required, then on-supplied to the retailer. As already noted, depending on retail policy, some retailers will then display the produce in the same crate; others unpack and repack.

11.25 CHEP, and FCC and WECK, operate a deposit refund system in connection with the hiring of crates by their respective customers. In simple terms, a crate is issued from a particular depot to a grower who is invoiced a deposit and usage fee. When the produce is sold by the grower to a wholesaler the crate deposit is transferred from the grower to the wholesaler. When the produce is sold by the wholesaler to the retailer, the crate deposit is transferred from the wholesaler to the retailer. When the retailer returns the crate, the deposit, depending on trading arrangements, is refunded or credited to a nominated account. Sometimes this is the retailer's account; sometimes this is the wholesaler's account if the wholesaler and retailer have entered into an arrangement as between themselves relating to administration and deposit liability. Settlement between the grower and the wholesaler and wholesaler and retailer generally occurs every two weeks.

11.26 The incentive for users to return crates is to reclaim the deposit. Hence, the supermarkets' concern with the administration (including segregation) and deposit liability potentially payable by them if crates are not returned to the supplier. Even where supermarkets and wholesalers have entered into administrative arrangements as referred to above, deposit charges generally remain with the supermarkets. 'Lost' crates can be costly for supermarkets.

11.27 The deposit refund system can best be explained by the following diagram:



11.28 CHEP's crate list price for an issue or usage fee is \$1. Its deposit fee is \$11. It is to be noted that the \$1.00 flat (crate usage) fee was introduced in order to have a simple fixed fee that could be benchmarked against other container packaging, in particular cardboard boxes. Growers wanted a fixed monetary amount to make the comparison

simple. However, the \$1.00 is a list price only. CHEP supplies customers at varying issue fees from [] depending on location, size of the grower, competitive alternatives and whether or not freight is included or excluded from the price. Also, CHEP has maintained an issue price of [] for major growers who were formerly customers of Green Leaf Vegetable Container Trading Company Limited (which CHEP acquired in 1999). CHEP can provide the Commission with any number of cases where it has been forced to sell below list prices as a result of pressure from customers and/or competition from FCC and alternative container packaging.

- 11.29 A small grower may require approx 500 crates a week. A large grower may require up to 4,000 or 5,000 crates a week (sometimes even more). Accordingly, a large grower may incur a crate cost of approximately \$5,000 per week during harvesting which the grower will then seek to recover in the sale price for its produce.
- 11.30 A small number of crates are hired to particular customers on a daily rate basis. The deposit refund system does not apply in these cases. This includes the supply of CHEP crates to Progressive for secondary distribution purposes.

Cardboard boxes

- 11.31 The majority of produce can be – and is – packaged in crates or cardboard boxes. This is not surprising because until crates entered the market in the late 1980s/early 1990s, cardboard (and wooden) boxes were the predominant form of packaging for produce. Attached as Appendix 2 is a table listing the main produce available in the New Zealand market with an indication as to the type of packaging container used for each fruit or vegetable. That table shows that the majority of fruit and vegetables is packed in both crates and cardboard boxes.
- 11.32 Cardboard boxes are manufactured from fibreboard. They will vary in quality and strength depending on, among other things, whether or not they are manufactured from virgin or recycled fibreboard. They are available non-waxed and waxed (a waxed cardboard box gives protection against moisture).
- 11.33 Cardboard boxes are available in a range of sizes for the produce industry. Unlike crates which are modular (ie they have a standard footprint), cardboard boxes will vary considerably in size. The range of sizes includes, however, cardboard box “equivalents” to the 23, 35, 47 and 75-litre crates. Bulk cardboard bins are also available as direct substitutes for bulk plastic bins. Cardboard boxes can also be manufactured to growers’ specifications, especially for product protection reasons. Appendix 3 provides a sample of cardboard box sizes available in the market which are approximately immediate “equivalents” to crates including dimensions and approximate capacity.
- 11.34 There is little in the way of public statistical information as to the proportion of cardboard/crate packaging used by those involved in the produce industry. But the evidence in the marketplace is that as a matter of fact and commercial sense, crates and cardboard boxes are substitutes for most (although not all) produce and directly compete for growers and wholesalers’ custom. The applicant comments as follows.

- 11.35 First, it is clear that growers consider that crates and cardboard boxes are, in the main, substitutable for each other. Some fruit and vegetables are more suitable for particular containers. Cardboard boxes are less suitable for vegetables with a high moisture content, eg for cabbage and silverbeet/spinach crates are preferred.⁸ Squash/pumpkin is also more suitably packaged in crates (or cages or wooden bins). Garlic, on the other hand, is only packaged in cardboard boxes. South Island tomatoes are also largely packaged in cardboard boxes only.
- 11.36 As already noted, provided with this application is a folder of photographs which includes in section 2, photographs of the same produce packed in both crates and other container packaging mediums, in particular cardboard boxes. These photographs – taken on the market floor of a wholesaler – show graphically that cardboard boxes are used by growers (and wholesalers) as an alternative to plastic crates.
- 11.37 CHEP has also informally surveyed a number of growers as to current use of cardboard boxes and crates (and other container packaging) and their views as to their ability to switch from crates to cardboard boxes and vice versa. Attached as Appendix 4 is a confidential copy of the notes of this survey.
- 11.38 This survey, along with the photographs, confirms CHEP’s view that most produce can be, and is, packed in crates and cardboard boxes. Moreover, growers confirm that there is no difficulty in switching from crates to cardboard boxes, eg:

Grower A – *“There is not a product that can’t be packaged in a carton”*

Grower B – *“It is very easy to change”*

Grower C – *“From a production point of view it is easy to change from crate to carton and vice versa”*

Grower E – *“There is no difficulty switching between crates and cartons”*

- 11.39 However, whether or not they choose to do so depends on a range of considerations, including the nature of the particular fruit or vegetable produce, grower preference, whether the produce is also exported, price, wholesaler and retailer requirements and the advantages and disadvantages associated with each product. Perceived advantages with crates are distribution, reusability, stackability, ability to store cool products and for some growers, price. Perceived advantages of cardboard boxes are lack of administration/segregation problems (no deposit/tracking system), the ability to brand, suitability for export and a premium image. For a number of growers the ability to ‘brand’ their cardboard boxes gives a marketing advantage resulting in a preference for cardboard boxes.
- 11.40 Attached as Appendix 5 is certain pricing information which CHEP has obtained from manufacturers and distributors of alternative container packaging for the produce industry, particularly for cardboard boxes. This pricing information confirms a wide range of cardboard box pricing depending on a number of factors including

⁸ The applicant notes, however, that in Australia where there is a higher degree of waxed carton used, cabbages etc are packaged in cardboard.

strength and quality, one piece or two piece (a one piece box has a fold-down lid; a two piece box has a slide-on lid); waxed or non-waxed, printed or non-printed and volume purchased.

- 11.41 It must be emphasised that these prices are list prices only. Some of the pricing information shows indicative volume discounts. CHEP believes, however, that there is considerable discounting off these list (even discounted) prices by the cardboard box manufacturers and distributors as confirmed by certain growers' comments in Appendix 4. Typically large growers – especially those involved in export as well as domestic supply – would be purchasing significant numbers of container packaging and therefore able to negotiate specific contract prices.
- 11.42 Although this pricing information shows that cardboard boxes are generally more expensive than crates, it must be remembered too that this is only in relation to the initial outlay. In addition to the usage fee of a crate, there are the administrative costs of tracking etc and potential deposit liability for lost equipment. Moreover, it is apparent that depending on volume requirements and other factors, growers are able to obtain cardboard boxes at competitive prices.
- 11.43 For example, the comment of Grower G is that “*cartons compete favourably with crates*”. To similar effect are the comments of Grower M, “*the cost of a cardboard box with a lid is competitive with plastic crates*” and Grower N, “*a cardboard box with a lid is \$1.30*”; “*the cost of packaging per kg is 55 cents for cardboard and 45 cents for crates*”. Furthermore, even where prices may not be comparable, it is clear from the evidence in the market place that some growers prefer to use cardboard boxes for non-price reasons, eg premium image and, in particular, to avoid the administration/segregation problems associated with use of crates.
- 11.44 Furthermore, to induce growers and wholesalers to use cardboard, cardboard manufacturers are supplying larger growers with carton forming machines. These machines are generally located in the packing shed and the carton is formed automatically prior to the produce packing process. For example, see the comments of Growers L, M and N.
- 11.45 Secondly, evidence shows that the wholesalers use a mix of crates/cardboard boxes (and other container packaging) for produce bought and sold through their markets. Wholesalers will buy produce from selected growers in particular container packaging. As already explained, in some cases, the wholesalers will unpack and repack into different container packaging, depending on the retailers' requirements.
- 11.46 CHEP has obtained from [], on a confidential basis, the type and volume of container packaging for all produce sold through its market for the 12 months ending 31 May 2002. The relevant information is set out in the following table:

Table 1

[]

Carton/Bags and Grower Bins

Bags (Plastic and Paper)	[]	
Cartons	[]	
[] Bin/Bin Packs	[]	
No Charge Bins	[]	
Total Receipts	[]	[]
Hired Crates/Bins etc		
FCC Plastic Bins	[]	
WECK Plastic Bins	[]	
FCC Wooden Bins	[]	
WECK Wooden Bins	[]	
Cantabins	[]	
CHEP Cages	[]	
FCC Crates	[]	
WECK Crates	[]	
CHEP Crates	[]	
Total Receipts	[]	[]
Total	[]	

Other container packaging not included in the table above – which is confined only to container packaging in the market as defined – included jars, punnets and retail display trays.

11.47 This table shows that crates accounted for approximately [] of the container packaging included in the applicant’s market definition. The [] statistics also show that cardboard boxes are used considerably more than crates for the storage and transportation of produce [].

11.48 The applicant has also obtained similar confidential information from [] for the six months ending 30 June 2002. The relevant information is set out in the following table:

Table 2

[]

Carton/Bags and Grower Bins		
Bags (Plastic and	[]	

Paper)		
Cartons	[]	
[] Bin/Bin Packs	[]	
No Charge Bins	[]	
Total Receipts	[]	[]
Hired Crates/Bins etc		
Plastic Bins	[]	
Plastic Crates	[]	
Total Receipts	[]	[]
Total	[]	

Other container packaging not included in the table above – which is confined only to container packaging in the market as defined – included jars, punnets, retail display trays.

- 11.49 This table shows that crates accounted for [] of the container packaging in the market as defined.
- 11.50 The applicant says that the [] statistics provide reliable evidence as to the extent to which produce is packaged in crates, cardboard boxes and other container packaging. These statistics have the advantage of providing the relevant statistics for a 6/12 month period. This avoids the problems of taking a “snapshot” of the market at any given time. The problem with taking a “snapshot” is that in the produce industry, different fruits and vegetables will be in season at different times.
- 11.51 For example, as at July, there were not significant quantities of fresh produce apart from lettuce, cabbage, cauliflower and broccoli which do tend to be packaged in crates rather than cardboard boxes. At other times of the year, when fresh produce includes stone fruits (peaches, nectarines, plums) and citrus, much of this produce is packaged in cardboard boxes. Indeed, CHEP is aware that as at July, for example, [] had a large volume of apples, pears and nashi pears in cardboard boxes in its storage facility.
- 11.52 Thirdly, evidence shows that the supermarkets buy their produce from the wholesalers in a mix of crates/cardboard boxes (and other container packaging). That is clearly confirmed by the [] statistics. It is also confirmed by information which CHEP has obtained from Mr Ian Pavey, former Director of Produce for Woolworths’ Supermarkets. Attached as Appendix 6 is a memorandum from Mr Pavey on the issue of container packaging for product supplied into Woolworths (and other) supermarkets. His memorandum confirms that supermarkets buy produce in a range of container packaging and that any material price increase would be constrained by competition from cardboard boxes.

- 11.53 The major cardboard box manufacturers are supplying cardboard compacting machines at the back of major retailers like supermarkets. All major supermarkets have these machines, which are used to compact used cardboard boxes and to encourage recycling. In some instances, the cardboard box supplier is also the purchaser of the used waste compacted cardboard. As a result, disposal of cardboard boxes is not a major issue for supermarkets. In fact, CHEP perceives that it is less of an issue than the administrative problems (including theft) associated with the supply of crates.

Bags/Wooden Bins and Cages

Bags

- 11.54 Bags are another alternative form of container packaging for produce, particularly potatoes, onions and carrots.
- 11.55 Poly plastic bags are especially suitable for carrots and potatoes. (See the comments of Growers F, G and H.) These are manufactured from high density polyethylene. They are available in a range of sizes from 2kg to 20kg. The 20kg bag is approximately “equivalent” to the 23-litre crate (see photographs, section 2, page 5). A 20kg bag costs approx 26 to 30c (see the comments of Grower X and Appendix 5 (Chequer Packaging prices)). Smaller poly bags will be placed in an outer (a large plastic bag or crate) and then packed on to a pallet for transportation.
- 11.56 Paper bags are especially suitable for potatoes. (See the comments of Growers F, G, H and I.) They too are available in a range of sizes from 5kg to 20kg. The 10kg and 20kg size bags are particularly used at a cost of between 46 to 64 cents (see the comments of Grower V and Appendix 5, Cryovac prices) (see photographs, section 2, page 10).
- 11.57 Bulk nylon mesh/netting bags are especially suitable for onions. (See the comments of Growers F and I.) They are normally available in 10kg and 20kg size bags which cost approx 30 and 45 cents respectively (see photographs, section 2, page 7).
- 11.58 Wooden boxes and bins (predominantly bins) continue to be used by some sectors of the produce industry, particularly for harvesting and storage purposes. Wooden bins are used by growers in the field for particular products such as apples, kiwifruit, citrus, onions, potatoes and cauliflower. The Cantabin is a large wooden bin used to harvest and distribute produce in the Canterbury region. Cantabin was a joint operation set up by T&G and MG. Cantabins are available for hire from FCC. A number of participants in the produce industry also own their own wooden bins for harvesting purposes, eg Enza (approximately 164,000) and Zespri Limited Packhouses (approximately 113,000). Graeme Weck – the former owner of WECK – is also a supplier of wooden boxes. MG also has a small number of its own wooden bins. CHEP estimates that other grower bins would be somewhere in the vicinity of 250,000.
- 11.59 Cages are used for some produce, eg cabbage, cauliflower, squash and pumpkin and are only available for hire from CHEP. A number of companies own their own cages, including Foodstuffs, Heinz Wattie and participants in the dairy industry.

Summary

- 11.60 Although cardboard is more expensive – at the upper price end of the market – and bags are less expensive – at the lower end of the market – the applicant says that as a matter of fact and commercial common sense it is clear that crates, cardboard boxes, wooden boxes and bags are substitutable from a demand side perspective and compete for market share.⁹
- 11.61 Whether a particular grower, wholesaler or retailer chooses a mix, or cardboard boxes over crates, or crates over cardboard boxes, or bags over crates will depend on a wide range of considerations. The important point is that applying the Commission’s *snnip* test, there can be little doubt that a merged entity would lose market share to alternative container packaging, particularly cardboard boxes.

2. Differentiated Product Markets

- 2.1 There is obvious product differentiation between crates, wooden boxes, cardboard boxes and bags.

3. Nature of the Differentiation

- 3.1 The principal characteristics of differentiation relate to the process of manufacture, price and the perceived advantages/disadvantages associated with each type of container packaging as discussed above. Some products are closer substitutes for crates than others. As discussed above, cardboard boxes are close substitutes for crates for most fruit and vegetables (with some exceptions). Bulk plastic and paper bags are close substitutes for crates for potatoes, onions and carrots. Wooden bins and cages are more distant substitutes (except for picking and storage); polystyrene more so.
- 3.2 Crates are non-differentiated, ie they are standardised. CHEP understands that all hire companies (and those companies who own their own crates) buy from the same supplier (Reece Viscount Limited). Customers of hired crates make their purchases largely on the basis of price, service and retailer requirements.
- 3.3 The acquisition of WECK’s business by CHEP will not result in a part of the substitution chain being controlled by the merged entity. FCC will remain an independent and vigorous supplier of plastic crates and numerous other carton,

⁹ The applicant notes that in *Decision No 291 (Caroma/James Hardie)* the Commission acknowledged that despite the considerable pricing differential between vitreous china toilet products and plastic toilet products, there was nonetheless a clear overlap in the middle range of the market (where prices moved closer together) and that as a “matter of fact and commercial common sense, plastic would be reasonably substitutable for vitreous china (and vice versa)” so that both were included in the same market. See also *Decision 399 (Southern Cross/Aetna)* where the Commission recognised that although different medical insurance plans provided different levels of cover and service and at different prices, (and so not perfect substitutes for each other) an *ssnip* would nevertheless be constrained by price competition between them and therefore all plans fell into the same market. The applicant says that precisely the same reasoning applies here.

bag and wooden box manufacturers and distributors (as listed in paragraph 16.1 below) will continue to supply growers, wholesalers and retailers.

Vertical Integration

4. Will the proposal result in vertical integration between firms involved at different functional levels?

4.1 The acquisition does not result in any vertical integration.

5. Previous Notifications

5.1 The following (proposed) acquisitions/notifications have been made in the past five years

GEC/CHEP.

5.2 On 9 June 1997, the Commission registered a notice in which clearance was sought for GECRPS to acquire the business of CHEP (ie a WECK/CHEP merger). In *Decision No 298*, dated 18 June 1997, the Commission granted a clearance. The Commission concluded that the relevant market was for the "*hire of reusable packaging containers in New Zealand*". The Commission noted that there did not appear to be any constraints on the expansion of activity by a competitor; that a new entrant would not face entry conditions; and that the merged entity would be constrained by the ability of large users to purchase containers and operate their own pools. The proposed acquisition did not proceed.

CHEP/FCC

5.3 In February 1998, the Commission investigated informally a proposed merger between CHEP and FCC. In an *Investigation Report* dated 5 March 1998, Commission staff concluded that the acquisition would not result in the acquisition or strengthening of a dominant position in a market.

5.4 Commission staff reconsidered the relevant market definition and defined the market as one for "*the hire of reusable and disposable packaging systems for the handling of unit loads in New Zealand*". Commission staff recognised that disposable packaging – ie cardboard boxes – was substitutable for reusable containers and so should be included within the relevant product market definition. Own-use supplies (including industry pools) were again excluded from the market definition.

5.5 Commission staff recognised too that there did not appear to be any significant constraints on existing competitors from expanding and that entry barriers were low. A merged CHEP/FCC would also have been constrained by customers having the ability to purchase their own packaging systems or operate their own pooling systems.

CHEP/Loscam

- 5.6 In September 1999, Brambles acquired the pallet hiring and pooling business of Loscam New Zealand (“Loscam”), a subsidiary of the Australian incorporated GECRPS. The Commission was advised informally of the acquisition and that no application for clearance would be made – relying, in part, on *Decision 298* and the Commission’s reasoning in relation to a possible CHEP/FCC merger. At the same time, the Commission was advised that Brambles was investigating the possibility of acquiring the assets of Green Leaf Vegetable Container Trading Company Limited, a minor participant in the supply of pallets and crates.
- 5.7 The applicant was advised by letter dated 1 October 1999 that the two acquisitions would not raise any dominance concerns. A staff investigation report applied the same market definition adopted in CHEP/FCC. Commission staff also found that barriers to entry were relatively low and that any market power would be curtailed by the countervailing power of large customers. Both acquisitions proceeded.

CHEP/Loscam – November 2000

- 5.8 In a subsequent investigation report dated 27 November 2000 (“*CHEP/Loscam – November 2000*”) Commission staff re-examined the CHEP/Loscam merger. They defined the relevant market as the “*national market for the general hire of pallets*”. Commission staff did not consider that crates were substitutable for pallets. They also considered that the barriers to entry – to set up a reasonable size pallet pool and depot network – would be significant. The applicant disagrees with the findings in this report. But since the current application is concerned with the supply of containers – and not pallets – this Investigation Report has little, if any, relevance to the present application.

PART III: CONSTRAINTS ON MARKET POWER BY EXISTING COMPETITION

Existing Competitors

- 16. In the market or markets, who are the suppliers of competing products, including imports?**

- 16.1 The following table sets out the relevant participants in the market as defined above:

Table 3: Market Participants

Participant	Function/Product
FCC	Hirer of plastic crates and wooden bins
WECK	Hirer of plastic crates and boxes
CHEP	Hirer of plastic crates and cages
AEP Industries Ltd	Manufacturer/direct distributor of plastic bags
Amcor Kiwi Packaging Ltd	Manufacturer/direct distributor of cardboard boxes
Barnes Plastics Ltd	Manufacturer/direct distributor of polystyrene boxes
Box NZ Ltd	Manufacturer/direct distributor of cardboard boxes
Carter Holt Harvey Packaging Ltd	Manufacturer/direct distributor of cardboard boxes and paper bags
Chequer Packaging Ltd	Manufacturer/direct distributor of polypropylene bags
Corvex Plastics Ltd	Manufacturer/direct distributor of modified atmosphere bags
Cryovac Ltd	Manufacturer/direct distributor of plastic/paper bags
Donald Napier Ltd	Manufacturer/direct distributor of nylon mesh bags and Kwikloc sealers
E C Attwood Ltd	Distributor of cardboard boxes
Graeme Weck	Manufacturer/distributor of wooden boxes
Hope Moulded Polystyrene Ltd	Manufacturer/direct distributor of polystyrene boxes
Jarvis Trading Ltd	Manufacturer/direct distributor of polypropylene and paper bags
Mainguard Packaging Ltd	Manufacturer/direct distributor of plastic potato bags
Packaging House Cartons Ltd	Distributor of cardboard boxes
Veg-Gro Supplies Ltd	Distributor of cardboard boxes
Visy Board Ltd	Manufacturer/direct distributor of cardboard boxes

16.2 In addition to the main distributors of cardboard boxes/bags as identified in Table 3 above, there are any number of smaller packaging suppliers able to supply the produce (or horticultural) industries. Examination of the Auckland Yellow Pages

alone, reveals a large number of packaging suppliers who supply inter alia the produce (or horticultural) markets.

- 16.3 The statistical information provided by [] would suggest that overall the cardboard box manufacturers have the larger market share for the supply of container packaging for produce. (The [] statistics would suggest that the market is reasonably evenly divided between crates and cardboard boxes/bags.) CHEP has no way of estimating, however, individual market share for the cardboard box (or bag) suppliers.
- 16.4 In relation to the supply – by way of pooling – of crates only, CHEP estimates that as at August 2002 the percentage of supply (for produce) as follows:

Table 4: Crate Supply Shares

Participant	Estimated Supply %
FCC	[]
WECK	[]
CHEP	[]

- 16.5 The presence of a large number of competitors in the market – as identified in Table 3 above – ensures that this acquisition will not substantially lessen competition nor conversely, will it create significant market power. The acquisition would not enable a merged CHEP/WECK to impose a material price increase even for a short period, and certainly not for a sustained two-year period, in terms of the Commission’s current Practice Note. A merged CHEP/WECK would continue to be constrained by existing competitors in the range of container packaging for the produce industry, in particular cardboard boxes.
- 16.6 In addition, a merged CHEP/WECK would be constrained ultimately by the wholesalers and retailers from imposing any material price increases due to the fact that if a merged entity were to increase prices to growers, they could be expected to attempt to recover those increased prices in their produce prices. It can be expected that wholesalers – and in turn retailers – would apply considerable pressure to constrain produce prices. That pressure would pass back through the supply chain to growers who can be expected to look at alternative container packaging supplies. Also, the industry is, characterised by a lack of contractual commitments which enables all customers to switch allegiance between suppliers (whether of other crates or cardboard boxes or paper/plastic bags) virtually overnight. It is particularly easy to switch from crates to cartons.

Conditions of expansion

17. Identify barriers to entry/expansion

17.1 Significant constraint is imposed by the absence of barriers to entry or expansion in the relevant market. Specifically, in relation to conditions of expansion, there are no barriers to the ability of current competitors of container packaging (crates, cartons, bags etc) to expand. There are no frontier entry conditions, legislative/regulatory conditions, industrial/business or other factors to prevent expansion.

18. Identify existing suppliers who could expand

18.1 All current market participants identified in Table 3 above could increase their supply of container packaging into the New Zealand market. Any of the cardboard manufacturers, the applicant believes, would have the ability to increase utilisation of existing capacity. Existing suppliers who could expand include FCC, particularly given the advantages it has of vertical integration with T&G.

19. What would influence the business decision to increase supply?

19.1 The business decision to increase supply would be premised on perceived commercial opportunity. That opportunity would arise if a merged company attempted to increase prices or reduce service.

20. How long would it take for supply to increase in each case?

20.1 Supply could increase very quickly given that increasing supply is as simple as manufacturing additional output (in the case of the manufacturers of cardboard boxes and (paper and plastic) bags) or purchasing additional product for supply (in the case of FCC which could purchase additional crates from the New Zealand supplier). (CHEP believes that Reece Viscount Limited manufactures approx 2,000 crates a day.)

21. Would the possible competitive response of existing suppliers constrain the merged entity?

21.1 Yes and see further paragraph 22.1 below.

22. Looked at overall, would the merged entity be constrained in its actions by the conduct of existing competitors in the markets affected.

22.1 Post acquisition a merged CHEP/WECK would continue to face significant constraint from FCC as its immediate direct competitor in the supply of crates for hire, as well as from the various other suppliers of alternative container packaging, eg cardboard boxes and bags. Accordingly, a merged entity would be unable to impose a material price increase or reduce the quality of its service following the acquisition on the basis of the constraint imposed by existing competitors alone. Substantial additional constraint is imposed, however, by the ease of entry and the very significant constraint imposed by the countervailing power of acquirers, especially wholesalers and retailers.

Co-ordinated market power

23. Characteristics post acquisition facilitating or impeding co-ordination effects

- 23.1 Collusion is highly unlikely to reduce competition as a result of this acquisition. First, it would be virtually impossible for CHEP to engage in co-ordinated pricing with the number of competing firms that supply container packaging to the produce industry. Secondly, any such co-ordinated pricing with FCC alone would be difficult and unlikely given the history of rivalry between CHEP/WECK and FCC and the countervailing power of the companies' customers which would prevent them from doing so.
- 23.2 The following table applies the factors considered by the Commission as relevant to an assessment of whether or not an acquisition would substantially lessen competition by the facilitation of the exercise of co-ordinated market power:

Table 5

Factors conducive to collusion	Presence of factors in the market
High seller concentration	No – there are a significant number of suppliers of container packaging to the produce industry
Undifferentiated product	No – the products supplied by the participants are differentiated in relation to process of manufacture, price and particular advantages/disadvantages perceived depending on the particular product.
New entry slow	No – entry can be affected reasonably quickly.
Lack of fringe competitors	Uncertain – though it would seem there are a number of fringe competitors especially in cardboard boxes
Price inelastic demand curve	No – pricing is a factor (although not the sole factor) in choice of container packaging
Industry's poor competition record	No – the market is competitive
Presence of excess capacity	Not relevant
Presence of industry associations	Yes (eg Packaging Council and Logistics Institute) – but no more than is typical of any industry

24. Characteristics post acquisition facilitating or impeding monitoring and enforcement of co-ordinated behaviour by market participants

- 24.1 Even if the merged entity was able to reach any collusive agreement with other participants, including FCC alone, “discipline” would be difficult. The following table applies the factors considered by the Commission as relevant to the assessment of whether or not co-ordination would be “disciplined”:

Table 6

Factors conducive to discipline	Presence of factors in the market
High seller concentration	No – see above
Sales small and frequent	No – Sales of packaging can be large volume
Absence of vertical integration	Yes – although some limited vertical integration ie T&G/FCC
Supply slow growing	No – the produce industry is a growing industry in New Zealand
Firms have similar costs	No – given the differentiated products
Price transparency	No – although the various participants have list prices, it is plain that there is considerable discounting from those list prices. CHEP has difficulty even in obtaining reliable information as to true cardboard box prices.

25. Evidence of price co-ordination, price matching or price following

- 25.1 The market is not characterised by co-ordinated behaviour. Even in relation to the supply of crates alone, the history has been of aggressive rivalry among crate suppliers. While list prices are the same or similar – because of similar cost structures and competitive factors – ‘real’ prices vary as between FCC, CHEP and WECK.

26. Reasons why the transaction will not increase risk of co-ordinated behaviour

- 26.1 As considered above, the proposed acquisition will not increase the risk of co-ordinated behaviour. Put simply, there are too many container packaging suppliers to the produce industry to make any co-ordinated behaviour possible or practical. In relation to the possibility of any co-ordinated behaviour between FCC and CHEP/WECK alone, any such co-ordination is very unlikely for the reasons stated earlier. Moreover, an obvious discouraging factor is that collusion is illegal under ss 27 and 30 of the Act.¹⁰

¹⁰ A point recognised by the Commission in *Decision No 439 (PMI/GCU)*

PART IV: CONSTRAINTS ON MARKET POWER BY POTENTIAL COMPETITION

Conditions of entry

27. Barriers to Entry

- 27.1 There are no barriers to entry to the supply of container packaging (reusable or disposable) for the produce industry (and indeed other industries). This was also the Commission's view in *GEC/CHEP and CHEP/FCC*.
- 27.2 In relation to cardboard boxes and bags, CHEP is less knowledgeable about entry factors. However, with three manufacturers of cardboard boxes in New Zealand, CHEP believes it would be possible for any new entrant to acquire supply for distribution, whilst infrastructure costs – to set up a distribution operation – would not be large. It believes the same would apply to bags. CHEP confines its comments in relation to the following questions to crates only.
- 27.3 Crates can be purchased at a reasonably small cost (\$8-10) from the manufacturer Reece Viscount Limited (“Reece”). Reece sells to both firms such as FCC, CHEP and WECK and to large users who wish to operate their own pools or use their own crates. The applicant is not aware of any capacity problems that would prevent Reece from supplying a new entrant.
- 27.4 A new entrant wanting to establish a small pooling operation would require depots/agents. Wholesalers, such as MG and CSI, already have the depots/agents in place to set up a crate pool with very little additional infrastructure costs if they wished to do so. Or, alternatively, their depots/agents could be made available to a new entrant.
- 27.5 This was a major advantage for FCC when it was established since T&G already had a depot infrastructure in place making it easy for their growers and retailers to purchase and return crates to the same site. Just as T&G has vertically integrated into the supply of crates, so too could MG or CSI if they considered it worthwhile doing so, particularly if a merged CHEP/WECK increased prices materially or reduced service.
- 27.6 A software system would be required to track equipment and deposit values. Depending on the size of the operation, a local software package could be used at a very low entry cost.
- 27.7 A crate washer would be required to wash the crates for re-issue. A crate washer can be purchased for around \$30,000.
- 27.8 The ability to enter the market on a smaller scale is illustrated by Green Leaf Vegetable Container Trading Company Limited's (“Greenleaf”) entry into the market in 1996/7. Greenleaf is a good example of a small pooling operation which was set up by approximately 300 growers in 1996/1997. From 1997 to 1999 (when CHEP purchased Greenleaf) its business steadily grew in the central North Island, averaging [] issues per week until April 1999 and [] per week after April 1999 when there was a change in policy by T&G to only charge FCC crates with their produce to

retailers. As Foodstuffs would not accept an invoice for the produce and an additional invoice from the crate companies (CHEP and WECK) this basically excluded both companies from the T&G market floor and resulted in Foodstuffs requiring all produce sold through T&G to be supplied only in FCC crates (see also section 41).

- 27.9 Greenleaf acquired 88,000 crates and 500 wooden bins (also 2,000 pallets). It employed 10 people (a General Manager, Accounts Clerk and eight factory staff). It used a local supplier of software product in Palmerston North. It had a small depot and office in Palmerston North, a second depot in Granada in Wellington, with agents in various other locations, eg New Plymouth, Hamilton and Tauranga. As Greenleaf was predominantly based in the Central Region of the North Island, with most crates being hired and subsequently de-hired in that region, low back load costs were incurred.
- 27.10 The applicant is aware that in *CHEP/Loscam – November 2000*, Commission staff reached the view that in relation to the hiring of pallets, the barriers to entry were significant. CHEP disagrees with these views. But, in any event, there are some significant differences between the cost of entry in relation to pallets and crates.
- 27.11 First, the cost of a pallet – as opposed to a crate – is considerably higher, ie \$25 per pallet compared with \$8-10 per container (ie approximately a third of the cost of a pallet).
- 27.12 Secondly, crates, unlike pallets, are predominantly used on one trip before return to the supplier, ie grower – wholesaler – retailer – crate supplier, since a crate requires washing before re-use. As a result, the hiring and de-hiring of crates tends to occur within regions and over much shorter periods than is the case with pallets. The same pallet may be used for numerous outward and inward trips before final return to CHEP. As a result, there is a reduced need in relation to a crate pooling operation – as opposed to a pallet pooling operation – to have nationally based depots/agents.
- 27.13 Thirdly, and following on from the above, the “back load” problem referred to in the Commission’s November 2000 report, ie the need to avoid transporting empty pallets across long distances on the return trip, is not an issue in relation to crates, which have to be returned empty in any event.
- 27.14 Finally, there are already in existence a number of small individually owned crate pooling operations. The applicant has excluded these from the market definition. But what these small operations demonstrate is the ability for growers to take these operations to the ‘next level’, ie a Greenleaf type of operation, if they so wish. Growers who currently operate their own small crate pooling operations include Enza, Heinz Wattie Ltd, Johnny Applesseed Limited and New Zealand Mushrooms Limited.

28. Possible New Entrants

- 28.1 Possible new entrants include a group of growers, a large wholesaler (if it decided to vertically integrate like T&G) or one of the large supermarkets (if it decided to own and administer its own crate supply).
- 28.2 There is also the possibility of large scale entry. In the *Dominion* on 19 June 2002, there was a report that a European manufacturer was looking at investing \$18 million over the next five years to make plastic bins in New Zealand for food exports. A copy of the article is attached as Appendix 7. Although it appears that these plastic bins would be used for exporting produce, there would be nothing to prevent these same plastic bins also being made available for the storage and transport of produce sold into the domestic market.

Likelihood, Sufficiency and Timeliness of Entry

29. The Business Decision to Enter the Market

- 29.1 A material increase in prices or reduction in service by a merged entity would likely result in new entry or expansion by existing suppliers of competing container packaging. As already noted, new entry could come from current participants in the industry or a new entrant.

30. The time required for entry to occur

- 30.1 A small container pooling operation could be set up within a matter of months. It would take longer to set up a nationally based container pooling operation.

31. Likelihood of entry at pre-acquisition prices

New entry may be unlikely at pre-acquisition prices – which are competitive with other container packaging – particularly when all customers are critical of the current segregation problems arising with three suppliers of crates. Although, that is not to say that a supermarket might not establish its own pooling system at current prices or sponsor a new entrant if it was not satisfied with the level of service provided by incumbent firms. But the point is that if a merged entity were to increase prices materially or reduce its service (particularly in relation to the necessary administration involved with the deposit refund system), then it is inevitable that growers, wholesalers and/or retailers would either look to another supplier of crates – instead of the merged entity – or suppliers of alternative container packaging, such as cardboard boxes and bags.

32. Would this rate of entry be at a level likely to cause market participants to react in a significant manner?

- 32.1 Yes

33. What conditions of entry would influence the business decision to enter the market de novo?

33.1 De novo entry would likely follow any attempt by a merged entity to increase prices materially or reduce service.

34. How long would it take for de novo entry to occur?

34.1 See 30 above.

35. To what extent would the possibility of de novo entry constrain the merged entity?

35.1 De novo entry would be a significant constraint on the merged entity.

PART V: OTHER POTENTIAL CONSTRAINTS

Constraints on Market Power by the Conduct of Suppliers

36. Who would be the suppliers of goods or services to the merged entity in each market identified in questions 11 and/or 14?

36.1 Reece

37. Ownership of suppliers

37.1. The applicant and target company have no links to any suppliers. Reece is owned by Viscount Plastics (NZ) Ltd.

38. Extent to which the merged entity would be constrained by the conduct of suppliers

38.1 Reece is the sole manufacturer and supplier of plastic crates in New Zealand. Only limited imports are available. The applicant anticipates that if it imposed a material price increase or reduced service, with the consequential loss of business to alternative container packaging, then Reece might be expected to try and take steps to minimise loss of sales. A merged entity could not afford to get offside with its supplier since it has no alternative source of supply.

Constraints on Market Power by the Conduct of Acquirers

39. Who would be the acquirers of goods or services supplied by the merged entity in each of the markets identified in questions 11 and/or 14?

39.1 As discussed above, the acquirers of a merged entity's crates will be the growers, wholesalers and retailers.

39.2 There are many growers of fruit and vegetables across New Zealand. Reasonably large scale operations include LeaderBrand Limited (broccoli), NZ Fresh Limited (citrus), Status Produce Limited (tomatoes), Johnny Appleseed Limited (apples) and New Zealand Mushrooms Limited (mushrooms) to name only a few.

39.3 There are an estimated 28 produce wholesalers operating from approximately 40 sites across New Zealand. Three of these (MG, T&G and CSI) account for approximately 77% of the volume of produce sold through the wholesale market system. These wholesalers also act as import and export agents and provide category management for some of the larger grocery retail chains. Estimated market share for the main wholesalers is laid out below:

Table 7: Wholesaler Market Shares

Wholesaler	Market share
T&G	40%
MG	27%
CSI	10%
Freshmax	10%
Other	13%
Total	100%

39.4 Supermarkets will be the principal retail purchasers from a merged entity. Estimated market share for supermarkets is laid out below:

Table 8: Supermarket Market Shares

Supermarket	Market share
Foodstuffs	55%
Progressive/Woolworths	40%
Others	5%
Total	100%

40. Ownership of acquirers

40.1 The applicant and target company have no links to any acquirer. Some of the acquirers, eg the large wholesalers and supermarkets, are owned by major corporates with considerable administrative and financial resources of their own.

41. Extent to which the merged entity would be constrained by the conduct of acquirers

- 41.1 There is strong countervailing power in the acquirers of container packaging, including crates. In particular, any one of the existing large growers (or group of growers), wholesalers or supermarkets would have little difficulty in exercising real and effective constraint on any attempt by a merged company to impose a material price increase or reduce service.
- 41.2 Growers are becoming larger with glass house facilities expanding. As a result, growers require secure markets and one way to achieve this is for a grower (or group of growers) to approach a particular retailer and to arrange dedicated supply for a particular product(s). In doing so, the grower has the option of using its own crates and avoiding the administrative problems of tracking etc.
- 41.3 The three major wholesalers – T&G, MG and CSI – have considerable buying strength and significant influence on the type of container packaging growers are required to use. They will continue to exert a considerable constraining influence on a merged entity dictating crate or cardboard and whether FCC, CHEP or WECK crates.
- 41.4 This can be illustrated by T&G’s decision in 1999 to change the way its hire crates would be accounted for through their market system. CHEP (and other crate suppliers) were advised that individual crate companies would have to establish trading arrangements with the receiver of the crates, ie the supermarkets. But for FCC crates, T&G would continue to record the deposit value on the customer produce invoice. As Foodstuffs wanted all hire equipment charged on the produce invoice (ie to avoid two invoices for the produce and the crate), T&G was required to supply only in FCC crates. The impact of this decision on CHEP’s business was significant as shown in the table below:

Table 9: Impact on CHEP

Year	Issues per Annum
1999	[]
2000	[]
2001	[]
2002	[]

- 41.5 []
- 41.6 MG similarly has a significant influence over what crates (or pallets) growers may use. MG, until the recent Progressive decision to acquire the Woolworths business, would only accept CHEP pallets. As has already been noted, until recently MG, Woolworths and CHEP were parties to a preferred Supplier Agreement whereby all produce sold by MG in crates into Woolworths was generally packed in CHEP crates.
- 41.7 CHEP refers to the above not to complain about industry practices but as clear evidence of the extent to which wholesalers influence what container packaging – specifically crates – the growers should use. Given both their influence, and the

importance of the wholesalers' business to a merged entity's profitability (MG accounts for []% and CSI []% of CHEP's crate issues), the commercial reality is that a merged CHEP/WECK could not afford to impose a material price increase or reduce service and risk the loss of any of its wholesale business to FCC or competing alternative products.

- 41.8 This is especially so when a major wholesale market, T&G, already largely excludes from its market floor WECK and CHEP crates. The merged entity could therefore ill afford to get offside with MG or CSI leading them to look to other options, which could include using FCC crates, establishing their own crate pooling system or requiring growers to supply even more product than is presently the case in alternative container packaging, eg in cardboard boxes.
- 41.9 CHEP acknowledges that it may be unlikely that a wholesaler would want to establish its own crate pooling system given the problems of administration/segregation etc. But the important point is that if one or more wholesalers were concerned about a merged company's prices or level of service, they would have the financial and administrative resources to establish their own crate pooling system if they chose to do so – as in the case of T&G.
- 41.10 There can be little doubt that supermarkets also have real buying strength and countervailing power.¹¹ Increasingly, supermarkets are exerting an influence over growers and wholesalers as to what container packaging is used. There is an increasing trend for retailers to require growers to provide their produce in pre-packed form in crates or cardboard boxes: see further Appendix 6. Some particular supermarkets discourage the use of bins to avoid repacking at the supermarket store. See, for example, the comments of Grower F in Appendix 4.
- 41.11 The extent of their buying strength (and influence) is such that if a merged entity tried to increase prices or reduce service, there would be a significant risk that, like the wholesalers, Woolworths/Progressive or Foodstuffs could look to other options.
- 41.12 Plainly, the supermarkets – like the wholesalers – would have the financial and administrative resources to establish their own crate pooling systems (or simply use their own crates) if concerned about a merged company's prices or level of service. Again, it is unlikely that supermarkets (even more so than wholesalers) would want to incur the capital costs or take on the added administration etc involved with a crate pooling operation. But there can be little doubt that if they were dissatisfied with a merged entity's prices or service, this would be an available option. In Victoria, Safeway has for many years used its own crates.
- 41.13 It is to be emphasised that there are few, if any, formal contractual arrangements between suppliers and customers for the hiring of crates. As a result, a customer can switch "overnight" from one crate to another or one container to another. This is demonstrated by the following examples:
- In July 1999 Progressive switched overnight from using CHEP crates to using WECK crates.

¹¹ As acknowledged by the Commission, for example, in *Decision No 448 (Progressive/Woolworths)* ie that "supermarkets now hold a lot of influence over suppliers" (para 205).

- In June 2000 Progressive Distribution outlets in the South Island switched overnight from using CHEP crates to using cardboard boxes for repacking purposes.
- In April 2002 KPH Produce Limited switched overnight from FCC crates to CHEP crates.
- In April 2002 Status Produce Limited (following T&G's purchase of that company) switched overnight from CHEP crates to FCC crates.
- []

Own Use

- 41.14 The applicant has excluded own-use supplies from the relevant market definition. Nonetheless, as the Commission has previously¹² recognised, the ability of customers – whether growers, wholesalers or retailers – either to use their own crates or to operate their own small scale crate pooling operation is a competitive constraint.
- 41.15 Attached as Appendix 8 is a list of companies which own their own crates, cages or wooden bins. A number of these operate their own small scale pooling operations including Enza, Johnny Appleseed Limited and New Zealand Mushrooms Limited. Own use remains an alternative option.

Summary of Constraint on Market Power by Acquirers

- 41.16 In summary, this is an industry where the acquirers – particularly wholesalers and supermarkets – have a high degree of countervailing power. They exert considerable influence, first, over what packaging is used by growers and secondly, where crates are used, the brand of crate to be used.
- 41.17 As a result, they will impose considerable constraint on a merged company. This is especially so when the loss of even one of these customers (eg, MG or Woolworths/Progressive) would cause a substantial reduction in market share and revenue. That is simply a risk that a merged entity could not take because of the particular features of this industry and the importance of a very small number of customers to the viability of its crate supply operation.

SUMMARY

- 41.18 The applicant says that this acquisition will not result in substantial lessening of competition due to:
- (a) the strong existing competition from a number of participants in the supply of both hired and reusable container packaging to the produce industry;
 - (b) the threat of expansion or new entry due to the absence of barriers to entry or expansion; and

¹² CHEP/FCC.

(c) the countervailing power of acquirers.

41.19 Nor is the likelihood of co-ordinated market power enhanced by this acquisition as “collusion” and “discipline” are unlikely.

41.20 All these factors ensure that post-acquisition, the merged entity will be unable to impose a material price increase or a reduction in service.

41.21 []

41.22 In all these circumstances, the acquisition will not have the effect or likely effect of substantially lessening competition in the relevant market and the applicant requests that the Commission grant a clearance for the acquisition pursuant to its powers under section 66 of the Commerce Act 1986.

THIS NOTICE is given by Brambles (“the Company”)

The Company confirms that:

- all information specified by the Commission has been supplied;
- all information known to the applicant which is relevant to the consideration of this application has been supplied;
- all information supplied is correct as at the date of this notice.

The Company undertakes to advise the Commission immediately of any material change in circumstances relating to this notice.

Dated this day of 2002 .

Brambles New Zealand Limited

John Judd, General Manager (CHEP)

I am the General Manager of CHEP and am authorised by Brambles to make this application.



APPENDIX 1: CHEP CONTAINER PRODUCT RANGE

PRODUCT DESCRIPTIONS

CHEP has available for the produce (and meat/small goods industry) a range of plastic crates (fixed wall and foldable), plastic bins (rigid and foldable) and cages.

Products are often packed in different sized crates based on the buyer's specifications, for example tomatoes will be packed in a 23-litre crate or a 35-litre crate depending on a requirement for 15kg or 20kg of product per crate (referred to as "yield"). Occupational, health and safety lifting limits can also influence the volume of product packed into a crate.

The product range is as follows:

Product	Some examples of usage	
 <p>23L GREY HANDLE External Dimensions 600 x 400 x 132mm Internal Dimensions 548 x 353 x 109mm Weight 1.5kgs Capacity 23 litres Incremental nest height 62mm Max load on bottom crate 140kgs</p>	Limes Strawberries Nashi pears Avocado Kiwano Stone fruit Mushrooms Kiwifruit Asparagus Beans Tomatoes	Courgettes Cucumbers Capsicums Citrus Berry fruits Spring onions Peas Pears Feijoas Tamarillo Passionfruit
 <p>35L YELLOW HANDLE External Dimensions 600 x 400 x 190mm Internal Dimensions 546 x 358 x 170mm Weight 1.7kgs Capacity 35 litres Incremental nest height 97mm Max load on bottom crate 180kgs</p>	Capsicums Apples Pears Tamarillo Nashi pears Kumara Mandarins Lemons Oranges Courgettes Beans Corn	Spring onions Onions Kiwi Fruit Tomatoes Avocado Asparagus Celery Peas Leeks Sprouts Lettuce Stonefruit



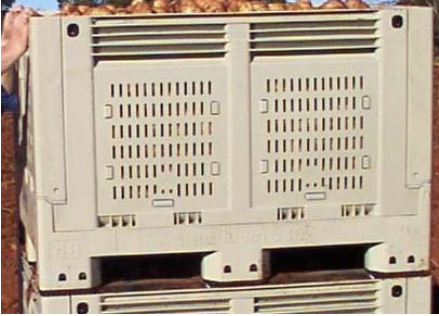





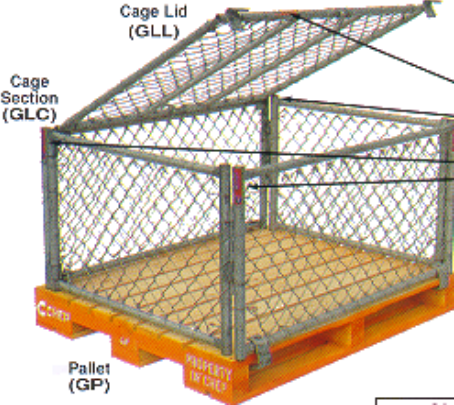
47L BLACK HANDLE

External Dimensions	600 x 400 x 260r
Internal Dimensions	547 x 354 x 225r
Weight	2.1kgs
Capacity	47 litres
Incremental nest height	120mm
Max load on bottom crate	180kgs

Pre-packed apples
Pre-packed citrus
Potatoes
Apples
Pears
Broccoli
Corn
Celery
Cabbage
Cauliflower
Onions
Kiwifruit

Parsnips

Product	Some examples of usage	
 <p>75L ORANGE HANDLE External Dimensions 600 x 400 x 394mm Internal Dimensions 541 x 348 x 368mm Weight 2.91kgs Capacity 75 litres Incremental nest height 150mm Max load on bottom crate 180kgs</p>	Pumpkin Squash Melons Potatoes Silver beet Sweet corn Broccoli Cabbage Cauliflower Lettuce Onions Parsnips	Spinach Carrots Citrus Pre-pack apples
Crates - Collapsible	Comments	
	CHEP has available a 25-litre to 74-litre range of 600mm x 400mm foldable crates. The crates are generally used in Australia, with small quantities in New Zealand for produce and used when a high relocation cost is involved to reduce in predominantly transit shipment costs.	
Shuttle Bin	Some examples of usage	
	Lettuce Apples Cabbage Pumpkin Citrus Melons	Squash Celery Broccoli Cauliflower Corn
	CHEP New Zealand has available, in small quantities, a fixed wall plastic bin 1160mm square. CHEP New Zealand has a plastic foldable bin (shuttle bin). The four sides fold for farm relocation cost advantages. WECK and FCC do not have a similar product available.	

Product	Some examples of usage	
<p data-bbox="336 293 512 327"><u>Ropak bins</u></p>  <p data-bbox="325 752 644 786">Large 1160 x 1160 x 838mm</p>	<p data-bbox="754 293 874 472">Lettuce Apples Cabbage Pumpkin Citrus</p>	<p data-bbox="1090 293 1249 439">Squash Celery Broccoli Cauliflower</p>
 <p data-bbox="341 1279 628 1312">Small 746 x 686 x 721mm</p>	<p data-bbox="887 842 1209 875">Some examples of usage</p> <p data-bbox="754 882 1315 1021">In addition to the lines listed above this bin could be used for: Pre-pack potatoes Pre-pack apples</p> <p data-bbox="754 1048 1294 1144">A small Ropak bin, (Code FSC), includes opposing drop front doors and a 400-kilo capacity.</p> <p data-bbox="754 1182 1337 1249">Both plastic Ropak bins are used for poultry, meat, small goods and produce.</p>	
<p data-bbox="400 1335 568 1368">Pallet Cage</p>	<p data-bbox="975 1335 1118 1368">Comments</p>	
	<p data-bbox="754 1373 1262 1406">Mainly used for cabbage and pumpkin.</p> <p data-bbox="754 1626 1342 1888">A pallet cage, (Code GLC), deposit refund cage of \$100 deposit is available. This cage comes in 1 high, 2 high and 3 high sections, with a cage lid that can be used as a shelf. It is manufactured of steel, with wire mesh. This cage is designed to fit with Klet attachments directly on to the deposit refund GP pallet.</p>	

APPENDIX 2: PACKAGING CONTAINERS FOR PRODUCE

Product	Plastic Crate/Bins	Cardboard Containers	Wooden Boxes/Bins	Bags (Paper/Plastic)	Other
Apples	X	X	X		
Asparagus	X	X	X		
Avocado	X	X			
Bananas		X			
Beans	X	X			
Berry fruit	X	X			Pstyrene
Broccoli	X		X		
Brussels sprouts	X			X	Pstyrene
Cabbage	X		X		
Capsicums	X	X			Cage
Carrots	X	X	X	X	
Cauliflower	X		X		Cage
Celery	X		X		
Citrus	X	X	X		Cage
Corn	X	X			
Courgettes	X	X			
Cucumbers	X	X			
Feijoas	X	X			
Garlic		X			
Grapes		X			Pstyrene
Kiwano		X			
Kiwifruit	X	X	X		
Kumara	X	X			
Leeks	X				
Lemons	X	X			
Lettuce	X		X		Cage
Limes	X	X			
Mandarins	X	X			
Melons	X	X			
Mushrooms	X	X			Pstyrene
Nashi pears	X	X			
Onions	X		X	X	
Oranges	X	X	X		
Parsnips	X			X	
Passionfruit	X	X		X	
Pears	X	X			
Peas	X				
Persimmon	X	X			
Potatoes	X		X	X	
Pumpkin	X		X		Cage
Silverbeet	X				
Spinach	X				
Spring onions	X				

Squash	X		X		Cage
Stone fruit	X	X	Tray		
Strawberries	X	X			
Tamarillo	X	X			
Tomatoes	X	X			

Appendix 3: Crates and Examples of Carton “equivalents”

Crate-Carton Comparison - with supporting images

The following is based around the three crate Companies' standard size crates.

Crates				Other Packaging							Carton Price range Refer Appendix 5			
Litre	Internal Dimensions in mm			Packaging Medium	Brand	Product	Dimensions			Crate Equivalent		Approx. Litres		
	Length	Width	Depth				Length	Width	Depth					
	23 Ltr	548	353	109	1 carton	No Brand	Limes	275	220	180	nil	12	Cost prices range from .82c to \$1.95	
					2 carton	Michaels	Nashi	440	335	90	nil	14		
					3 carton	K1W1	Kiwi	400	300	120	nil	16		
					4 carton	Team	Avocado	440	340	100	nil	16		
					5 carton	No Brand	Kiwano	440	340	100	nil	16		
	35ltr	546	358	170	6 carton	No Brand	Beans	415	300	125	23	17		Cost prices range from \$1.07 to \$ 2.65
					7 carton	Fresh Qua	Tomatoes	280	285	220	23	19		
					8 carton	Tree Ripe	Apples	410	300	160	23	21		
					9 carton	Plen Tree	Cherries	410	300	160	23	21		
					10 carton	Limburgia	Mushrooms	430	350	150	23	24		
					11 carton	Silvervale	Mushrooms	390	285	240	23	29		
	47ltr	547	354	225	12 carton	No Brand	Capsicums	380	350	175	35	25	Cost prices range from \$1.15 to \$3.05	
					13 carton	Love Bites	Apples	600	390	100	35	25		
					14 Wood	Dole	Grapes	500	400	120	35	26		
					15 carton	No Brand	Tamarillo	385	285	220	35	26		
					16 carton	CCP	Capsicums	390	290	280	35	34		
					17 carton	Pukeake	Nashi	595	390	150	35	37		
					18 carton	ENZA	Apples	630	390	150	35	40		
					19 carton	Riverland	Kumara	480	285	270	35	40		
					20 carton	Deltapac	Mandarins	420	280	315	35	40		
					21 carton	Product NZ	Lemons	420	280	315	35	40		
	75ltr	541	348	368	22 Styrene		Courgettes	575	380	185	35	44	Cost prices range from \$1.15 to \$3.05	
					23 Styrene		Beans	490	335	250	35	44		
	1000ltr	1220	1016	838	24 carton	NZ Apples	Apples	490	325	270	47	46	Cost prices range from \$1.15 to \$3.05	
					25 carton	NZ Pears	Pears	490	325	270	47	46		
					26 carton	Dole	Bananas	505	405	245	47	54		
					27 carton	Dole	Pineapples	590	400	195	75	50		
					28 Cardboard	No Brand	Apples	1200	1000	555		717		
					29 Wooden Bin	No Brand	Citrus	1200	1000	1000		1292		

This table, based on the 29 supporting images, provides a sample of carton sizes, including the equivalent crate. Images 1 to 5 show a sample of cardboard boxes sizes less than the smallest 23-litre crate equivalent, although produce can of course be packed in several boxes as an “equivalent” eg 2 x 12 litre cartons of limes in image 1. The smaller pack sizes are usually requested by the chains for slower selling lines.

APPENDIX 4

CHEP INFORMAL SURVEY OF GROWERS RE CONTAINER PACKAGING OPTIONS

This informal survey of growers was conducted by CHEP staff by telephone in June 2002. Growers were asked for any information they could provide as to their packaging mix and views on container alternatives.

Appendix 5: Packaging Pricing

The following prices have been drawn from price lists of packaging companies and agencies. It should be noted that prices vary significantly for similar sized packages based on volume discounts and in the case of cardboard cartons; the grade of the fibreboard and the number of print colours used all impact on the price. To try to draw a comparison, the volume of the crates has been used as the benchmark and cartons and bags of similar volume compared.

The price lists below are shaded in yellow for 23-litre comparable lines, light blue for 35-litre, green for 47-litre and tan for 75-litre.

Packaging House Cartons				Crate Equivalent	Approx Litres	Price per carton excluding GST
Code	Dimensions					
	Length	Width	Depth			
1657157	210	126	76	nil	2	\$ 0.67
1589565	153	142	102	nil	2	\$ 0.48
1720867	232	150	98	nil	4	\$ 0.46
1702144	190	145	155	nil	5	\$ 0.56
1784227	250	200	145	nil	8	\$ 0.68
1086940	255	205	150	nil	8	\$ 0.80
1892088	250	250	200	nil	13	\$ 0.87
1011041	310	225	250	nil	19	\$ 0.94
1271130	370	217	231	23	20	\$ 0.99
1283631	305	305	245	23	25	\$ 1.17
1817813	340	255	305	23	28	\$ 1.17
1318275	250	250	370	23	25	\$ 1.18
1894900	455	310	160	23	24	\$ 1.22
1870701	405	255	255	23	28	\$ 1.25
1793240	480	340	120	23	21	\$ 1.29
1076620	358	358	198	23	27	\$ 1.39
1072552	380	280	210	23	24	\$ 1.80
1172389	503	249	295	35	40	\$ 1.38
1885161	430	330	255	35	39	\$ 1.47
1312626	432	302	225	35	32	\$ 1.81
1710294	455	305	305	47	46	\$ 1.58
1091552	598	344	231	47	51	\$ -
1438759	615	290	290	47	56	\$ -
1335333	510	380	280	47	58	\$ 1.65
1041954	455	455	350	75	78	\$ 2.17
1015255	428	280	586	75	76	\$ 2.43
1018222	550	410	380	75	92	\$ -
1004968	600	400	400	nil	103	\$ -
1534819	510	380	585	nil	122	\$ 3.25
1422925	510	380	585	nil	122	\$ 2.45
1940826	700	500	550	nil	207	\$ 4.24
1811128	667	525	810	nil	305	\$ -
	1000	700	700	nil	527	\$ 18.89



		Dimensions				Crate Equivalent	Approx Litres	Price per carton excluding GST	Volume Discounts	
Code	Board Grade	Length	Width	Depth	Cubic Cms				500 Plus	100 - 999
	1G	440	255	305	33,825	23	\$ 0.82	\$ 0.73	10.98%	
	1G	440	255	255	28,335	23	\$ 0.83	\$ 0.74	10.84%	
	2G	424	312	152	20,108	23	\$ 1.00	\$ 0.90	10.00%	

Respectively

Visy						Crate Equivalent	Approx Litres	Price per carton excluding GST	Volume Discounts	
Code	Board Grade	Length	Width	Depth	Cubic Cms				500 Plus	100 - 999
3	495-B	340	255	305	26,444	23	28	\$ 0.82	\$ 0.73	10.98%
4	495-B	405	255	255	26,335	23	28	\$ 0.83	\$ 0.74	10.84%
AA4	495-B	424	312	152	20,108	23	22	\$ 1.00	\$ 0.90	10.00%
5 (3A)	495-B	430	330	255	36,185	35	39	\$ 1.07	\$ 0.98	8.41%
6	495-B	455	305	305	42,326	47	46	\$ 1.15	\$ 1.02	11.30%
7	495-B	455	455	350	72,459	75	78	\$ 1.70	\$ 1.57	7.65%
1	495-B	225	205	150	6,919	nil	7	\$ 0.40	\$ 0.36	10.00%
2	495-B	250	250	200	12,500	nil	13	\$ 0.53	\$ 0.50	5.66%
A4	495-C	310	225	250	17,438	nil	19	\$ 0.59	\$ 0.54	8.47%
8	495-B	510	380	280	54,264	nil	58	\$ 1.40	\$ 1.28	8.57%
9	495-C	510	380	585	113,373	nil	122	\$ 1.95	\$ 1.72	11.79%

Carter Holt Harvey					Crate Equivalent	Approx Litres	Price per carton excluding GST	Volume Discounts	
Code	Dimensions			Cubic Cms				2000 plus	100 - 999
	Length	Width	Depth						
314581	643	451	50	14,500	23	16	\$ 1.50	\$ 1.33	11.67%
23232	380	296	249	28,008	35	30	\$ 1.50	\$ 1.40	6.35%
12172	194	194	910	34,249	35	37	\$ 2.60	\$ 2.00	23.08%
27869	380	296	249	28,008	35	30	\$ 2.65	\$ 2.40	9.43%
16094/02	362	230	95	7,910		9	\$ 0.43	\$ 0.33	23.53%
12144/02	366	220	50	4,026		4	\$ 0.43	\$ 0.33	23.26%
12144/01	362	207	96	7,194		8	\$ 0.54	\$ 0.43	21.88%
16094/01	362	230	95	7,910		9	\$ 0.52	\$ 0.44	16.03%
48634	357	296	82	8,665		9	\$ 0.70	\$ 0.60	14.39%
12167/02	370	160	50	2,960		3	\$ 0.97	\$ 0.66	32.34%
12167/01	370	160	115	6,808		1	\$ 1.17	\$ 0.90	23.24%
12161	363	256	95	8,828		10	\$ 1.21	\$ 0.95	21.49%
12180	345	240	92	7,618		8	\$ 1.49	\$ 1.05	29.44%
16494/	370	210	94	7,304		8	\$ 2.20	\$ 1.75	20.45%

R.L. Button (Polystyrene)					Crate Equivalent	Approx Litres	Price per carton excluding GST
Code	Dimensions			Cubic Cms			
	Length	Width	Depth				
640674	250	250	200	12,500	nil	13	\$ 0.66
640676	340	255	305	26,444	23	28	\$ 0.93
640678	405	255	255	26,335	23	28	\$ 0.90
640650	430	330	255	36,185	35	39	\$ 1.20
640682	455	305	305	42,326	47	46	\$ 1.30

Plastic Bags

Chequer Packaging							Crate Equivalent	Approx Litres	Price per Bag excluding GST
Code	Weight		Dimensions			Cubic Cms			
			Length	Width	Depth				
2320	10kg	Parsnips Bag	400	675		-		0	\$ 0.13
2331	20kg	Carrot Bag	425	880		-		0	\$ 0.15
2360	20kg	Potato Bag	425	850		-		0	\$ 0.26
2370	10kg	Potato Bag	335	710		-		0	\$ 0.12

Paper Potato bag with plastic liner

Cryovac							Crate Equivalent	Approx Litres	Price per bag excluding GST
Code	Weight		Dimensions						
			Length	Width	Depth	Cubic Cms			
	10kg	Unbleached Narrow NH				-		0	\$ 0.46
	10kg	Unbleached wide NH				-		0	\$ 0.47
	20KG	Unbleached No Handle				-		0	\$ 0.64

Prices quoted by Wendy 22/7/02

Appendix 5 A: Packaging Pricing

Comparison of prices by approximate crate size.

The price lists below are shaded in yellow for 23-litre comparable lines, light blue for 35-litre, green for 47-litre and tan for 75-litre.

Suppliers		Price Range Comparison				Crate Equivalent	Approx Litres	Price	Volume Discounts	
		Code	Case	Dimensions						
				Length	Width					Depth
Visy	Cartons	3		340	255	305	23	28	\$ 0.82	\$ 0.73
Visy	Cartons	4		405	255	255	23	28	\$ 0.83	\$ 0.74
RL Button	Cartons	640678		405	255	255	23	28	\$ 0.90	
RL Button	Cartons	640676		340	255	305	23	28	\$ 0.93	
Packaging House	Cartons	1271130		370	217	231	23	20	\$ 0.99	
Visy	Cartons	AA4		424	312	152	23	22	\$ 1.00	\$ 0.90
Packaging House	Cartons	1283631		305	305	245	23	25	\$ 1.17	
Packaging House	Cartons	1817813		340	255	305	23	28	\$ 1.17	
Packaging House	Cartons	1318275		250	250	370	23	25	\$ 1.18	
Packaging House	Cartons	1894900		455	310	160	23	24	\$ 1.22	
Packaging House	Cartons	1870701		405	255	255	23	28	\$ 1.25	
Packaging House	Cartons	1793240		480	340	120	23	21	\$ 1.29	
Packaging House	Cartons	1076620		358	358	198	23	27	\$ 1.39	
CHH	Cartons	314581		643	451	50	23	16	\$ 1.50	\$ 1.33
A C Attwood	Cartons	250AA deep		310	220	305	23	22	\$ 1.50	\$ 1.20
A C Attwood	Cartons	25022		450	310	150	23	23	\$ 1.50	\$ 1.38
Packaging House	Cartons	1072552		380	280	210	23	24	\$ 1.80	
A C Attwood	Cartons	250AA4		424	312	152	23	22	\$ 1.80	\$ 1.30
Visy	Cartons	5 (3A)		430	330	255	35	39	\$ 1.07	\$ 0.98
A C Attwood	Cartons	2503		340	265	305	35	30	\$ 1.18	\$ 0.90
RL Button	Cartons	640650		430	330	255	35	39	\$ 1.20	
Packaging House	Cartons	1172389		503	249	295	35	40	\$ 1.38	
Packaging House	Cartons	1885161		430	330	255	35	39	\$ 1.47	
CHH	Cartons	23232		380	296	249	35	30	\$ 1.50	\$ 1.40
A C Attwood	Cartons	2505		430	330	228	35	35	\$ 1.50	\$ 1.20
Packaging House	Cartons	1312626		432	302	225	35	32	\$ 1.81	
A C Attwood	Cartons	2513		503	249	295	35	40	\$ 2.00	\$ 1.80
CHH	Cartons	12172		194	194	910	35	37	\$ 2.60	\$ 2.00
CHH	Cartons	27869		380	296	249	35	30	\$ 2.65	\$ 2.40
Barnes - Styrene	Styrene	Box & Lid		545	370	200	47	43	\$ 3.70	
Packaging House	Cartons	1091552		598	344	231	47	51	\$ -	
Packaging House	Cartons	1438759		615	290	290	47	56	\$ -	
Visy	Cartons	6		455	305	305	47	46	\$ 1.15	\$ 1.02
RL Button	Cartons	640682		455	305	305	47	46	\$ 1.30	
Packaging House	Cartons	1710294		455	305	305	47	46	\$ 1.58	
A C Attwood	Cartons	2506		456	305	305	47	46	\$ 1.60	\$ 1.30
Packaging House	Cartons	1335333		510	380	280	47	58	\$ 1.65	
A C Attwood	Cartons	2510		610	290	290	47	55	\$ 1.80	\$ 1.45
A C Attwood	Cartons	2514		598	344	231	47	51	\$ 2.58	\$ 2.05
Packaging House	Cartons	1018222		550	410	380	75	92	\$ -	
Visy	Cartons	7		455	455	350	75	78	\$ 1.70	\$ 1.57
Packaging House	Cartons	1041954		455	455	350	75	78	\$ 2.17	
A C Attwood	Cartons	2507		456	433	350	75	74	\$ 2.35	\$ 1.90
Packaging House	Cartons	1015255		428	280	586	75	76	\$ 2.43	
A C Attwood	Cartons	25021		610	380	280	75	70	\$ 3.45	\$ 3.15
Barnes - Styrene	Styrene	Box & Lid		595	420	230	75	62	\$ 3.70	

Price Range Comparison

Suppliers		Code	Case	Dimensions			Crate Equivalent	Approx Litres	Price	Volume Discounts	
				Length	Width	Depth					
28	Packaging House	Cartons	1004968		600	400	400	nil	103	\$ -	
32	Packaging House	Cartons	1811128		667	525	810	nil	305	\$ -	
71	Visy	Cartons	1		225	205	150	nil	7	\$ 0.40	\$ 0.36
3	Packaging House	Cartons	1720867		232	150	98	nil	4	\$ 0.46	
2	Packaging House	Cartons	1589565		153	142	102	nil	2	\$ 0.48	
45	A C Attwood	Cartons	25000		154	142	102	Nil	2	\$ 0.50	\$ 0.40
46	A C Attwood	Cartons	2500		190	150	155	Nil	5	\$ 0.50	\$ 0.40
72	Visy	Cartons	2		250	250	200	nil	13	\$ 0.53	\$ 0.50
4	Packaging House	Cartons	1702144		190	145	155	nil	5	\$ 0.56	
73	Visy	Cartons	A4		310	225	250	nil	19	\$ 0.59	\$ 0.54
90	RL Button	Cartons	640674		250	250	200	nil	13	\$ 0.66	
1	Packaging House	Cartons	1657157		210	126	76	nil	2	\$ 0.67	
5	Packaging House	Cartons	1784227		250	200	145	nil	8	\$ 0.68	
47	A C Attwood	Cartons	2501		265	205	160	Nil	9	\$ 0.78	\$ 0.60
6	Packaging House	Cartons	1086940		255	205	150	nil	8	\$ 0.80	
48	A C Attwood	Cartons	250GGH		145	85	65	Nil	1	\$ 0.85	\$ 0.75
7	Packaging House	Cartons	1892088		250	250	200	nil	13	\$ 0.87	
51	A C Attwood	Cartons	260B86		100	95	90	Nil	1	\$ 0.90	\$ 0.85
50	A C Attwood	Cartons	250GGC		153	82	108	Nil	1	\$ 0.90	\$ 0.80
8	Packaging House	Cartons	1011041		310	225	250	nil	19	\$ 0.94	
49	A C Attwood	Cartons	2502		250	215	200	Nil	12	\$ 0.95	\$ 0.75
52	A C Attwood	Cartons	2508		122	122	145	Nil	2	\$ 1.00	\$ 0.90
53	A C Attwood	Cartons	2504		405	255	255	Nil	28	\$ 1.25	\$ 1.00
54	A C Attwood	Cartons	250AA		310	225	280	Nil	21	\$ 1.30	\$ 1.04
74	Visy	Cartons	8		510	380	280	nil	58	\$ 1.40	\$ 1.28
55	A C Attwood	Cartons	2512		250	250	370	Nil	25	\$ 1.45	\$ 1.15
56	A C Attwood	Cartons	2511		370	217	231	Nil	20	\$ 1.65	\$ 1.30
57	A C Attwood	Cartons	2515		305	305	245	Nil	25	\$ 1.65	\$ 1.35
59	A C Attwood	Cartons	2516		358	358	198	Nil	27	\$ 1.90	\$ 1.65
58	A C Attwood	Cartons	2508		510	380	280	Nil	58	\$ 1.90	\$ 1.55
75	Visy	Cartons	9		510	380	585	nil	122	\$ 1.95	\$ 1.72
30	Packaging House	Cartons	1422925		510	380	585	nil	122	\$ 2.45	
60	A C Attwood	Cartons	2059A		510	380	585	Nil	122	\$ 2.80	\$ 2.25
61	A C Attwood	Cartons	2509		510	380	585	Nil	122	\$ 3.20	\$ 2.60
29	Packaging House	Cartons	1534819		510	380	585	nil	122	\$ 3.25	
31	Packaging House	Cartons	1940826		700	500	550	nil	207	\$ 4.24	
62	A C Attwood	Cartons	240		460	480	620	Nil	147	\$ 4.25	\$ 3.85
63	A C Attwood	Cartons	255HB		860	380	510	Nil	179	\$ 4.60	\$ 4.20
64	A C Attwood	Cartons	25020		660	480	800	Nil	273	\$ 11.40	\$ 10.45
33	Packaging House	Cartons			1000	700	700	nil	527	\$ 18.89	
80	CHH	Cartons	16094/02		362	230	95		9	\$ 0.43	\$ 0.33
81	CHH	Cartons	12144/02		366	220	50		4	\$ 0.43	\$ 0.33
83	CHH	Cartons	16094/01		362	230	95		9	\$ 0.52	\$ 0.44
82	CHH	Cartons	12144/01		362	207	96		8	\$ 0.54	\$ 0.43
84	CHH	Cartons	48634		357	296	82		9	\$ 0.70	\$ 0.60
85	CHH	Cartons	12167/02		370	160	50		3	\$ 0.97	\$ 0.66
86	CHH	Cartons	12167/01		370	160	115		1	\$ 1.17	\$ 0.90
87	CHH	Cartons	12161		363	256	95		10	\$ 1.21	\$ 0.95
88	CHH	Cartons	12180		345	240	92		8	\$ 1.49	\$ 1.05
89	CHH	Cartons	16494/		370	210	94		8	\$ 2.20	\$ 1.75

APPENDIX 6

Memorandum

To: Miriam Dean
CC: Chep (New Zealand) (“Chep”)
From: Ian Pavey
Date: 25/07/02
Re: Packaging in the Produce Industry

1. I have been employed in the supermarket industry for 31 years, the last 12 years focused on produce. I have just completed a 26-month assignment as the Director of Produce for Woolworths (NZ) Ltd. My national responsibilities covered the procurement, distribution, retailing, operations and financials for produce and floral. Prior to my time in New Zealand, I was the State Produce Merchandise Manager for Safeway Supermarkets in Australia, covering similar responsibilities.
2. Due to the fact that packaging of product can have a significant effect on costs within the supply chain, I have always maintained an involvement with my buying team on packaging mediums and their impact on the business. Prior to moving to New Zealand, I worked with the Australian United Fresh Sub Committee on the development of modular packaging for produce.
3. I have been asked by Chep to comment on produce packaging in New Zealand and having been exposed to the Australian and New Zealand operations, I make the following observations.
4. Whereas cartons dominate the Australian industry, the New Zealand industry has a high rate of returnable equipment in use:
 - Australian Market.
 - Produce in cartons can be easily sold across a range of retailers.
 - Supplier cartons, with colourful graphics, can be used for instore merchandising.
 - Crate pooling systems operate in South and Western Australia, but the major east coast markets are dominated by cartons.
 - The major chains of Coles and Safeway operate an “in-house” crate system primarily for wet vegetable lines, though Woolworths (of which Safeway is a division), has commenced trials with crate pooling.
 - New Zealand Market.
 - The majority of exported produce is moved in cartons, which allows export packers to use their buying power for export cartons to negotiate competitive rates for cartons for the domestic market.
 - Cartons are especially used in the fruit market

- Returnable crates are especially used in the wet vegetable market.
5. Based on my knowledge, each of the three supermarket retailers in NZ takes a different approach to packaging and display of produce:
 - **Progressive**, take a major portion of their produce in Weck Crates only, the balance in cartons and have developed a merchandising style around the Weck crate.
 - **Foodstuffs**, which are not a “chain” operation, will handle all types of packaging, with a preference for cardboard cartons, FCC and Weck crates. My impression is that buyers are not so much concerned with the type of packaging as the purchase quality of the produce. The administration costs for tracking crates are the responsibility of the individual storeowners. Foodstuffs have a policy of no supplier packaging on the trading floor
 - **Woolworths** handles all brands of crates and cartons (although with a preference for Chep crates) and have a preference for cardboard, particularly in the fruit category. Woolworths have a policy of no crates on the trading floor, but will use printed cardboard cartons as a merchandising aid. With the purchase of Woolworths by Progressive, it is reasonable to assume that the Woolworths stores will be converted to the “Progressive” merchandising style.
 6. I am aware from discussions with wholesalers, growers and retailers, that the proliferation of crate is a concern from an inventory management and administrative point of view:
 - If a wholesaler were selling, say broccoli, to the three chains, they would have to carry an inventory of broccoli in three different crate types. This is very inefficient from a cost point of view and causes additional problems in maintaining freshness of product due to stock rotation and possible repacking issues.
 - Often the deposit and usage fee are higher than the value of the produce in the crate.
 - Because of the value attached to crates, they are a target for the black market operators and theft rates are high.
 - Cartons, although the initial cost is higher, offer an attractive alternative as they can be sold across all retail outlets and have no additional administrative costs attached.
 7. Woolworths and MG Marketing (who operated the Distribution Centre for Woolworths), attempted to restrict the Woolworths supply line to CHEP crates only, as a means of reducing our administration costs by way of a preferential supply agreement. But the burden on growers of having to carry three different crate types – including Chep – in their packing sheds made the system unworkable.
 8. The administration of crates is a significant cost to the business:
 - Crates have to be counted in and checked off against the invoice.

- Once emptied they have to be sorted by crate type and strapped to the pallet to avoid theft.
- Request for credits have to be raised and returned with the crates.
- Once received at the depot, the request for credit and the physical count is verified and the Credit passed or if the count is disputed, the variations have to be sorted out and the correct documentation raised.
- There is a reasonably high rate of mis-counts due mainly to the large number of crate variations.
- As a rule of thumb, it costs \$45.00 to fully process a credit from the store through to settlement.

This can be contrasted with the case of dealing with a cardboard carton, ie empty and place in the recycling crusher.

9. As to merchandising styles of the chains:

- Both Woolworths and Foodstuffs merchandise their stores using the “loose fill” method. This method of merchandising means that all products placed on display are removed from the package, either crate or carton, and placed on show.
- Progressive use a loose fill method in their refrigerated cabinets and a “crate fill” system in their display lounges.
 - With the crate fill system, the objective is to replace stock on show with a full crate as it sells down. The reality is that the majority of filling is still done by hand because as the product in the crates sells down, the displays become unsightly and need to be replenished. This is done by hand filling
 - By hand filling, the produce operator also can check the individual pieces of fruit and vegetables for quality.
 - Progressive will use crates to create “spill-overs” on displays. This is where the standard display space is extended forward into extra crates to give the impression of abundance.

10. Woolworths supermarkets, as stated above, are all loose fill (or at least until the Progressive merger).

- Woolworths encourages the use of colourful display cartons in spillover displays, and to this end, have worked with suppliers to create colourful cartons to enhance the colour and presentation instore with the objective of creating a market atmosphere.
- Woolworths has a policy of no crates on the trading floor, as they are often unsightly.

11. In my opinion, and based on my experience as a produce buyer, the current range of crates and other packaging mediums are excessive to the needs of the industry and add unnecessary costs to the supply line. Most industry participants would welcome any rationalisation of packaging and I see no concerns over the possibility of price increases from any rationalisation. Growers and packers have a clear choice between using crates or cardboard packaging (and bags), and when consideration is given to the whole supply line, cardboard has several advantages. Crates have an advantage in the wet produce area, but again, waxed cardboard is an alternative.

Ian Pavey

APPENDIX 7

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APPENDIX 8

ESTIMATE OF OWN USE CRATES/WOODEN BINS (BOXES) AND CAGES PLASTIC CRATES (incl Bins)

COMPANY	INDUSTRY	VOLUME (Estimates)	VALUE (at \$10/unit)
Anchor Milk	Beverage	50,000	500,000
Baking Industry	Food Mfg	200,000	2,000,000
BOP Meatpackers	Meat Processing	10,000	100,000
Meat Processing	Pet Food	5,000	50,000
Fishing Companies	Fish Processing	52,000	520,000
Foodstuffs	Food Retail	5,000	50,000
Heinz Wattie	Food Processing	10,000	100,000
Huttons	Food Mfg	3,000	30,000
Johnny Appleseed	Fruit & Produce	15,000	150,000
NZ Mushrooms	Produce	10,000	100,000
Tegel Foods	Poultry	50,000	500,000
Tui Milk	Beverage	20,000	200,000

BINS/BOXES/CRATES – WOODEN

COMPANY	INDUSTRY	VOLUME (Estimates)	VALUE (at \$90/unit)
ABC	Liquor	100,000	600,000
ENZA	Produce	164,000	14,760,000
Canta Bins	Produce	10,000	900,000
Growers (various)	Produce	250,000	22,500,000
Heinz Wattie	Food Pro.	15,000	1,350,000
Seeka Industries	Produce	40,000	3,600,000
BOP Fruitpackers	Produce	35,000	3,150,000
Bridgecool	Produce	11,000	990,000
Eastpack Ltd	Produce	15,000	1,350,000
Areocool	Produce	12,000	1,080,000

CAGES/FRAMES/BOXES

COMPANY	INDUSTRY	VOLUME (Estimates)	VALUE (at \$300/unit)
Courier Companies	Postal/Courier	3,000	900,000
Dairy Board	Dairy	10,000	3,000,000
Foodstuffs New World	Retail	15,000	4,500,000
Heinz Wattie	Storage	10,000	3,000,000

NZ Post	Postal/Courier	20,000	6,000,000
TNT	Various (Rental)	2,000	600,000