Self-dispensing systems are well established in a number of countries and have proved popular with customers and grocery retailers. This study will help UK retailers consider whether implementation of such systems in the UK is commercially viable.
**Front Photograph:** A visual representation of how a self-dispensing counter would look like in store.

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Executive summary

Self-dispensing systems, whereby products are offered ‘loose’ and customers are encouraged to use simple packaging provided by the retailer, have the potential to contribute to significant reductions in retail packaging and also reductions in the food households throw away, as consumers buy as much or as little as they need.

Such systems are well established in other countries including the US, Australia and New Zealand and are reported to be both popular with consumers and retailers.

This study looks at existing systems in use in the US, Australia, New Zealand and the UK, and compares the findings with a UK market survey investigating consumer attitudes to self-dispensing. From a comparison of the data collated, potential self-dispense systems and products suitable for such dispensing are evaluated for their suitability for use within the UK retail sector.

One of the major concerns of potential users is the risk of contamination or spoilage of the foodstuffs within the dispensers. For this reason, gravity feed bins rather than open bins are the preferred choice for food products. However, for non-food items the simplicity of the bin and scoop system was much liked by those involved in the market survey.

The major advantages of self-dispense systems as seen by the consumer are the ability to select only the quantity needed (portion control) and the reduction in packaging. The value for money factor was not a major issue with consumers but all expected that self-dispensed product would be cheaper than the pre-packed equivalent. In the US, consumer cost savings of the order 30-60% were common, and in Australia and New Zealand the cost savings were in the region of 10-30%.

The major disadvantages to self-dispense as seen by the consumers were their concerns over hygiene, lack of information (nutritional, ‘sell by’ dates, etc), and limited branded goods availability. Most of these objections have been resolved overseas and could be easily addressed in the UK.

For the retailers, a reason for adopting self-dispense systems is increased profitability. Potential savings of £30,000–£136,000 per one million units of pre-packed products are possible for the key products deemed ideal for self-dispense. These savings derive from packaging material savings (printed consumer packs no longer required), distribution savings, and Packaging Recovery Note (PRN) savings / cost avoidance. With regard to product shelf density, self-dispense offers no real advantage or disadvantage over conventional shelf stacking.

The report concludes with a discussion of the possible routes forward to adopt self-dispense systems within the UK retail sector, including, a number of designs for self-dispense zones which demonstrate that a modern user-friendly environment can be created to help boost sales of potentially high added value produce.
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1.0 Introduction

Self-dispensing systems, whereby products are offered ‘loose’ and customers are encouraged to use simple packaging provided by the retailer, have the potential to contribute to significant reductions in retail packaging and also reductions in the food households throw away, as consumers buy as much or as little as they need.

Self-dispensing systems are well established in a number of countries such as the US, Canada, Australia and New Zealand where they have proved popular with customers and profitable for grocery retailers. Self-dispensing is less common in the UK, and this study will help UK retailers consider whether implementation of such systems is commercially viable.

The aim of this work is to study the economics of self-dispensing systems for use within the UK food and non-food retail sector in order to make a case to retailers that the systems are commercially feasible.

The study addresses the extent to which the concept is currently used in the UK and overseas. It looks at the general range of product options suitable for self-dispensing for both food and non-food retail sectors, and discusses the general methods of supply logistics and practical dispensing of the products, in-store merchandising, hygiene and labelling.

The study examines potential barriers and constraints to the wider implementation of self-dispensing systems in the UK and proposes solutions which may overcome or mitigate such barriers and constraints.

The main part of this study was undertaken by James Ross Consulting Ltd. (www.jrconsulting.com). The consumer market survey was undertaken by Marketry Ltd (www.marketry.co.uk), and possible store layouts were produced by The Brewery (www.thebrewerydesign.com).
2.0 Methodology, Target Markets and Concept Selection

2.1 Methodology

To initiate the study a number of brainstorming sessions were undertaken to determine possible products, both food and non-food, suitable for in-store self-dispense. From this initial range of products a shortlist was produced of possible products and dispensing methods to investigate in greater detail. This shortlist was used to design a consumer questionnaire and hall studies, which were carried out in parallel to a study of existing systems in the US, Australia, New Zealand and the UK.

To study existing systems overseas, a range of shopping malls, speciality food shops, conventional supermarkets and health food stores were visited. Where self-dispensing systems were in use, interviews were requested with store management and photographs taken where permitted. The evidence from these visits, in the form of notes, interview responses and photographs, was used to review the short listed concepts for feasibility and construct a decision matrix for each concept.

A series of four consumer hall tests involving 400 interviews and two focus groups were carried out. They were undertaken to establish the consumers’ views and perceptions on self-dispensing systems covering views on grocery shopping, recycling in general and recycling of packaging in particular, buying loose food, and non-food products suitable for self-dispensing. The outcomes were used to ascertain where these products should be located in store: standalone self-service or near pre-packaged goods, and to identify the barriers and the constraints both real and perceived from the consumers’ perspective that may inhibit the concept. The four towns chosen were: Chesterfield and Widnes (North of England) and Braintree and Canterbury (South of England). The two focus groups were held at Chesterfield and Whitstable.

Using the decision matrix and results from the UK market study the pros and cons of each concept/product option were assessed and those options deemed most likely to succeed were evaluated in greater depth to determine where and how such systems could be used successfully in the UK retail sector.

From a study of the equipment costs, supply and distribution costs and likely impact on sales, the commercial feasibility of self-dispensing a cross-section of products was determined, as was any potential reduction in household waste going to landfill arising from the implementation of in-store self-dispense systems.

2.2 Target markets

Three key retail market areas were identified where self-dispense systems could be used:

- Grocery (Food & Non-Food);
- Health and Beauty (Non-Food); and
- DIY and Garden Products (Non-Food)

The Grocery sector is by far the biggest sector by volume and has the widest range of suitable products, thus most of this study is based on solutions and systems applicable to this market sector. The Health and Beauty sector has a limited, but potentially high volume of products that could be self-dispensed (principally hair care and skin care products). The DIY and Garden Products sector already uses some forms of simple self-dispense within the UK, but could do far more. However no existing systems were seen in the overseas markets visited, thus significant development of suitable technology might be required before this particular sector could fully exploit the benefits of self-dispensing.

2.3 Criteria for choosing concepts

For any new system to meet the demands of, and be adopted into, the retail sector it must offer added value / profit to retailer and must be perceived as value for money by consumers. This can be achieved by offering a product at ultra low cost, a premium product at ‘standard product’ price (upgrading), or an added value service. The latter two options are generally perceived as preferable to the first.

Any technology used must be safe, simple and ideally transferable to other products / market sectors. Whilst the economic and commercial criteria are critical to the retail sector embracing the technology, implementing the change may reduce household food and packaging entering the waste stream. Any initial concepts chosen will need to be easy to install and use, and be based on existing technologies in use in other countries.
3.0 Existing Systems Review

3.1 Methodology of review

Visits were made to a wide variety of stores including shopping malls, speciality food shops, conventional supermarkets, health food stores and pet food stores in the US, Australia and New Zealand, as well as a number of stores in the UK. The store sizes ranged from large out-of-town hypermarkets to small town-centre boutiques. The types of self-dispense equipment in use, the products dispensed and the store layout with regard to the dispenser location were all documented and evaluated.

3.2 General comments

All store managers who had self-dispense systems (bulk bins) reported that the system was very / highly profitable for the store. Self-dispense systems were found predominantly in food stores specialising in fresh / organic / health food products, but the concept within such stores is often applied to other products such as confectionery, snacks and health and beauty. In most stores, 80-90% of the SKUs in self-dispense bins were also available pre-packed (at a higher price - typically 30-60% higher). This was said to be important for the customers so that they had a choice.

Figure 1: An organic food store in the US

Figure 2: Self-dispense systems in a New Zealand store.
In the US, Australia and New Zealand, some consumers can be more motivated by good value / low prices than they are in the UK. Thus, self-dispensing – which can offer significant savings to consumers who take the time to make such purchases. It is also possible to build in brand identity / premium produce as shown in Australia and US.

3.3 US supermarkets

There are two nationwide store chains in the US that specialise in organic / health foods, both of which make wide use of self-dispense systems; these are Wild Oats and WholeFoods. A number of boutique organic / health food stores were also visited. These also used self-dispense systems and varied in size from small single shops to large out-of-town superstores.

From observation, bulk bins reduced the price of the produce to the consumer by 30–60% in most cases. It was reported by the store managers that consumers typically purchased smaller portions than they would pre-packed, but they would buy more often. Some stores found that many consumers did not like the bulk bins because they feared contamination. However, if the bulk food was packaged by the staff, labelled and left beside the bulk bin, they were happy to purchase it. On average most of the stores had to refill 60% of the bins at least once a day.

Gravity feed bins are considered to be more sanitary, with less risk of contamination, and are preferred to open top / lidded bins. Bulk food dispensing has significant wastage and spillage. Bulk dispensing was far more popular on the West Coast than the Midwest or East Coast of the US. There were also other ‘value’ stores that used self dispensing systems in the US and Canada.
3.4 New Zealand - specialist bulk food stores

In New Zealand customers are primarily the older generation as the younger generation like the convenience offered by supermarkets. In addition, bulk food stores are not open late, some customers have concerns about quality (bulk goods are typically unbranded goods), and this kind of shopping requires the consumer to pick and pack, so it takes more time. There is a difference in pricing between the two types of store; bulk supermarkets price goods per kilogram but conventional supermarkets do not advertise the per kilogram price and this can lead to confusion for the customer. Within the bulk supermarkets, cereals are the biggest selling item. Due to the strong environmental awareness in this area, some customers regularly re-use bags and liquid containers.
10–15% re-use bags for dry goods; and
The majority of customers re-use liquid containers.

3.5 New Zealand – conventional supermarkets

Even conventional supermarkets in New Zealand have a small range of bulk-dispense items comprising mainly baking goods, cereals, dried fruits and coffee beans. The majority of such products are unbranded and sold in a specific zone (ie, not in aisles), though sometimes the bulk dispensers are situated in the same location as the pre-packed goods. An example of this is coffee beans, where bulk and pre-packed are sold side-by-side, the bulk goods being marginally cheaper:

- Coffee beans: Bulk: $8.30 / 225g; Branded: $8.95 / 200g (~$10.07 / 225g - 17.6% more expensive);
- Cereal: Bulk: $0.75 / 100g; Branded: $3.61 / 350g (~$1.03 / 100g - 27.2% more expensive)

3.6 Australia – conventional and specialist stores

Figure 9: Coles Supermarket, in Sydney, Australia, sells much of its food by self-dispense

Bulk food stores do not appear to be as popular in Australia as they are in New Zealand. Self-dispense systems in the form of soft drink and snack vending machines are popular, and self-dispense is used for nuts and dried fruit in most of the supermarkets, but self-dispense systems were not found to any great extent in the non-food category. This may be because the perceived benefits of self-dispensing are more applicable to food produce than non-food. Re-usable packaging is encouraged in the Australia Packaging Covenant but is not regulated by law – self-dispensing is a useful method to allow packaging re-use.

3.7 Key responses from interviews in store

3.7.1 General

A number of store managers / self-dispense section managers were interviewed in the US (5), Australia (2) and New Zealand (3). The stores concerned varied from large national chains with a footprint similar to a large out-of-town supermarket to a small, downtown, inner-city ‘boutique’ store. In many cases, the comments made were the same or similar for most of the managers interviewed. None of the comments made were independently verified, though in all cases the comments reflect what was witnessed in the many different stores visited.

An extract from Natural Grocery Buyer, Spring 2005, extolling the virtues of bulk dispense is given in Appendix 3.

3.7.2 Consumer motivators

In the US there was a clear split between the stores in the key drivers identified for consumers to use the self-dispense facility. Some stated that they tended towards organic / premium / unusual products for self-dispense, but still sold them cheaper than the pre-packed equivalent, giving the consumer the ability to ‘upgrade’ at a price less than that of the pre-packed premium product. Other stores opted for commodity products at prices cheaper
than pre-packed – anything that sold well pre-packed and could be self-dispensed was self-dispensed. From observation these stores seemed to have more people using the dispensers.

In Australia and New Zealand value for money / low cost seemed to be the main driver.

In the UK, the use of food self-dispense appears to be limited mainly to regional, specialist health / fresh food stores (principally in the London area, but also in the South West – Bristol). Though the use of self-dispense for pet food is more national, it is not high volume. Some specialist coffee shops throughout the UK are known to offer a ‘grind your own beans’ service similar to the systems that are widespread in the US.

### 3.7.3 Benefits

<table>
<thead>
<tr>
<th>To the Retailer</th>
<th>To the Consumer</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased profit</td>
<td>Perceived value for money</td>
<td>Less packaging waste</td>
</tr>
<tr>
<td>Ease of shelf refill</td>
<td>Portion control</td>
<td>Less food that ends up in the household bin (portion control)</td>
</tr>
<tr>
<td>Differentiation</td>
<td>Real / perceived freshness</td>
<td></td>
</tr>
<tr>
<td>Improved logistics</td>
<td>‘Feel good’ factor</td>
<td>Less carbon emissions (less packaging / improved logistics)</td>
</tr>
<tr>
<td>Ethical stance</td>
<td>Easy to try new products</td>
<td></td>
</tr>
<tr>
<td>Footprint smaller:</td>
<td>greater density of products / m²</td>
<td></td>
</tr>
</tbody>
</table>

**Table 1:** Perceived benefits of self-dispensing from in-store interviews
4.0 Opportunities for Self-Dispense Systems within the UK Retail Sector

4.1 Proposed markets

Three market areas have been identified; Grocery (Food & Non-Food), Health and Beauty (Non-Food) and DIY and Garden Products (Non-Food)

4.2 Proposed Products – Food

<table>
<thead>
<tr>
<th>Dry Foods</th>
<th>Liquid Foods</th>
<th>General Produce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>Cooking oils</td>
<td>Nuts</td>
</tr>
<tr>
<td>Rice</td>
<td>Milk</td>
<td>Dried fruit</td>
</tr>
<tr>
<td>Pasta</td>
<td>Water</td>
<td>Frozen shellfish</td>
</tr>
<tr>
<td>Pulses</td>
<td>Sauces</td>
<td>Salads</td>
</tr>
<tr>
<td>Grains</td>
<td>Dressings</td>
<td>Dried pet food</td>
</tr>
<tr>
<td>Oats</td>
<td>Wine</td>
<td>Confectionery</td>
</tr>
<tr>
<td>Coffee powder</td>
<td>Fruit juice</td>
<td>Cheese</td>
</tr>
<tr>
<td>Coffee beans</td>
<td></td>
<td>Cooked meat slices</td>
</tr>
<tr>
<td>Tea leaves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flour / baking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ingredients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seasoning (spices)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 2: Proposed food products for self-dispense, UK*

4.3 Grocery – non-food

<table>
<thead>
<tr>
<th>Solids</th>
<th>Liquid</th>
<th>Small Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat litter</td>
<td>Liquid detergent</td>
<td>Stationery</td>
</tr>
<tr>
<td>Detergents</td>
<td>Liquid soaps</td>
<td>CD Jewel Cases</td>
</tr>
<tr>
<td>Dishwasher Products</td>
<td>Dishwasher products</td>
<td></td>
</tr>
<tr>
<td>Dried pet food</td>
<td>Household cleaners</td>
<td></td>
</tr>
</tbody>
</table>

*Table 3: Proposed non-food grocery products for self-dispense, UK*

4.4 Health and beauty

<table>
<thead>
<tr>
<th>Solids</th>
<th>Liquid</th>
<th>Small Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soaps</td>
<td>Soaps</td>
<td>Soap bars</td>
</tr>
<tr>
<td>Bath salts</td>
<td>Moisturiser</td>
<td></td>
</tr>
<tr>
<td>Aromatherapy</td>
<td>Shampoo / hair</td>
<td></td>
</tr>
<tr>
<td>products</td>
<td>Conditioner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatherapy oils</td>
<td></td>
</tr>
</tbody>
</table>

*Table 4: Proposed health & beauty products for self-dispense, UK*
4.5 DIY / garden

<table>
<thead>
<tr>
<th>Solids</th>
<th>Liquid</th>
<th>Small Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant / grass seeds</td>
<td>Liquid plant food</td>
<td>Screws</td>
</tr>
<tr>
<td>Compost</td>
<td>Car care products</td>
<td>Nails</td>
</tr>
<tr>
<td>Plant fertiliser</td>
<td>Paint</td>
<td>Plant bulbs</td>
</tr>
<tr>
<td>Sand*</td>
<td>Outdoor cleaning products (eg patio cleaner)</td>
<td>Batteries</td>
</tr>
<tr>
<td>Cement*</td>
<td></td>
<td>Brackets / fixings</td>
</tr>
<tr>
<td>Ready mix*</td>
<td></td>
<td>Cupboard / door</td>
</tr>
<tr>
<td>*Small portions for 'home repair'</td>
<td></td>
<td>Handles</td>
</tr>
</tbody>
</table>

**Table 5:** Proposed DIY & gardening products for self-dispense, UK

4.6 Other ideas

Self-dispense technology could also be applied to a wider range of products and applications such as beer (can / bottle multi-packs), Food can multi-packs, oral care, carbonated soft drinks (water plus flavouring and carbonate at dispense).
5.0 Technologies Applicable to UK

5.1 Bin and scoop

The bin and scoop dispense method is the simplest of all the self-dispense systems and probably the most widely used. It is suitable for a range of dry products, including small items or even frozen items; however, because of the nature of the dispense method there is a potential risk of contamination by users. It is for this reason the system was not favoured by consumers for food items in the consumer survey, but was thought acceptable for non-food products. However, in the US, bin and scoop is the most widely used approach for both food and non-food items. Some health food and pet stores in UK already use such a system; it is also often used for low-cost food items or in low-cost outlets.

**Figure 10:** A bin and scoop system with the scoops stored outside the bins

**Figure 11:** A bin and scoop system with the scoops stored inside the bins

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Widely used in US, Asia, Australia, New Zealand and Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Technology widely established</td>
</tr>
<tr>
<td></td>
<td>Simple to use</td>
</tr>
<tr>
<td></td>
<td>Upgrading - the ability to buy premium goods at lower prices</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concerns</th>
<th>Health and safety</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low value perception</td>
</tr>
<tr>
<td></td>
<td>Wastage / spillage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suitable Products</th>
<th>Food - solid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Food - whole food</td>
</tr>
<tr>
<td></td>
<td>Non-food - solid</td>
</tr>
<tr>
<td></td>
<td>Non-Food - powder</td>
</tr>
<tr>
<td></td>
<td>Non-food - small items</td>
</tr>
</tbody>
</table>

**Table 6:** The pros and cons of the bin and scoop system

5.2 Gravity feed bins

Gravity feed bins are also widely used in the US and the Asia-Pacific Region, and there are now smaller stores in the UK starting to adopt such systems (For example: As Nature Intended in London). Bins come in a range of sizes; 10-12 litre (~10 kg), 18-29 litre (~16 kg) and 45-50 litre (~40 kg). These are typically arranged with the dispenser at about shoulder height and stacked on purpose-designed shelving. In the US, where the use of bins was more prominent, no provision was made for disabled users such as those in wheelchairs; however, there was usually a member of staff nearby willing to help if required.
The bins are filled manually from the top using bulk (25-50 lb / 10-25 kg) product bags. Customers who would not self-dispense would often buy product that had been dispensed by staff, labelled and stacked adjacent to the dispensers. In most stores about 80% of the items available from bulk bins were also available pre-packed, typically at a higher price. In most stores, the customer wrote the bin number on a tag using blank tags supplied next to the bins and the product was weighed and priced at the checkout. Generally the customer could reject the purchase and normally these purchases were then disposed of by the store rather than put back on sale as either pre-packed product or put back into the bins. In one store there was a bulk weigh station next to the bins. The staff weighed and labelled the produce before the customer went to the checkout.
### Advantages
- Widely used in US, Asia, Australia, New Zealand and Europe
- Technology widely established
- Simple to use
- Hygienic
- Minimal risk of product contamination
- Upgrading – the ability to buy premium goods at lower prices

### Concerns
- Health & safety
- Low value perception
- Wastage / spillage

### Suitable Products
- Food – flowing solid
- Food – whole food (small)
- Non-food – flowing solid
- Non-food – small items

**Table 7:** The pros and cons of the gravity feed system

5.3 **Liquid**

Liquid self-dispense systems fell into two categories: bulk containers selling such items as cooking oils, honey and detergent products, and smaller-scale dispensers mainly used for health and beauty products. The bulk dispensers tended to utilise a tap or valve closure, while pump dispensers were mainly used for products such as soap, shampoo and skin care products. In two health food outlets visited, liquid self-dispense was also used for herbal remedies.

**Figure 14:** Liquid self-dispense for cooking oils (left) and detergents (right)

| Advantages | Widely used in US, Asia, Australia, New Zealand and Europe  
Technology widely established  
Simple to use |
|------------|----------------------------------------------------------|
| Concerns   | Health & safety  
Mess / slip hazard  
Low value perception  
Wastage / spillage |
| Suitable Products | Food – liquid  
Non-food – liquid |

**Table 8:** The pros and cons of liquid self-dispense
5.4 **Dose / portion control**

Dose / portion control in its simplest form would be dispensing one item / pack at a time in the same way as a vending machine. In terms of bulk dispense, gravity feed bins have been developed in the US that dispense a fixed volume of product for each turn / operation of the handle. The volume dispensed can be calibrated such that it is equivalent to a standard weight of the chosen product. This can simplify pricing for the consumer, but does limit the consumer choice over portion control.

**Figure 15:** Gravity feed systems can be adapted to dispense a fixed dose or portion of product

<table>
<thead>
<tr>
<th><strong>Advantages</strong></th>
<th>Easy to understand pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Technology established</td>
</tr>
<tr>
<td></td>
<td>Simple to use</td>
</tr>
<tr>
<td><strong>Concerns</strong></td>
<td>Health &amp; safety</td>
</tr>
<tr>
<td></td>
<td>Inaccurate dosing</td>
</tr>
<tr>
<td></td>
<td>Wastage / spillage</td>
</tr>
<tr>
<td><strong>Suitable Products</strong></td>
<td>Food – flowing solid</td>
</tr>
<tr>
<td></td>
<td>Food – powder</td>
</tr>
<tr>
<td></td>
<td>Non-food – flowing solid</td>
</tr>
<tr>
<td></td>
<td>Non-food – powder</td>
</tr>
<tr>
<td></td>
<td>Non-food – small items</td>
</tr>
</tbody>
</table>

**Table 9:** The pros and cons of dose / portion control

5.5 **Value Added – blending**

An example of blending used in the UK is paint mixing in DIY stores; however, the basic technology could also be applied to a range of other applications including: flavoured milk drinks, fruit juices, 'smoothies', carbonated drinks (water + flavouring + gas), creams and moisturisers ('aromatherapy' additives into a basic mix), building products (cement / sand / colouring mixes). Depending on the complexity of the technology utilised the blending ratio could be completely in the hands of the user (consumer / store operator), restricted to pre-set formulations or ideally a combination of the two. An example could be a fruit drink where the consumer can choose from a range of pre-set options or select their own blend from the ingredients available.

**Figure 16:** Paint mixing is a common form of value added by mixing in UK DIY stores
### Table 10: The pros and cons of blending

| Advantages | Value added  
Technology established in other areas  
Simple to use |
|---|---|
| Concerns | Health and safety  
Reproducibility  
Fear of technology  
Wastage / spillage |
| Suitable Products | Food – flowing solid  
Food – liquid  
Non-food – flowing solid  
Non-food – small items |

5.6 Value Added – grinding

The ability to grind coffee beans to give ground coffee or a range of nuts to give nut butter (eg peanuts to give peanut butter) is well established in the US. Such systems are very common in a range of US stores including conventional supermarkets, boutique food stores and health food stores, and were typically situated alongside the equivalent pre-packed product. They not only give the consumer the chance to select fresh ground coffee / nut butter, but also to create their own blend by grinding their own particular mix of product.

**Figure 17:** Grinding their own coffee blend is a popular option among some customers

**Figure 18:** This mill allows customers to blend their own peanut butter

| Advantages | Value added  
Used in US, Asia, Australia / New Zealand and Europe  
Technology widely established  
Simple to use  
Freshness  
Portion control |
|---|---|
| Concerns | Health and safety  
Hygiene  
Technology / difficult to operate  
Wastage / spillage |
| Suitable Products | Food – solid  
Food – whole food  
Non-food – solid |

**Table 11:** The pros and cons of grinding
5.7 Value added – touch screen controls

Touch screens are becoming ever more commonplace in both the home and the workplace, and are now increasingly being used for food applications such as in fast food restaurants for menu selection and in cafeterias for choosing meals or sandwich fillings. In the realm of self-dispense they could be used for product / portion selection for individual food items, product / portion selection for sandwich fillings, product / portion selection for hot meal / takeaway meal application, or information provision.

Figure 19: Touch-screen ordering could be used for self-dispensing deli products and fast food

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Value added</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Basic technology widely established, but not in the context of self-dispense</td>
</tr>
<tr>
<td></td>
<td>Simple to use</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concerns</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wastage</td>
</tr>
<tr>
<td></td>
<td>May require manual food handling for final product dispense</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suitable Products</th>
<th>Sandwich fillings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Takeaway food / ready meals</td>
</tr>
<tr>
<td></td>
<td>Drink mixing</td>
</tr>
<tr>
<td></td>
<td>Vending</td>
</tr>
</tbody>
</table>

Table 12: The pros and cons of touch-screen dispensing
6.0 Potential Weight Savings

6.1 Cereals

The average weight of a 500 g cereal box is 73 g including the liner, thus replacing a box with a PE (polyethylene) bag will save approximately 70 g. Replacing one million boxes with such bags will remove 70 t of waste from the household waste stream.

In cost terms, substituting a simple PE bag for standard (500 g) cereal box will save approximately £20,000-£30,000 per million boxes in packaging costs.

6.2 Coffee jars

An average 100 g coffee jar weighs approximately 260 g, thus replacing one million coffee jars by using PE bags or lightweight plastic containers will remove 260 t from the domestic waste stream. Similar savings could be made for other products in jars, such as preserves and olives.

In financial terms, replacing one million coffee-type jars with a PE bag / lightweight plastic container will save £30,000-£50,000 in packaging costs.

6.3 Detergent cartons

A typical 1 kg detergent carton weighs about 86 g, thus replacing one million detergent cartons with PE bags will remove approximately 86 t from the domestic waste stream.

In financial terms, replacing one million detergent cartons with PE bags will save approximately £30,000-£40,000 in packaging costs.

Figure 20: Cardboard detergent cartons are prime candidates for replacement by self-dispense bags

6.4 Liquid detergents / fabric conditioners

A typical 1 kg liquid detergent bottle weighs about 96 g, thus if consumers re-use one million detergent bottles by self-dispensing from a bulk container in store this will remove approximately 96 t from the domestic waste stream.

In financial terms, re-using one million detergent bottles will save approximately £8,000-£12,000 in packaging costs.

6.5 Sauces / dressings / cooking oils

Sauces and dressings come in a variety of plastic or glass containers, many of which have the potential to be reused. For certain items the product could be self-dispensed from a bulk container into a lightweight plastic container with a lid, but this would depend very much on the product and required / expected shelf life. Re-using or replacing a glass bottle / jar with a lightweight container could save 200-300 g per pack.
6.6 Nuts and dried fruit

Nuts and dried fruit are mainly sold in pillow packs or laminated form-fill-seal packs, thus it is unlikely that self-dispense will have a significant effect on packaging. Significant distribution savings are, however, possible from buying bulk bags to refill the dispensers. As the consumer is able to choose the quantity purchased, it may save product waste from entering the domestic waste stream.

6.7 Rice / pasta / pulses / grains

Again, rice, pasta, pulses and grains are mainly sold in pillow packs or laminated form-fill-seal packs, thus it is unlikely that self-dispense will have a significant effect on packaging. Significant distribution savings are, however, possible from buying bulk bags to refill the dispensers. As the consumer is able to choose the quantity purchased, it may save product waste from entering the domestic waste stream.
7.0 Responses from Consumer Research

7.1 Introduction

A consumer awareness / market survey was conducted by Marketry Ltd as part of this study. This involved a series of four consumer hall tests involving 400 interviews and two focus groups. The four towns chosen were Chesterfield and Widnes (North of England) and Braintree and Canterbury (South of England). The two focus groups were: Chesterfield (10 respondents) and Whitstable (9 respondents). The details below regarding the consumer research are summarized:

The principal objective of this part of the study was to assess consumers’ views and perceptions of self-dispensing. More specifically, the study aimed to:

1. Determine consumers’ views on: grocery shopping; recycling and packaging; and food and non-food products that would be suitable for self-dispensing dry and liquid, eg, flour, washing up liquid, pet food;
2. Ascertain where these products should be located in store: standalone self-service zone or near pre-packaged goods;
3. Identify the barriers and constraints, both real and perceived, from the consumers’ perspective that may inhibit the concept; and
4. Find out the drivers for different consumer profiles: cost, opportunity to purchase exact requirements, quality.

In order to achieve these objectives, quantitative as well as qualitative methods were needed. There was therefore a broad mix of respondents in both the hall tests and the focus groups; the people interviewed were mixed in terms of race, age and gender. From the analysis of the focus groups and the quantitative data, it is clear that large supermarkets and local branches of a chain are the place where most people do most of their shopping. Of the people interviewed, 87% buy their groceries from large supermarkets – 14% more than 10 years ago. People bulk buy in supermarkets and then ‘top up’ by shopping in smaller or more specialised stores.

This study also showed just how keen people are to recycle; 76% of the respondents feel that it is important for all households to try to recycle as much as possible, and most people would recycle whether or not councils encouraged them to do so. The principal reasons for recycling are environmental and included leaving behind a better place for one’s children to live. People believe that products have too much packaging; 52% think that food items have too much packaging and 34% think the same about non-food products. People feel especially strongly that vegetables and fruits have more packaging than is necessary, and electrical goods come up for most criticism among non-food products. Other products which are felt to have too much packaging are cereals, cakes and biscuits – among food items – and children’s toys, pet food, cosmetics and garden products, among non-food products.

Important conclusions can also be drawn regarding people’s views on buying loose. People clearly buy more loose products than they think they do; especially bakery items, wrapped and unwrapped sweets and salads among food items and flower bulbs, screws and nails, soap (solid), seeds and pet food among non-food products. Many more people buy food loose than non-food; 90% of people have bought food loose at some time, whereas only 31% have bought non-food items in this manner. However, people are keener to buy non-food items than food products; and dry food rather than wet food. Hygiene is the key driver for this. People believe that they do not have to worry about hygiene if they buy non-food items loose, and they are more willing to buy food that they can wash, peel or boil in this manner.

For all the above, drivers for and barriers to buying things loose can be identified. The most important drivers are:

- Less packaging;
- You can buy as much as you want;
- It is cheaper;
- You can see what you are getting; and
- It's an easy way to try new products, as you need only buy a small quantity.
Self-dispensing systems need to be easy to use. The barriers people mentioned were:

- Unhygienic;
- No information about the product (brand, nutritional content, etc);
- No ‘sell by’ date;
- The quality may not be good; and
- Freshness.

The use of self-dispensing systems is widely accepted and 89% of the respondents said they had used them, e.g. buying fruit and vegetables. 59% of interviewees rated their interest in buying loose items as 70% or greater, which indicates a good propensity to buy. However, people who have not used them (10%) consider that there are important barriers that prevent them from using self-dispensing machines. These people feel they are unhygienic – 34% think that self-dispensing systems are unhygienic and time-consuming, 26% think that it takes too much time, and 18% have concerns about packaging.

The main age group that would use self-dispense in the UK are the 35+ year olds (the same as in the US and Australia / New Zealand).

People’s views on self-dispensing systems were explored. All the systems discussed were well regarded when they dispensed non-food items and dry food. Bin and scoop systems were well received for some dry food, and non-food items. Gravity feed bins were the preferred option for food. Consumers liked this system since the food could not really be touched and also because they knew the portion size. People also felt that it was important that it was filled from the top and it looked hygienic. The grinding system was found very appealing for coffee and spices.

It is clear that people’s approach to self-dispensing systems depends on the product dispensed. The location of the self-dispensing systems within stores depends also on the type of product dispensed. Generally speaking, it was felt that most products should be located near their packaged counterparts in supermarkets.

### 7.2 Drivers for buying things loose

There are certain types of products that people feel comfortable buying from a self-dispensing system. The most highly ranked types of products are clearly dry ones. Liquid products that were highly ranked were non-food items such as fabric softener or shampoo. More specifically, people feel most comfortable buying the following from a self-dispensing system:

- DIY and gardening products (e.g. grass seeds, screws and nails);
- Dry non-food grocery products (e.g. washing powder);
- Dry food (e.g. cereals, coffee granules, nuts);
- Non-food grocery liquids (e.g. fabric softener); and
- Liquid health and beauty products (e.g. shampoo).

There is clearly most concern about soft and liquid foods; only 37% of people said that they felt very comfortable or comfortable buying drinks (e.g. juices, milk) from a self-dispensing system; and just 27% said that about soft and liquid foods (e.g. jam, soup). The main reason people like using a self-dispensing system is because they can choose how much they want; this allows them to reduce waste but also to try out different types of products. Hygiene issues emerge specifically with liquid food. In effect, people feel more comfortable buying dry food or liquid non-food items since they do not have to worry about hygiene.

The following comments illustrate these views and some positive feedback about food items where people were comfortable with liquid food dispensing and did not have concerns about hygiene:
Some of the main drivers for consumers buying loose items are the ability to choose the quantity they want, cost savings, less food waste and less packaging.

### 7.3 Barriers to buying things loose

The main consumer barriers to buying loose items are freshness, hygiene and lack of information about the products. By siting the products in or near the fresh produce section, ensuring good lighting and good stock rotation (choosing the appropriate sized bins for the sales throughput), many of the concerns over freshness can be overcome.

The items that have the highest number of people who feel uncomfortable or very uncomfortable are drinks (eg juices, milk) and soft and liquid foods (eg jam, soup). This is consistent with the results of the previous section, where people said that liquid products are less appealing to buy from a self-dispensing system.

Some people did also express some concerns about buying non-food liquids from self-dispensing systems – especially liquid health and beauty products (eg shampoo), for which around 36% of the people feel uncomfortable or very uncomfortable. DIY and gardening products (eg grass seeds, screws and nails) and dry non-food grocery products (eg washing powder) were clearly more acceptable to buy from a self-dispensing system. They were the most highly ranked in very comfortable / comfortable and had less mentions in uncomfortable / very uncomfortable.

Barriers identified for different product types:

- **Food products** (despite the presentation of the product): the major concern with food is hygiene. People tend to think that there could be several people handling the food;
- **Liquid products**: people believe self-dispensing these would be too messy. There is not much concern about hygiene with these types of products – except in the case of liquid food, where people are concerned about hygiene; and
- **Dry health and beauty items**: with these items most people say that they prefer to buy these pre-packed. People were not really sure about why they felt uncomfortable buying these type of products from self-dispensing systems, but some people said they were just not used to it or felt that it was not necessary.
Issues over hygiene are best addressed by using gravity feed bins that are kept clean and well maintained, as these prevent contamination by other consumers. The floor area will need to be kept clean by staff, but good bin design and display layout can minimise spillage onto the floor.

Product information such as ‘use by’ dates, branding, and nutritional information can be easily addressed by suitable labelling of the bins and separate leaflets giving nutritional information, recipies, product origin, etc, available in-store. This type of information was readily available in the overseas stores visited and was welcomed by the customers.

7.4 What manufacturers could do

It must be noted that very few, if any, of the people interviewed had used or even seen modern gravity feed self-dispense systems; thus some of the comments reflect the lack of first-hand knowledge.
7.5 Different types of self-dispensing systems

Since each type of self-dispensing system clearly has its own pros and cons, they have been assessed independently.

**Bin and scoop system**

The initial reaction from most respondents was that they would not use this type of self-dispensing system. The main reasons for this were:

- It is unhygienic;
- It could be messy;
- You do not know the quality of the food (most people prefer to buy branded products); and
- There is no nutritional information.

People believe that they would buy fruit and vegetables from this system as they would be able to wash the items before eating them. In addition, people felt you could see and smell the product as well as buy as much as you liked. The main concerns were hygiene, freshness, and ensuring a good rotation of the product when the container was deep.

Other non-food products that could be sold through this self-dispensing system were household items such as soaps, dusters and washing powders – as long as they were dry products. The reaction regarding pasta was mixed. Some people would not have a problem as they can boil it, whereas others were very reluctant to buy any food loose. The idea of self-dispensing pet food was popular.

People would prefer to buy products loose when they are not food, and especially if they are dry items. Dry washing powders were well regarded. Other products mentioned were grass seed and nails and screws. For the container to collect the product, people preferred to use a paper bag or something that could be re-used.

People felt the bins should be smaller so that the product was always fresh. It was felt that containers should be separated from each other in such a way that products cannot be mixed. This type of self-dispensing system was felt to be appropriate for health food or independent stores. Pet shops and large supermarkets were also mentioned but not many people agreed with these locations.

This self-dispensing system can be improved by putting the bins at a more reachable height, and making the containers smaller – people were concerned that the weight of the product was pushing the product down. People imagine a system such as this would be located at the front of the store with the fruit and vegetables in supermarkets as well as in small stores such as specialist food product stores or greengrocers. All the participants would prefer to serve themselves since they are able to choose the goods they want.

**Gravity feed bins**

Gravity feed bins were much better regarded than bin and scoop. People like the concept as it cannot be touched by children and because they would decide the portion size. It is important to note that people mentioned that it was filled from the top and it looked hygienic. These designs clearly minimise hygiene issues, and this is supported by other research.

Other products that can be sold through gravity feed bin systems are spices. Some people thought about liquids and jams, although they were a clear minority. People mentioned that it should not be anything with too short a shelf life. People felt that the dates not being on the products would be a problem. Another concern was that you would need to put the product into a container at home if the provided bags were not properly labelled. People would also like to know the brand of the product they are buying.

The container to put the product in as well as the type of retailer to place this system in seems to depend on the product type sold by the machine. People felt generally that it could be located in a large supermarket as well as in a small shop. If the product were liquid, participants would prefer to have plastic cups. If it were herbs, a paper bag would be fine. Most people would like to help themselves.
This system was very well regarded and there were more positive comments than negative ones. The most mentioned arguments in favour of the system were:

- You know your set portion; and
- It is easy to use.

For liquids, people would use this system at certain retailers only, like The Body Shop or Lush stores. Among the benefits of this system, participants mentioned less packaging and the possibility of selecting different items in small portions. Others suggested that it was good to smell the varied fragrances of the different items. The most popular disadvantage was that it could be messy, with things spilling out everywhere.

Bottles of different sizes seem to be the best option for this type of product. No other products were suggested to sell through this type of self-dispensing system. There were mixed views on whether assistance would be needed.

**Dose / portion control**

The dosing system was much preferred because the product could not be touched and the portion size was clear. Also, people mentioned as important that it was filled from the top and it looked hygienic. People expressed some concerns when the product was liquid. They mentioned that it could be messy, time consuming and you would not know either the brand of the product or its nutritional information.

**Value added – blending**

Most people liked this system. However, despite this the number of negative comments was also high at around 80%. The opinions on this system were clearly divided and there is not a clear-cut conclusion about it. People really liked the fact that they could make a mix to their own taste. However, respondents do not like this system primarily because it seems to be messy.

**Value added – grinding**

This system provoked fascinating discussions about hygiene and freshness. People who were more concerned about hygiene would not buy product from a grinding system; on the other hand, those who preferred to have fresh products without additives would prefer to use this system for getting peanut butter and similar products. People agreed that the system could be improved by making it completely transparent, so the grinding process could be observed and it would be easy to confirm that the machine was clean.

Some people felt this system could be in all type of retailers - especially in supermarkets in an aisle dedicated to natural products. The container to put this product in should be a clean tub. Other products could be dispensed from this system such as coffee and spices such as cardamom, cinnamon or nutmeg. No one felt they needed an assistant to use this self-dispensing system.

This system was regarded differently depending on the type of product it dispensed. However, the grinding system was positively received. The most frequently mentioned arguments in favour were:

- You get the amount you want; and
- It is fresher.

The most common opinions in opposition were:

- It is unhygienic; and
- It is too difficult to operate.

**Value added – touch screen control**

Respondents did not grasp the concept of this system.
7.6 Self-dispensing systems: overview

Some of the respondents’ views on self-dispensing systems in general, whatever the mechanism, are summarised below:

- They would be fine for dispensing dry-food or non-food items: bath salts, DIY products, vegetables and fruits;
- Self-dispensing machines need to be appealing in terms of hygiene and appearance;
- Information about the product needs to be clear (nutritional information, brand of the product, ‘best before’ or ‘sell by’ date);
- Self-dispensing systems have to be easy to use; and
- Supermarkets are the main driver in the market.

7.7 Recommendations from market research

The items that consumers are most likely to buy loose in the UK are non-food products and dry food. Therefore, these are probably the most suitable items to start with. There is considerable room for improvement in this area.

Most people would use self-dispensing systems if the product cannot be touched. In effect, hygiene is the principal concern about self-dispensing systems. Manufacturers of self-dispensing systems should be encouraged to find a way to make these systems more appealing in terms of hygiene and appearance. Participants suggested making the system completely transparent so they could be confident about the machine’s hygiene. Providing information about the products is a good way to encourage people to buy loose products. Some essential information that should be on the self-dispensing system includes:

1. Brand of the product (where available!)
2. Nutritional information
3. ‘Best before’ or ‘sell by’ date.

Some other important points are:

- Self-dispensing systems need to be easy to use. Having usage instructions on one side of the machine would also encourage people to use these systems;
- Clearly supermarkets are the main driver in the market. However, self-dispensing systems for some special products – like bath therapy salts or biscuits – could be placed in special independent stores;
- At present, the use of touch-screen would appear to be difficult to implement. People considered this system time-consuming and too complicated. This may change in the future when consumers are more used to self-dispensing; and
- With the bin and scoop system, the bins need to be shallower and must be separated from one another so food cannot be mixed.
8.0 **Motivation for UK Consumers**

8.1 **Altruism**

To persuade consumers to adopt new technology, it is often necessary to offer some form of financial incentive or alternatively provide a ‘comfort zone’ with new technology in familiar surroundings. For self-dispense systems, both ploys can be used to good advantage. One option is to create a dedicated zone instore to attract aware / motivated consumers who will take more time / make more effort / potentially spend more to get a good green solution – both in terms of the environment and cost benefit. The zone should be well lit, and give the illusion of being spacious so that consumers have room to park their trolleys and make their choices without being crammed in by other shoppers. Within the zone, a wide range of self-dispense items could be offered as well as other premium or ‘green’ products such as organic produce, or items in simple packaging, or product refills, etc.

A second, but equally important, criterion is to offer value for money. This could be in the form of low-cost goods or the opportunity to upgrade to a premium product at standard prices. Because self-dispense permits the control of portion size, consumers will often pay less than they would for the same goods pre-packed – which would typically be in larger packs. This can be used to enhance the perceived value for money.

8.2 **Innovation / technology / convenience**

The consumer groups in the UK and the interviews in the US, Australia and New Zealand indicated that self-dispense systems appeal more to the older generation than younger shoppers. To attract some of the younger generation one option is the use of creative systems that are easy to use, look stylish and offer a ‘different’ shopping experience. Care must be taken, however, that in the process of attracting younger shoppers, the existing ‘older generation’ shoppers are not alienated and cease to use the new systems.
9.0 Motivation for UK Retail Sector

Interviews with store managers who use self-dispense systems in overseas markets confirmed the consistent turnaround and high profitability of such systems. No details were available as the stores did not want such information made public; however, from the comments made it was possible, using knowledge of different packaging technologies, to estimate the potential savings in material costs and distribution costs from installing and using self-dispensing systems. From the market survey it is apparent that gravity feed bins would be the preferred method of dispense, and products such as rice (and grains and pulses), pasta, detergent / dishwasher powder and cereals would be the most likely to be acceptable. The table below shows the estimated savings possible for these products using gravity feed bins. For the purpose of these calculations a number of assumptions have been made:

- Annual purchase volumes remain constant;
- Assumes consumer buys at same rate;
- The material costs only account for the primary pack – the consumer pack for the current pack and the bulk pack for the self-dispense product – thus there is also the potential to reduce costs further by doing away with the need for a shipper;
- The weight / cost of the take-home bag for the self-dispense system has been ignored, but such bags cost very little;
- In-store labour is assumed to be cost-neutral. This will depend upon the type of system selected and the velocity of product demand. Some systems would offer a significant in-store labour advantage; and
- No effect of price change has been considered.

Before any decisions are made based on the figures in Table 13, specific cost analysis related to an individual store / store chain and a specific product, and using formal supplier quotations, is strongly recommended. Simple, generic box designs have been assumed and costs estimated, thus data is indicative only. No effect of PRN cost savings has been included in the savings.

<table>
<thead>
<tr>
<th></th>
<th>Rice</th>
<th>Cereal</th>
<th>Detergent</th>
<th>Pasta</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Pack Type</strong></td>
<td>1kg pillow pack</td>
<td>500g carton with HDPE liner</td>
<td>1kg carton</td>
<td>1kg pillow pack</td>
</tr>
<tr>
<td><strong>Packaging weight</strong></td>
<td>18g</td>
<td>70g</td>
<td>86g</td>
<td>20g</td>
</tr>
<tr>
<td><strong>Pallets / 1M units</strong></td>
<td>3,334</td>
<td>3,334</td>
<td>1,695</td>
<td>2,667</td>
</tr>
<tr>
<td><strong>Estimated material costs</strong></td>
<td>£50,000</td>
<td>£50,000</td>
<td>£44,000</td>
<td>£110,000</td>
</tr>
<tr>
<td><strong>Estimated distribution costs</strong></td>
<td>£100,000</td>
<td>£100,000</td>
<td>£50,850</td>
<td>£80,000</td>
</tr>
</tbody>
</table>

| **Self-Dispense System Pack** | 25kg sack | 10kg carton | 25kg carton | 25kg sack |
| **Packaging weight** | 50g        | 1.0kg      | 1.2kg      | 120g      |
| **Pallets / 1M units** | 1,000      | 1667       | 1,667      | 1,000     |
| **Estimated material costs** | £4,000    | £15,000    | £16,000    | £24,000   |
| **Estimated distribution costs** | £30,000 | £50,000 | £50,000 | £30,000 |

| **Savings** | 16,000kg | 20,000kg | 38,000kg | 15,200kg |
| **Material costs / 1M units** | £46,000 | £35,000 | £28,000 | £86,000 |
| **Distribution costs / 1M units** | £70,000 | £50,000 | £850 | £50,000 |
| **Total savings / 1M units** | £116,000 | £85,000 | £28,840 | £136,000 |

Table 13: Possible cost advantages of self-dispense over current packaging types
From Table 13 it can be seen that significant savings are possible in both distribution and packaging costs. In simple terms, the smaller the consumer pack (pack volume / product density related) the greater the potential savings from buying in bulk and using self-dispense units.

For equal volume basis, the shelf width required is similar for current format versus self-dispense if gravity feed bins are used, but bin and scoop can offer higher product density per linear metre. Typically self-dispense requires less shelf depth, allowing potentially more aisles per unit area.

<table>
<thead>
<tr>
<th>Bin volume (litres)</th>
<th>Max. weight (kg)</th>
<th>Height (cm)</th>
<th>Width (cm)</th>
<th>Depth (cm)</th>
</tr>
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<tbody>
<tr>
<td>11</td>
<td>10</td>
<td>46</td>
<td>13</td>
<td>30</td>
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<td>13</td>
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<td>16</td>
<td>69</td>
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<td>30</td>
</tr>
<tr>
<td>45</td>
<td>41</td>
<td>69</td>
<td>23</td>
<td>46</td>
</tr>
</tbody>
</table>

Table 14: Typical SDS gravity feed bin dimensions

Potential exists to improve shelf density utilisation and / or to offer a wider product range (Figure 23 illustrates a potential ‘mixed’ shelf system, where higher volume / fast moving goods are held on the lower tier and slower moving / higher margin / promotional products are held in smaller quantities on the top tier). The higher volume items would usually be put in larger bins to reduce the refill rate to approximately once per day.

Figure 23: A potential shelf layout for self-dispensing

In-store waste

For consumer packs, the packs are usually shipped multiple packs to a shipper which remains in-store and the primary pack is disposed of by the consumer after the product is used. For self-dispense systems, the products will not need to be in high-quality printed packaging, thus for all products supplied in a bulk box the box can be recycled / reused through the same closed loop system as the current shippers. For bulk products delivered in a sack, in many cases the sack will be recyclable.
10.0 Recommended Systems to go to Consumer Trial Stage

Using information from the desktop studies, store visits, retailer interviews and marketing input the initial shortlist was reviewed and only those systems that were acceptable in all areas of investigation were chosen for further investigation. For each system a list of suitable products for dispensing has been considered and, where available, costs of the systems obtained from potential suppliers:

Who?

- Mainstream grocery retailers / supermarkets (eg Tesco, ASDA, Sainsbury’s, Morrisons)
- Pet food outlets (large)

Why?

- Significant cost savings to the retailers;
- Reduction in packaging;
- Reduction in food in the household waste stream;
- Differentiation;
- Freshness / cost / portion control incentives for the consumer; and
- Smaller ecological footprint.

Where?

- Adjacent to / part of fresh produce area – typically the front of the store, near the main entrance – to emphasise the freshness of the product; and
- Bins for products such as coffee beans are best placed in the dedicated coffee aisle adjacent to the pre-packed product.

With?

- Gravity feed bins
  - Dry foods – grains, pulses, pasta, rice, cereals, coffee beans, nuts, baking ingredients, etc;
  - Non-food – detergent powder, bath salts, etc; and
  - Pet foods – biscuits, dry pet foods.
- Grinders
  - Coffee beans;
  - Peanuts and similar nuts; and
  - Spices.
- Limited bin and scoop
  - Food – Fruit and Veg / salads;
  - Non-food – health and beauty – soap, bath salts; and
  - Pet foods.
- Dose / portion control
  - Dry foods – grains, pulses, pasta, rice, cereals, coffee beans, nuts, baking ingredients etc;
  - Non-food – health and beauty – soap, bath salts; and
  - Freshly made sandwiches etc.
How?

- Have a well-defined bulk-dispense area, with its own staffed weighing and labelling area, or the product could be weighed and priced at the checkout in the same way as fresh produce;
- Nutritional information / ‘use by’ date to be displayed on front of bin and reproduced on label (most bins have a location on the front to display such information);
- Information leaflets / recipe ideas to be available near dispensers;
- Adjacent to, or as part of, the bulk-dispense area a stock of pre-packed equivalent products should be available; and
- Area to be kept clean and tidy.

In-store logistics

- A key issue identified in UK store trials and US stores is the handling of stock;
  - Bulk stocks in US are in 25 or 50 lb sacks (11.3 / 22.7 kg);
  - In the UK supplies ideally should be 5-10 kg bags for ease of handling;
  - Stock control is an issue and part-used bags in the warehouse are difficult to control and monitor; and
  - Part-used bags could be stored on purpose-designed shelving above the dispense units, out of risk of reach of the consumer, (need to ensure no contamination). There may also be health and safety issues (manual handling) if stored above head height.

Consumers need to have brand, nutritional, and ‘sell by’ date available – these are best displayed on the front of the dispenser and reproduced on the label.

Take-home packaging

- Simple PE sealable bags in a limited number of different sizes need to be provided adjacent to the dispensers; and
- In-home storage may be an issue for some consumers - there is a belief that pre-packed product will stay fresher longer.

Consumers want to see equivalent pre-packed goods for sale alongside, or in the same aisle as, the self-dispense systems.
11.0 Cost of Dispense Systems

There are two US bin suppliers who have supplied gravity feed bins to the UK:
Trade Fixtures (Agent is Martek Contracts Ltd, Surrey)
BestBins (Sold direct into UK)

There are several UK suppliers of confectionery gravity feed bins and bin and scoop-type fixtures - the list below is not exhaustive:
EML Ltd, Basingstoke
Acrylic Design, Watford
GPX Group, Borehamwood
Luminate Waycon, Ivybridge
Hurst Green Plastics, Whalley
Sunlight Plastics, Waterlooville

Typical gravity feed bin costs (based on quotes from the two US suppliers):
7.3 kg / 8.7 litre £67
13.5 kg / 11.4 litre £68
10.9 kg / 13.2 litre £73
16.3 kg / 18.9 litre £75
45.4 litre £110

Typical bin & scoop costs:
11.4 litre £38
18.9 litre £40
45.4 litre (wheeled) £168

Display aisle costs:
50 gravity feed bins ~£3,500 + installation
100 gravity feed bins ~£7,000 + installation
50 gravity feed bins + 50 bin & scoops ~ £5,500 + installation

Installation costs will vary store to store, depending on the extent of the work required and can be as low as a few thousand pounds to as high as £60,000 if all new flooring, lighting and shelving are required for a large installation.

In-store footprint:
To sell similar quantities of bulk foods and pre-packed goods typically requires a similar footprint if gravity feed bins are used, but bin and scoop and liquid dispense can have a smaller footprint if large bins / dispensers are used (typically only used for high-volume items). The footprint for gravity feed bins is obviously affected by the size of the bin. A larger bin takes up more shelf space, but requires less frequent filling, while a small bin requires less space but may need more frequent filling. The decision on what bin to use depends very much on the retailer's needs to balance floor space against frequency of refill. This is no different to pre-packed goods, where the quantity on display is governed as much by sales volume (need to restock shelf) as by the need to offer the consumer a wide range of products.
12.0 The Route Forward in the UK

12.1 History / current situation

Self-dispense is well established in the US, Australia, New Zealand and parts of Europe. This is mainly in health food categories, but some non-food systems also exist in these markets.

In the UK, self-dispense was popular in the 1980s through stores like ‘Weigh & Save’, but with changing social attitude (increasing trend towards premium rather than low-cost products) and hygiene concerns, it is now limited mainly to regional health food stores (London and Bristol being the key regions).

12.2 Labelling issues

Currently in the UK only pre-packed foods require labelling. Foods that are sold loose, such as self-dispensed foods, do not require labels. However, most US and Australian stores surveyed provided nutritional information on leaflets / brochures / display screens in the vicinity of the dispensers. A number of the larger stores had brochures with nutritional information and recipe ideas available near the dispensers. Normally these were free, but some came at a nominal cost. In the US store staff said such information was important to encourage people to buy the products from the dispensers. Where branded goods were sold via a self-dispense system, the branding was usually clearly visible on the dispensers. Much emphasis in some US stores was on local produce, emphasising the ‘freshness’ of the product.

In the US, in most stores self-dispense was integrated with or adjacent to the fresh produce area and as with fresh produce the dispensers did not show ‘use by’ or ‘best before’ dates. There is no legal requirement in the UK for loose produce to have a ‘use by’ date. Allergy warnings (eg, contains nuts, etc) are not legally required for products sold loose but were often on the dispensers to aid the consumer.

All of the dispensers observed in the US, Australia, New Zealand and the UK were labelled with the name of the product and price, and most had a bin number or similar identifier which the consumer wrote on to the sealing tag for the bag so that the produce could be identified and correctly priced at the checkout.

(A guidance note on the labelling of sweets in self-dispense bins from Nottingham County Council is given in Appendix 2 for information.)

12.3 Potential routes forward in the UK market

Zoning
If self-dispense is confined to a specific area in store (a zone), advertising in-store can direct people to that zone. The advertising could target specific groups of individuals, such as price conscious, health conscious, environmentally aware, or it could promote other aspects of self-dispense such as portion control, freshness, etc.

Focusing on one or two target groups (these may vary region to region, store to store) self-dispense could become a lifestyle choice for that group. Once established it is easy to transfer acceptability across other categories.

Cost
Self-dispense must offer a tangible / significant cost benefit to the consumer to meet consumer expectations. This can be achieved due to the cost savings achievable to the retailer from using self-dispense. This will attract buy-in on value basis for many consumers; other consumers will appreciate the ability to upgrade to a premium product at no cost. Typically 20-60% was seen in the US, Australia and New Zealand.

Environmental
Self-dispense should give perceived, if not real, environmental benefit through both reduced packaging and reduced household waste. With the facility for portion control, there is the benefit of reduced wastage arising from not purchasing more than required.

Convenience
For any retail system to be successful it must be easy to use, hygienic and offer benefit to the consumer. There is an additional benefit that for most self-dispensed products the take-home packaging will be a simple, easy-to-open bag, not a pack that is difficult to open.
Improve desirability
To improve the desirability of self-dispense there is a need to increase the ‘image’ of self-dispense to overcome the historical perception of ‘cheap and nasty’ and unhygienic. One method seen in the US and New Zealand is the inclusion of branded goods, which have the same brand values as their pre-packed equivalents.

Communication
To build consumer confidence in self-dispense there is a need to raise consumer awareness of the issues and create an atmosphere of consumer responsibility / ownership. This can be achieved in part by promoting freshness and similar desirables.

Grocery self-dispense location
From the consumer research the preferred location was split between adjacent to the fresh produce (fruit and vegetables) section or a series of small displays of dispensers selling the produce in the same location as the pre-packed goods. In the US in particular, the self-dispense section was a separate zone adjacent to, and managed by, fresh produce staff. It also needs to provide a premium image and be a pleasure to use.

Weighing / labelling
One option is to create a weighing and labelling area within the self-dispense zone with staff who can help / advise customers and ensure all products are correctly labelled prior to arrival at checkout. This can also provide an opportunity to re-dispense if the quantity is incorrect. Alternatively, the consumer can label the bag with the bin number and it will be weighed and priced at the checkout.

Hygiene
Use gravity feed / dose control bins to avoid contamination as these prevent the consumer handling the residual produce. The area must be kept clean and dry to promote the hygiene standards of the store.

Current opportunity
The success of the WholeFoods and Wild Oats chains is spreading the use of self-dispense to conventional supermarkets in the US. Self-dispense is also well established in Australia / New Zealand. WholeFoods are now established in London and Bristol in the UK through the purchase of the Fresh & Wild chain. A new large store in London is planned for 2007. Thus the use of self-dispense is gaining a foothold in the UK market again – though currently mostly in small, gourmet stores.

12.4 Potential Self-Dispense Zones
Examples of how this could be applied in the UK are shown in Figures 23 to 29 as well as potential store layouts in Figure 30.

The WRAP Retail Innovation team works with retailers and their supply chains to reduce the amount of packaging and food that households throw away. For more information visit our website at www.wrap.org.uk/retail or contact the Retail Team at WRAP on 01295 819686 or email retail@wrap.org.uk.
Figure 24: Self-dispensing – freshly ground coffee

**Freshly ground coffee**

- **Benefits**
  - Freshly ground coffee, buy as little or as much as you need
  - Personalise your grind
  - Compare the price to mainstream coffees
  - Foil bags for freshness
  - Try something new
  - Smells of fresh-ground coffee
  - Whole beans available.

- **Operation**
  1. Select a coffee, read the product information
  2. Turn the dial to personalise your grind or dispense the whole bean
  3. Push and hold the button in to dispense as little or as much coffee as required
  4. Remove the bag from the trigger loaded dispenser
  5. Print the barcode label to match your coffee and seal the bag
  6. Product is weighed and priced at the checkout.

- **Supermarket self-dispensing | fresh coffee bar**

- **Main signage / promotional panel**

- **Coffee bean/blend info**

- **Ready to dispense bags**

- **Choices of grind**

- **Pre-packed, priced coffee from eco-brand**
Figure 25: Self-dispensing – fresh ground nuts

Fresh ground nuts free from preservatives and additives

- Control your portion size manually using the push button
- Personalise your grind to smooth, medium or crunchy
- Mix your nuts for a unique combination
- Lightweight packs in a variety of sizes.

OPERATION
1. Select your container size and nut type
2. Set the grind type
3. Push the button to activate the grinding
4. Attach the lid and label that include barcode, nutritional information and use by date
5. The product is weighed and priced at checkout
Figure 26: Self-dispensing – salad bar

**Fresh and green salad bar**

**BENEFITS**
- Pick and Mix foods according to price
- Fresh chilled salad
- Customise your salad with a variety of toppings
- Overflow trays capture any spillage
- Circular system fits in existing fruit and veg section
- Spring loaded self-closing lids
- Circular system maximises access

Supermarket self-dispensing | fresh and green salad bar

**OPERATION**
1. Select salad using the tongs and put into a bag
2. Weigh on scales to get overall cost estimate
3. Remove sticky label with barcode from salad dispenser and seal bag
4. Select salad toppers using the different sized bags with tongs
5. Remove matching sticky label to match product
6. Seal the product with sticky label including barcodes
7. Product accurately weighed at checkout

Self-Dispensing Systems - Commercial Feasibility Study 39
Dispense a variety of dry goods, customise the size

**BENEFITS**
- Large variety of dry goods
- Dispense as little or as much as required
- Weigh your product as you go for quantity control
- Choose from pre-packed or self-dispensed products
- Spring loaded drawers automatically close
- Variety of bag sizes
- New foods featured every week
- Overflow tray on counter and at ground level
- Variety of different sized gravity feed hoppers

**OPERATION**
1. View the product of the week
2. Read the detailed product information
3. Select your product and dispense into the appropriately sized bag
4. Weigh and label using the product selection keys
5. Product information including price and use-by-date label doubles as bag closure
Figure 28: Self-dispensing – chilled soup

Fresh chilled soup with controlled dosing

BENEFITS
- Fresh chilled soup in different sized packs
- Competitive pricing
- Reduced packaging
- Pre-dispensed refrigerated soups
- Microwave available for hot food solutions
- Large bench top space for easy dispensing
- Large container designed to fit comfortably in fridge door

OPERATION
1. Select your soup pack size
2. Eye-level dispensers indicate product quantity
3. Choose your soup flavour
4. Push the portion size button and dispense soup
5. Attach the lid
6. Push the coloured button to print product brand, best by date, allergy and nutritional information, price, cooking instructions and barcode.

Supermarket self-dispensing | Kitchen garden soup

Self-Dispensing Systems – Commercial Feasibility Study 41
Figure 29: Self-dispensing - beauty bar

The touch screen and controlled dosing allows for the same customised product every time.

**Benefits**
- Customise ingredients to meet individual face and body needs
- Lightweight containers in two sizes
- Reusable, refillable pouches reduce costs to the consumer
- More products per square foot in store
- Branded labels illustrate product type and instructions for use
- Additives and fragrances separate face and body base products
- Storage cupboards hold excess dispensing systems
- Controlled dosing for regulated outcomes
- Body beautiful: Shower gel, body moisturiser, liquid soap and shampoo
- Flawless: Moisturiser, cleanser toner and makeup remover

**Operation**
1. Browse the touch screen menu for inspirational beauty tips
2. Select your needs through prompts on screen
3. Use the touch pad to activate your chosen product
4. Select the pack size and format to meet your needs
5. Dispense the products using the activation button, your dosing is controlled
6. Attach the information label including product contents,
price, barcode and instructions for use
7. Proceed to checkout.
Figure 30: Self dispensing - dry pet food

Select different quantities and flavours to give your pet a varied dry diet

**Benefits**
- Variety of fresh dry foods
- Customise quantities for individual diets
- Lightweight bags
- Competitive prices
- Small quantities allow for pet product sampling
- Piler acts as branding point and also divides car and dog food types
- Value bulk foods held below in filling bins
- Tinning bin seals shut to minimise smells
- Overflow tray to capture any spillage

**Operation**
1. Use level dispensers. Check petry feed bins containing premium meals. Tilting bins contain value foods.
2. Take a paper bag, 3 different sizes
3. Consumer uses plastic trowels to fill their paper bags
4. Fill with same type of product or pick'n'mix
5. Press button which matches food type or pick'n'mix
6. A printed, sticky label is presented with nutritional information, best of date, price and brand printed on it
7. Use the label to seal the bag
8. Bag scanned at checkout.

Supermarket self-dispensing | Pet pick'n'mix
Figure 31: Potential floor layout
## WRAP – SELF-DISPENSE SYSTEMS EVALUATION MATRIX - SUMMARY TABLE

<table>
<thead>
<tr>
<th>Concept</th>
<th>Market Application</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grocery – Food</td>
</tr>
<tr>
<td></td>
<td>Grocery - Non-Food</td>
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<tr>
<td></td>
<td>Health &amp; Beauty</td>
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<td></td>
<td>DIY</td>
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<tr>
<td>Bin &amp; Scoop</td>
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</tr>
<tr>
<td><strong>Suitability:</strong></td>
<td>Fair</td>
</tr>
<tr>
<td><strong>Pros:</strong></td>
<td>Simple, versatile, easy-to-use</td>
</tr>
<tr>
<td></td>
<td>low cost system</td>
</tr>
<tr>
<td><strong>Cons:</strong></td>
<td>Risk of product contamination; seen as low value</td>
</tr>
<tr>
<td>Gravity Feed Bins</td>
<td></td>
</tr>
<tr>
<td><strong>Suitability:</strong></td>
<td>Good</td>
</tr>
<tr>
<td><strong>Pros:</strong></td>
<td>Simple, easy-to-use low cost system</td>
</tr>
<tr>
<td></td>
<td>Good hygiene; some product security</td>
</tr>
<tr>
<td><strong>Cons:</strong></td>
<td>Not suitable for sticky or large items. One-handed use means only small quantities dispensed</td>
</tr>
<tr>
<td>Liquid Dispense</td>
<td></td>
</tr>
<tr>
<td><strong>Suitability:</strong></td>
<td>Good</td>
</tr>
<tr>
<td><strong>Pros:</strong></td>
<td>Simple, versatile, easy-to-use</td>
</tr>
<tr>
<td></td>
<td>low cost system</td>
</tr>
<tr>
<td><strong>Cons:</strong></td>
<td>Only suitable for liquid products, can be messy</td>
</tr>
<tr>
<td>Dose / Portion Control</td>
<td></td>
</tr>
<tr>
<td><strong>Suitability:</strong></td>
<td>Fair</td>
</tr>
<tr>
<td><strong>Pros:</strong></td>
<td>Moderately simple, easy-to-use</td>
</tr>
<tr>
<td></td>
<td>system. Good hygiene; some product security</td>
</tr>
</tbody>
</table>

### Pros:
- **Bin & Scoop**: Simple, versatile, easy-to-use low cost system
- **Gravity Feed Bins**: Simple, easy-to-use low cost system. Good hygiene; some product security
- **Liquid Dispense**: Simple, versatile, easy-to-use low cost system
- **Dose / Portion Control**: Moderately simple, easy-to-use system. Good hygiene; some product security
<table>
<thead>
<tr>
<th>Concept</th>
<th>Market Application</th>
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<tr>
<td></td>
<td>Grocery - Food</td>
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<tr>
<td><strong>Blending</strong></td>
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<tr>
<td><strong>Cons:</strong></td>
<td>Simple bin systems are moderate cost, more complex systems can be expensive</td>
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<tr>
<td><strong>Pros:</strong></td>
<td>Provides added value, increases consumer choice</td>
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<tr>
<td><strong>Cons:</strong></td>
<td>Expensive, can be daunting to operate for some consumers</td>
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<tr>
<td><strong>Suitability:</strong></td>
<td>Fair</td>
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<tr>
<td><strong>Grinding</strong></td>
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<tr>
<td><strong>Pros:</strong></td>
<td>Provides added value, increases consumer choice</td>
</tr>
<tr>
<td><strong>Cons:</strong></td>
<td>Expensive, limited use</td>
</tr>
<tr>
<td><strong>Suitability:</strong></td>
<td>Good</td>
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</tbody>
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Appendix 2

Guidance Note on Labelling of Sweets

If you sell sweets then the Food Labelling Regulations 1996 apply to you.

This leaflet covers the labelling of sweets which are on sale either:

- loose or unwrapped
- on pick ‘n’ mix sale
- prepacked by you on the premises
- prepacked by you for sale from your market stall or mobile vehicle.

It does not cover:

- sweets prepacked for sale elsewhere
- chocolates and chocolate products to which special labelling requirements apply.

What labelling is required?

The following information must be given:

- The true name of the sweets

Names like ‘cherry lips’ or ‘flying saucers’ do not properly describe the true nature of the food and should be accompanied with a proper description i.e. cherry flavour gum sweets or sherbert filled wafers.

- If the sweets contain any of the following types of additives, the category name for those additives must be stated:
  - Antioxidants
  - Sweeteners
  - Colours
  - Flavour Enhancers
  - Flavourings
  - Preservatives

For this purpose it is sufficient to state the category of additive without specifying its full name or ‘E’ number e.g. ‘contains colour and flavouring’.

A general notice is not acceptable for additive categories they must be given for each individual type of sweet.

Please turn over...
How must the information be given?
When sold to the consumer the required information must be marked:
- on a label attached to the food, OR
- on the front of each individual pick ‘n’ mix bin.

Sweets sold loose from boxes or jars will usually have been marked with this information by the manufacturer. This is sufficient, provided it can be easily read from the customer’s side of the counter.

The responsibility for labelling rests with you the retailer and you may have to seek the relevant information from your supplier. Details may already have been given in invoices and similar documents or on an outer package.

What other pitfalls exist?
It is important to realise that the words ‘flavoured’ and ‘flavour’ have different meanings. For example, orange flavoured sweets derive their flavour from real oranges, but orange flavour sweets are synthetically flavoured.

Particular care must be taken when describing products as ‘chocolate’ or as containing chocolate. If the product has only the flavour of chocolate and is not made from chocolate then it must be made clear in the name e.g. ‘Chocolate Flavour Easter Egg’, and ‘Peanuts with Chocolate Flavour Coating’.

The word ‘choc’ must only be used with products that contain chocolate.

Penalties
Failure to comply with these requirements is a criminal offence.
The maximum penalty on conviction in a Magistrates Court is a fine of £5,000.

This leaflet is a brief summary of the law regarding the labelling of sweets. It is not an authoritative document on the law and is only intended for guidance. For further details please contact the Trading Standards Service.

Contacting us
email mansfield.tss@nottsc.gov.uk
phone 01623 452005
fax 01623 452059
post Trading Standards Service, 100 Chesterfield Road South, Mansfield, Nottinghamshire NG19 7AQ
internet www.notttinghamshire.gov.uk

This information can be made available in other languages and formats.
For further information please contact 0115 977 4972.

Updated March 2004 / 60
Appendix 3

From The Spring 2005 Issue of Natural Grocery Buyer

Bulk up on natural dry grocery sales

The scoop on creating a profitable bulk section

Jennifer Alsever

Supermarkets nationwide are pulling out the barrels and scoops and setting up bulk sections, with hopes of luring shoppers from natural foods competitors.

Bulk sections, with their jars and bins of honey, nuts, raisins, rolled oats and pasta, have for years been a mainstay of natural foods stores, where they project the image of freshness and healthier products.

Consumers like buying from bulk bins because they can control the quantity they buy without paying for packaging or expensive marketing. They can play with different ingredients, trying a little of something to see whether they like it, and dispensing goods into their own containers to save the hassle of repacking them at home.

But some retailers, put off by high rates of pilferage on expensive snack items, are attempting to move away from bulk, says Robin Robinson, vice president of marketing at nSpired Natural Foods in San Leandro, Calif. “Shrinkage can be 20 percent to 25 percent on a ready-to-eat item, and it’s expensive stuff.”

Supermarkets for years also resisted selling bulk products because of fears of bugs and dirty hands inside bins, lawsuits resulting from people who might slip on spillage, and the time-consuming job of keeping bins clean and products fresh.

That’s starting to change. Better bins are now available that use pull levers for dispensing products, keeping hands out and pilferage to a minimum. The bins are also easier to clean, stronger than older acrylic containers, and made of interchangeable parts, so broken bins can be fixed instead of thrown away.

Plus, supermarkets are taking notice of bulk’s huge profit margins—which can be as high as 50 percent on some items—and the opportunity to sell more of the same product in bulk than in packages, says Bart McKnight, a sales associate with Trade Fixtures / New Leaf Designs, a Little Rock, Ark., company that builds bins for natural products, candy and coffee.

“I saw a lady at one store buying cashews, and she clearly bought three pounds from a bin. At $5.99 a pound, she spent $18 on cashews,” McKnight says. “Most people are not going to go to a shelf and rake off nine to 10 containers of cashews.”

Chains such as Safeway, King Soopers, Fred Meyer, Hannaford, Raley’s and A&P now offer bulk sections in stores that cater to a more upscale clientele.

Market statistics for bulk items are tough to come by. San Francisco-based SPINS, for instance, relies on UPCs to tally sales and doesn’t track any bulk items.

But bulk-packaged products now make up a significant part of sales at Guayaki Sustainable Rainforest Products Inc., in San Luis Obispo, Calif. The company, which makes maté tea, a caffeinated healthy drink, is growing at a 30 percent clip, and much of the new growth comes from selling loose maté in bulk bins. “We’re getting more calls from supermarkets,” says David Karr, Guayaki co-founder.
BestBins Inc., a maker of bulk bins in Chaska, Minn., is also expanding quickly, says Vice President Kyle McDonough. “It’s growing like wildfire. Grocery stores are seeing the success of Wild Oats and Whole Foods.”

Proprietary research published last year in The Natural Foods Merchandiser showed that if the bulk section were removed from their favorite store, more than 60 percent of naturals shoppers would go elsewhere.

“In the past, supermarkets didn’t have to carry [bulk foods],” says McKnight. “Now consumers are starting to expect it. If you want to show a commitment to natural foods, it’s probably something you should do.”

So how does a retailer go bulk? We asked vendors for advice:

- **Keep it in produce.** If you don’t have a “store-within-a-store” strategy for natural products, then treat bulk foods as perishables and put them inside the produce department. Produce workers can easily monitor the section and fill up and clean bins as part of their regular prepping and stocking duties.

- **Understand your customers.** Lower-income and middle-income customers aren’t big buyers of bulk products. But if there’s a Whole Foods down the street or a gourmet grocery around the corner, bulk might be a good idea. Price isn’t always most important to bulk buyers, according to research by Frontier Natural Products Co-op, which conducted focus groups of bulk customers. Freshness was the top priority for those customers.

- **Update your offering regularly.** Ask your suppliers what’s selling in bulk at wholesale and in other stores. Look at hot sellers in packaged grocery, and see if they might be available in bulk. Three or four turns per bin a month is a good flow of product. If a bin gets two or fewer turns a month, look at other products, McKnight says.

- **Keep it fresh.** Use 5-pound bags of product to stock bins, rather than buying 50-pound bags, to avoid a backlog of unsold, stale product.

- **Design an appealing, easy-to-use section that maximizes the SKU count.** McKnight recommends creating a bulk section that’s 12 feet to 16 feet and that contains 75 to 100+ SKUs. “It gives a good visual appeal, [and] it doesn’t have the feeling of being an afterthought.”

- **Make it easy to shop.** Keep the set clean; have enough supplies and make them easy to find; make sure the bins are well-filled and properly labeled. Employees should be knowledgeable and ready to answer questions.

- **Offer recipe cards for premixed foods such as tabouli or pancake mix.** The manufacturer will usually supply these.

- **Put instructions for use on every single bin unless you truly enjoy sweeping up.** Ditto for economizing on the really cheap plastic bags—the ones that split when the pinto beans hit them.

Jennifer Alsever is a business reporter in Denver. Lisa Everitt contributed to this story.
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