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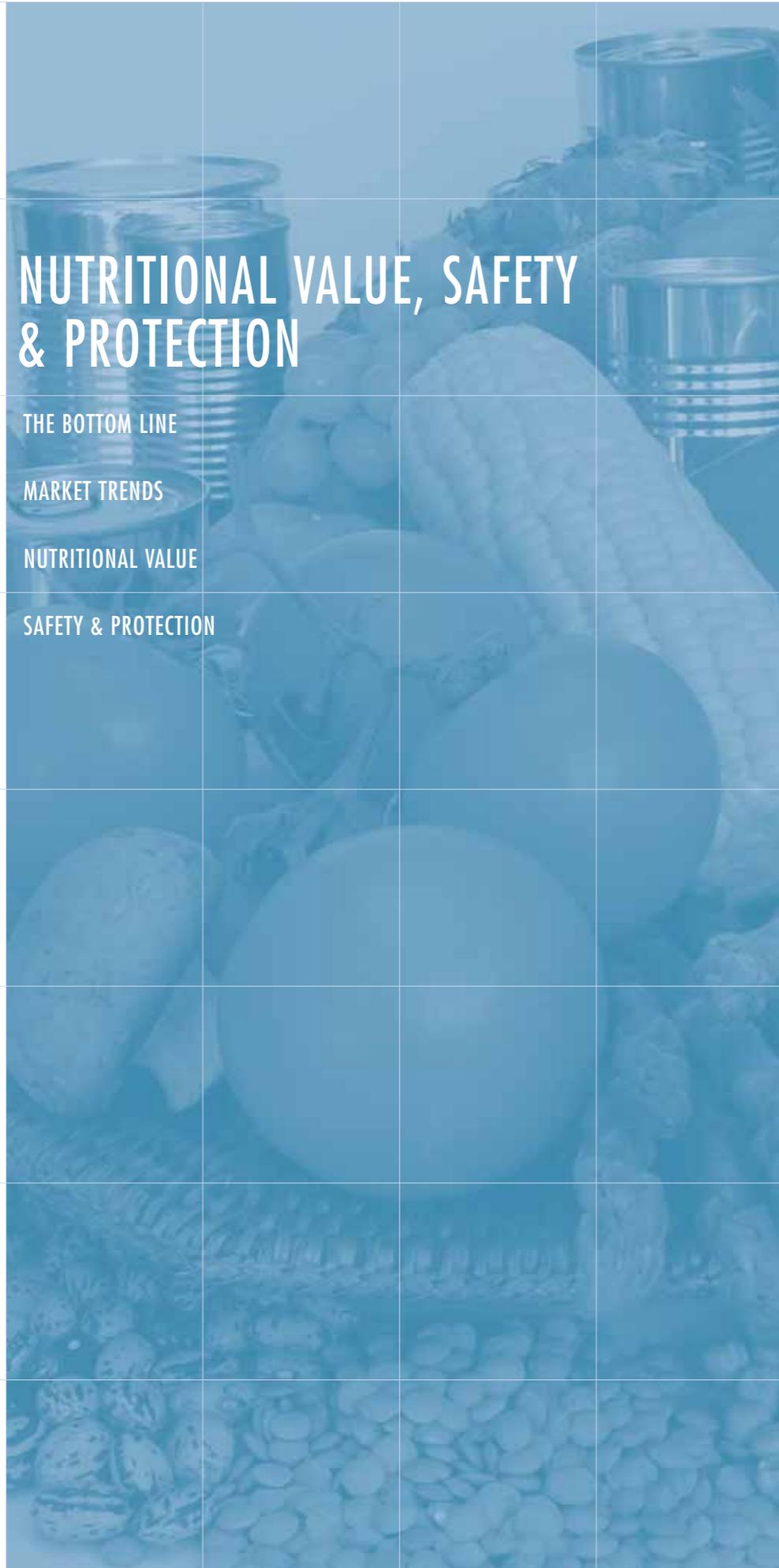
## NUTRITIONAL VALUE, SAFETY & PROTECTION

THE BOTTOM LINE

MARKET TRENDS

NUTRITIONAL VALUE

SAFETY & PROTECTION



1. CONVENIENCE

2. SHELF DIFFERENTIATION

3. NUTRITIONAL VALUES, SAFETY & PROTECTION

4. SUSTAINABILITY

1. CONVENIENCE

2. SHELF DIFFERENTIATION

3. NUTRITIONAL VALUES, SAFETY & PROTECTION

4. SUSTAINABILITY

# > THE BOTTOM LINE



## **Consumers today are more aware of health concerns**

Consumers who value their health are the driving force for growing concerns about well-being and nutrition. Food consciousness and the importance of maintaining a good diet for prolonged health are major concerns for them today. As consumers become more informed about nutritional issues, they are demanding more varied and healthier convenience foods, snacks and drinks.

## **Canned foods are as healthy as fresh foods**

Canned food is often overlooked as a convenient source of nutrition. In fact, it is packed with nutrients and is an easy way to add vitamins and minerals into one's diet. This is because the food is packed without delay when flavour, vitamins and minerals are at their peak. In addition the canning process preserves the food and prevents nutrient loss over time.

## **No additives or preserving agents**

Canning is one of the best studied forms of food preservation. No additives are needed to preserve canned foods. The sterilisation process occurs inside the pack as the food is uniformly heated and therefore no preservatives are used or needed.

Steel packaging enables the rapid transfer of heat to the food and allows it to penetrate to the centre of the product being processed. Canned foods are also the safest form of nutrition because the methods used are designed to guarantee microbiological safety, as well as nutritional benefits and a fresh sensory quality.

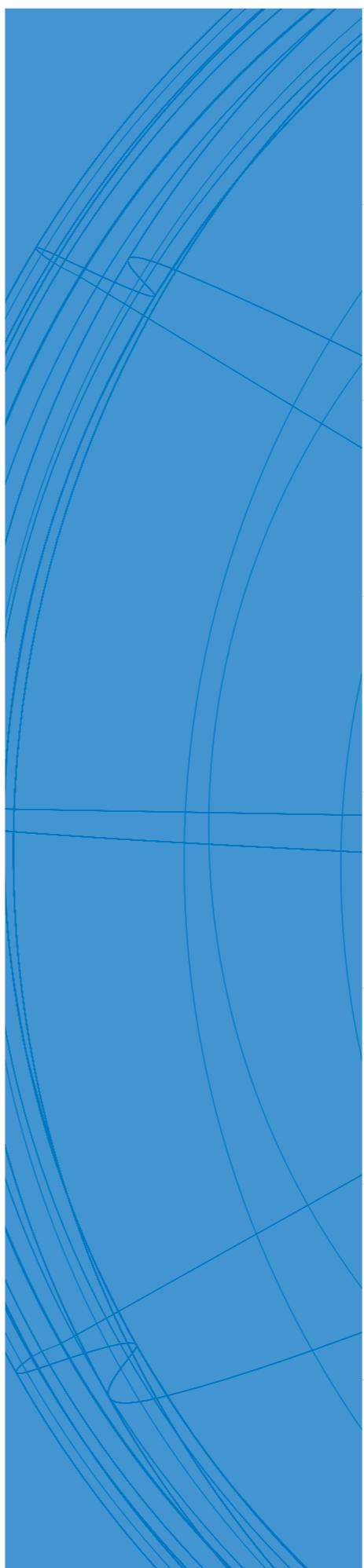
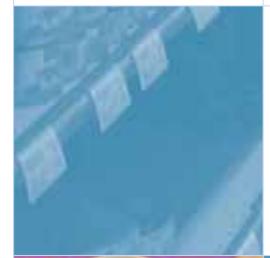
## **Consumers trust the can**

The steel food can - a high performing packaging solution - is still, more than ever, associated with trust in the mind of the consumer. A recent survey confirms that European consumers rate the metal pack foremost on all protective qualities - it: 'protects the content well' and 'is tamper proof'. Steel packaging is unrivalled when it comes to protecting the packed content and its resistance parameters (to crushing, perforation, denting), are considered highest in comparison with alternative materials.

## **Steel packaging offers excellent traceability and unrivalled barrier properties**

Steel packaging has an excellent traceability record. Quality management systems implemented in the steel industry and during can manufacture enable fast and detailed upstream and downstream traceability of steel packaging up to the production lot. In the case of product recalls, this is an asset for brand owners and retailers since it allows to target with greater precision the quantities of products to be recalled and the response time needed.

Moreover, steel packaging is the only container that is completely lightproof and oxygen tight, offering excellent barrier properties for a wide range of products.



# > MARKET TRENDS

*"Today, consumers know more about nutrition than ever before and are using this information to choose foods and beverages to meet their health goals."*

*Alison Kretser, Senior Director of Scientific and Nutrition Policy at the Grocery Manufacturers Association (GMA)*



## Consumer's increased focus on health and nutrition

Modern consumers are increasing their focus on their personal well-being and expect more from the products they consume to remain healthy and even to boost their health through added functionality. This global trend could have a massive impact on consumption, for example Marketing Magazine<sup>1</sup> reported, "a 1% shift toward healthier food could amount to US\$1.5 billion in potential food revenue".

There is an array of evidence which highlights consumers' growing health and guilt concerns, and their increased knowledge of nutritional issues. As consumers become more aware of nutrition they demand more varied and healthier convenience foods, snacks and drinks.

## Greater food consciousness and self-reliance

Greater food consciousness and self-reliance to manage their health through diet have become apparent over the last 10 years as consumers become more knowledgeable and proactive in order to maintain good health. Food consciousness and the importance of maintaining a satisfactory diet for health reasons has become a major concern for them.

Highlighting the importance consumers attach to health from 'within', Datamonitor<sup>2</sup> found that more people (66%) had taken active steps to eat more healthier food in 2006 than they had in 2005.

## Seeking convenience and healthy on-the-go products

The convenience and health mega-trends may no longer be targeted in isolation because consumers are now demanding both. Results from Datamonitor<sup>3</sup> showed that brand owners are very much aware of this trend with 89% of US food marketers and 65% of European industry respondents expressing the view that "offering health benefits for on-the-go products" will be of major and significant importance in the next five years. Another Datamonitor<sup>4</sup> report identified that the number of healthy on-the-go eating opportunities in Europe and the US is set to increase from 74 billion in 2004 to 85 billion in 2009. This is reflected by increased media attention, political pressure and the consumer's need to become more health-conscious. This scenario will improve further as manufacturers and retailers seek to overcome the barriers to healthy on-the-go eating and drinking.

The results of the survey indicate that people place a higher importance on improving their diet and have a greater understanding of the need to make improvements, even if they are not currently doing so.

### Percentage of consumers who have taken active steps to improve their health through diet in recent years



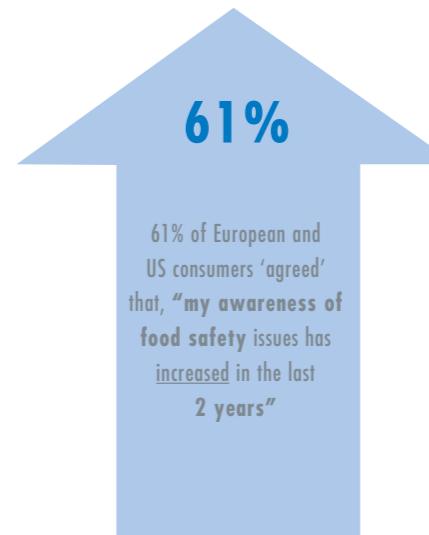
## Consumers' awareness of food safety increases as their trust in brands decreases

Recent surveys on consumer awareness, the perception of brands and safety issues in Europe and the USA reveal that due to food safety crises and subsequent product recalls, consumer awareness of food safety issues has increased considerably. Indeed, a Datamonitor<sup>5</sup> survey revealed that 61% of European and US consumers agree that their awareness of food safety issues has increased in the last 2 years. At the same time, an industry opinion survey conducted by the same organisation confirmed that the consumer's trust in brands has decreased over the same period.

Furthermore, the survey identified a high level of consensus that consumers' product safety fears may be accentuated by a perceived lack of transparency about how products transit from source to shelf.

Therefore, when "trust" becomes such a highly valued element for consumers and brands alike, it is legitimate to ask oneself how packaging can help to increase the relationship of trust between the consumer and brand owners in the food and drinks sector, and to take into account the fact that steel packaging performs better than other packaging solutions

## Consumers' 'unconscious' ranking of brand differentiating factors



64% of respondents to our industry opinion survey 'agreed' that "consumers' trust in brands has decreased in the last 2 years"



Source: Datamonitor - Dec 2005



# NUTRITIONAL VALUE

*"Whoever eats food from the can is doing his body a favour. He is taking in valuable nutrients and vitamins. The can is not only for individuals who are short of time, but is also a highly recommendable alternative to fresh products for health-conscious people."*

Professor Dr. Reinhard Hambitzer,  
Faculty of Ecotrophology at the Technical School in Niederrhein

## Essentials of canned food

With today's manufacturing know-how, canned foods have made their mark in a world which is more and more sensitive to security, health and nutrition.

Sophisticated food processing technologies and efficient thermic transfer during the shortest possible time frame ensures a precise control of retorting temperatures (sterilisation) and maintains consistent high standards of quality to meet today's critical consumer demands. Furthermore, canned foods are protected from light and oxidisation, and when stored at room temperatures less than 20°C, preserve their vitamins for at least 2 years without high energy-consuming refrigeration.

## Studies confirm canned foods are as healthy as fresh foods

The current trend favours fresh, organic foods for nutrition and health, but in fact, fresh vegetables are not necessarily more nutritious than canned food. A study by the University of Illinois Department of Food Science and Human Nutrition found that canned fruits and vegetables provide as much dietary fibre and vitamins as the same corresponding fresh foods, and in some cases, even more.

Fresh foods begin losing their vitamins as soon as they are picked and are often stored in warehouses, or are in transit, for as long as two weeks before they reach the market and then wait even longer to be purchased. Fresh fruits and some vegetables are harvested before they are even ripe and depend upon this time lapse to be ready to eat. Canned foods, on the contrary, are harvested at their peak of ripeness and are processed from the source within hours (in most cases less than 2 hours), thus preserving more vitamins than their fresh counterparts.



## Extra nutritional value

The nutritional and health value of canned foods has been largely underestimated for many years and even today, the average consumer believes that the essential elements in food are lost in the canning process. In reality, canned food maintains high nutritional values.

That's because canned foods preserve high levels of nutrients and vitamins, often more than fresh food, chilled, or frozen equivalents. The canning process actually captures and 'locks in' nutrients, which would otherwise be lost.

The quality of food which is destined for can processing is strictly controlled to maintain freshness. More so, in fact, than the majority of 'fresh' foods which are stocked and supplied using various distribution channels. The lapse of time between the harvesting, transport and processing of canned foods is extremely short and is one of the principal reasons why they maintain such a high nutritional value.

*"The 3 main assets for our products packed in steel cans are good protection, preservation of minerals and of most vitamins, as well as the availability of products throughout all seasons."*

Christophe Chaumette  
Marketing Director - CECAB Group

## Vitamins galore

Proteins and lipids remain intact in canned foods. Vitamins, which are often sensitive to heat, light and oxidisation are safeguarded. The vitamin content of canned vegetables is therefore higher than that of fresh vegetables that have been cooked for too long, or stored for several days in the refrigerator.

It is a well-known fact that asparagus can lose up to 40% of its vitamin C within just 24 hours of storage, spinach 30% and green beans 20%. Studies at the Cornell University of Ithaka, New York, have shown that with the short, high temperature heating used by the canner in modern food production processes, the nutritional value is in fact improved. In the case of tomatoes and corn on the cob, lycopene - a secondary plant material - are released at high temperature during food processing. Lycopene play an important role in our metabolism, as an antioxidant against carcinogenic free radicals.

The vitamin C loss is considerably less than in normal home cooking and an independent study (see below) from the Faculty of Ecotrophology in Mönchengladbach (Germany) shows that the A, B and E group vitamins, including folic acid, are preserved in canned foods together with carbohydrates, proteins and fatty acids.

Moreover, a report conducted in 2005 by TNO shows that the carotenoid content (essential for normal growth, the development of immune system functions and vision), found in carrots packed in steel cans is much higher, reaching a factor of 12 against 7.8 for fresh carrots.



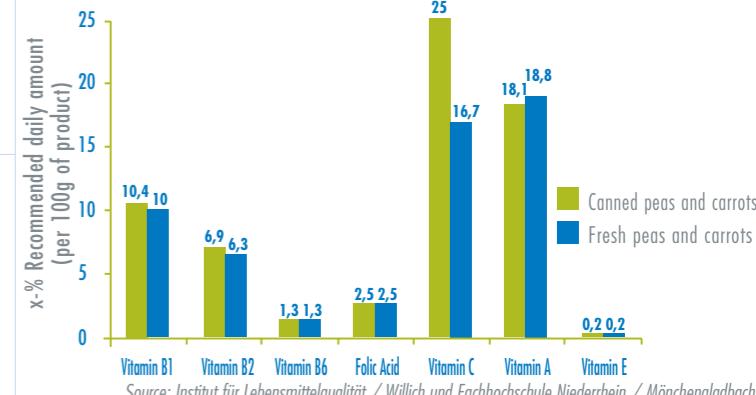
## No need for additives & preserving agents

Contrary to popular belief, canned fruits and vegetables use no chemical preservatives but are preserved via controlled heat sterilisation.

Canning is one of the best studied forms of food preservation. The sterilisation process occurs inside the can as the food is uniformly heated. No additives are needed to preserve them.

Steel packs also transfer the heat to the food more rapidly and allow the penetration of heat to the centre of the product. This means that canned foods are the safest form of food because the conditions used are designed to preserve their microbiological safety, as well as nutritional and sensory qualities.

## Canned products provide similar vitamin content to freshly prepared dishes



|  |   |  |
|--|---|--|
|  | <p><i>"Canned ingredients are not only effortless substitutions for their fresh counterparts in savoury cooking, but are often the very essence of flavour itself. Always remember that canned food is just cooked fresh food - a canned pear is a poached pear, a canned tomato is a blanched tomato, and canned tuna is simply steamed tuna. Where would Caesar Salad be without a can of anchovies, or Pasta Puttanesca without canned olives and tomatoes?"</i></p> <p>Chef Andrew Schloss - Author of numerous cookery books<br/>President of Culinary Generations, Inc.<br/>Frequent guest on radio and television programmes throughout the USA.</p>   |    |
|  | <h3>Reduced salt for good health</h3> <p>When salt is added to canned food today, it is only for flavour and can be eliminated without compromising food safety.</p> <p>The salt content in commercially canned foods has been significantly reduced, up to 40% compared to former canning methods. Due to advances in technology, many canned products are preserved only in water rather than brine, and fruit juice rather than syrup, which also contribute to less sugar and salt content.</p> <p>For those consumers who are more sensitive to salt, many canned products are increasingly available in low-salt and even no-salt alternatives, as more and more brand owners launch reduced salt and sugar varieties of canned products.</p> |  |
|  |   | <h3>Intelligent and savoury cooking</h3> <p>More and more chefs and cooks now claim that one can do much more with canned food than just use it as a "last resort". Dagmar von Cramm, one of Germany's most prominent experts in nutritional sciences who recently published the cook book "On your can - get ready - go", claims for instance that canned food is not only practical and tasty, but also healthy. She also demonstrated that when using canned food for cooking, one could obtain maximal results with the minimum of effort.</p> <p>Her "recipes for smart cooks", sounds almost like 'gourmet' cooking, and includes Saltimbocca with tuna, Chinese pork filets, Duck's breast with pineapple and red cabbage and Chocolate-pineapple coulis with mandarins. The preparation of these wonderful dishes takes less than 30 minutes, not including the cooking time.</p> <p><i>Creative and tasty recipes may be consulted on the web sites of national canned food associations. Please refer to the last page for co-ordinates.</i></p> |
|  |   |    |

|  |  |  |   |
|--|--|--|---|
|  |  |  |   |
|  | <h3>Nutritionists' opinion on canned food</h3>  | <p>Professor Martine Laville, Nutritionist and Endocrinologist at Edouard Herriot Hospital, Lyon</p> | <p><i>"The essential elements, glucides, lipids and proteins contained in foods remain practically unchanged during canned food processing. Oxidisation of lipids is rare in comparison to home cooking, where peroxidation is often observed, which in some cases may be a health hazard. With regards to the proteins and glucides, the only slight modification which occurs improves, in fact, the digestion of these elements.</i></p>   |
|  |  |  | <p><i>So, as far as the macro nutrients of canned food are concerned, the vital components and the equivalent calorific and energetic value are retained as in fresh foods. Liposoluble vitamins, which are found in fats, are systematically preserved as opposed to vitamins, which are hydrosoluble and frequently removed during the washing and processing operation as in home cooking. The washing process during canning however is rigorously controlled to ensure minimum loss.</i></p>   |
|  |  |  | <p><i>Independent analysis after sterilisation shows that 70% of vitamins are preserved, which is exceptional considering that only 10% of vitamins are retained after storage and the home preparation of fresh products."</i></p> <p><i>There are some unique ways that canned foods can contribute to a balanced diet and canners need to communicate to the consumer the process used, its effect on the produce and the fact that canned food does not contain additives. Labelling is important and indicating the contents in terms of calories, protein, salt, sugar etc., is very useful."</i></p> |



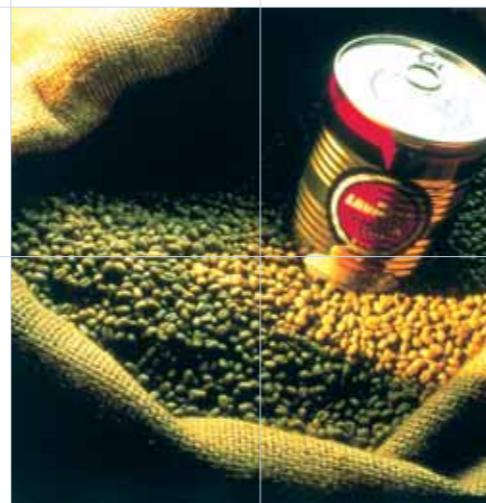
## Packaging high quality vegetable oils

Steel provides optimal protection from external elements, such as light, which are detrimental to the taste of oil. Peroxides, which are formed when the saturated fatty acids are influenced by light and heat, are responsible for rancid tastes. Steel packaging therefore ensures the best taste at all times.

Columbus vegetable oil was developed by blending a high quality olive oil from the Mediterranean with young flaxseed oil. This resulted in a very appetising oil characterised by a perfect balance between the various classes of essential fatty acids required. Use of steel packaging protects the oil against light and provides excellent stability whilst at the same time, respecting environmental conservation.

*"For our exceptional Columbus® vegetable oil, we needed an exceptional packaging. After much deliberation, a round steel packaging was favoured. Our intention was to communicate to the consumer the exceptional quality of the product... Steel packaging gave us the possibility of achieving this objective and at the same time, benefit from the environmental and safety features of steel packaging."*

Jean-Pierre Goeseels, Marketing Director, Belovo



## A premium packaging for coffee

Packaging plays a vital role in conserving the quality of coffee, whether it is coffee beans or ground coffee.

Steel is also a highly versatile packaging solution for coffee offering excellent protection from external elements such as oxygen, light and humidity, which are detrimental to coffee flavour and aroma.

Due to the intrinsic resistance properties of steel, as opposed to vacuum packed flexible packaging, there is no need to de-gas the coffee during the packaging process. The full aroma of the coffee is therefore perfectly preserved.

Coffee beans undergo roasting under intense heat, which turns them brown and releases their aroma. In order to conserve its full flavour potential, it is imperative to store, transport and distribute coffee in hermetically sealed containers. Immediately after grinding, the coffee is placed in airtight silos and packed into steel packages which are evacuated and seamed. After 48 hours, the pressure in the cans is normalised. This process prevents aroma from escaping and so preserves optimum quality.

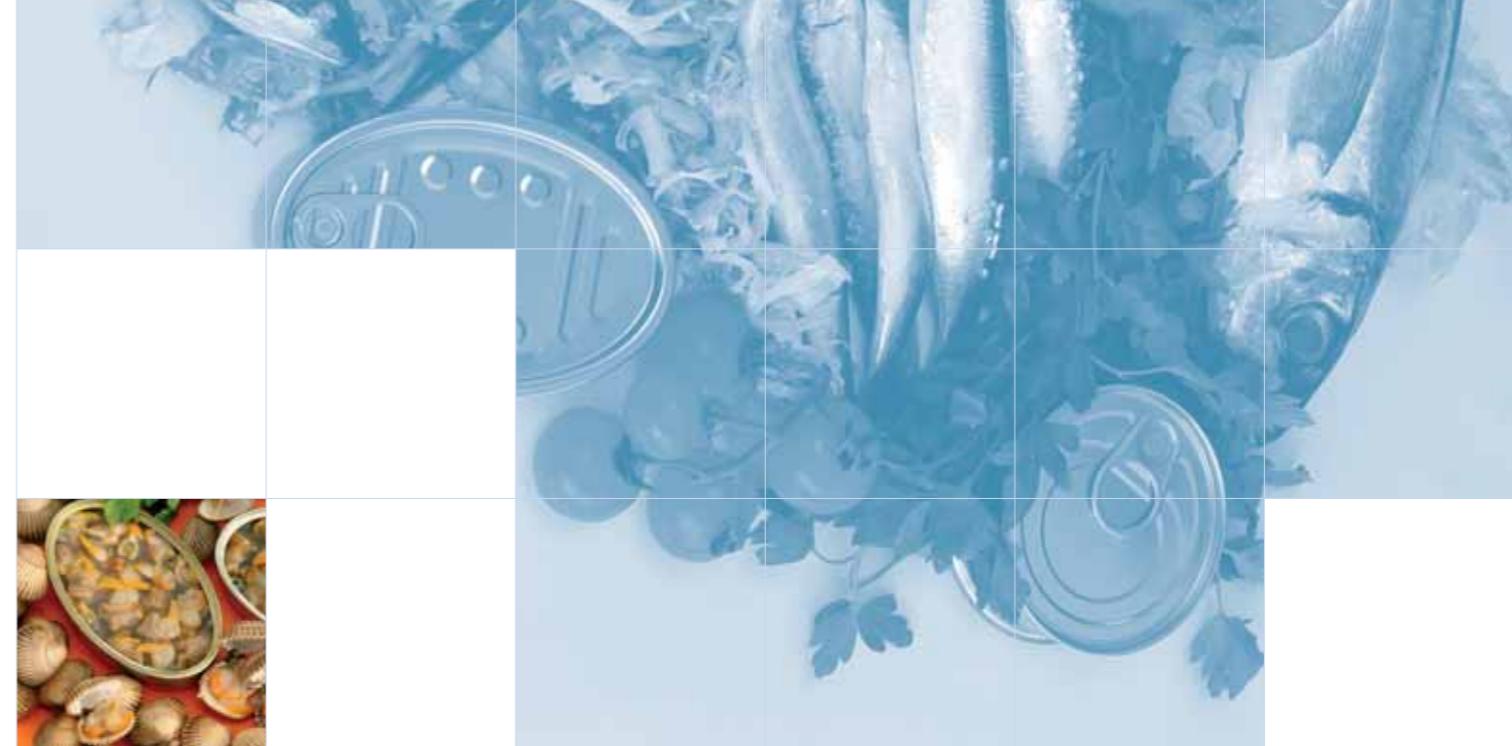


## Informing & advising the consumer

National associations such as UPIA (France), Die Dosenköche (Germany), CICE (Spain), Canned Food Alliance (USA), Canned Food UK and Anfima (Italy), have introduced a number of collective promotional campaigns to inform and advise consumers that canned foods provide an ideal way of adding nutrition, flavour and variety to any recipe, anywhere and at any time of the year. Many consumers are simply not aware that the nutritional value of canned food in terms of vitamins is similar to that of freshly cooked meals prepared using traditional methods.

Together with the co-operation of major brands, canned food associations are confident their initiatives will continue to increase consumer awareness of the added value of canned food.

*Please refer to the last page for further details on national associations.*



# > SAFETY & PROTECTION

*61% of European and US consumers agreed that their awareness of food safety issues has increased in the last 2 years.*

*Datamonitor report 2005*



## Consumers trust the can - more than ever

The steel food pack, a high performing packaging solution present in our food markets for over 200 years, is still - and today more than ever - associated with trust not only in the consumer's mind, but also in that of the brand owner. Despite increased competition from more recently developed packaging materials and solutions, the steel pack remains firmly positioned as a reliable contender in the food and drink market, with constant sales of 37 billion cans per year in Europe.

## Food canning - safest guarantee against microbial contamination of food

Food canning is one of the safest forms of food processing due to heat sterilisation and the strict adherence to health and safety requirements.

The simplicity of the canning process and the thoroughness of the heat sterilising process ensure that incidences of inadequate processing are extremely rare in the production of billions of food cans a year for human consumption.

In addition, the canning industry was one of the first to adopt the HACCP<sup>6</sup> principles of food safety.

Almost all kinds of foods have been implicated in *Bacillus cereus* food-borne poisoning. The majority of outbreaks were linked to the consumption of heat-treated foods. Failure in refrigeration was frequently suspected.

No wonder that the European Food Safety Authority has found canning the best means of fighting some forms of food-borne bacteria.

Only heat treatments used for the canning of low acid foods can ensure the complete destruction of the bacteria *Bacillus cereus* (a spore-forming bacteria), which was found to be especially prevalent in heated foods.



## Consumers rely on steel packs being tamper proof

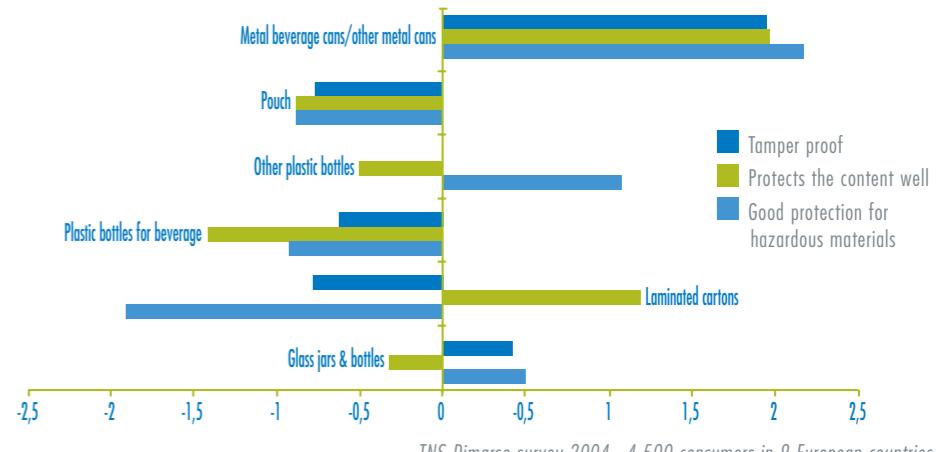
The demand for tamper-proof packaging is growing amidst fears and concerns about food safety. As consumers increasingly demand safe and tamper-evident packaging, the rigidity of steel packs respond well to the need to protect food. Steel packaging gives consumers peace of mind as it is nearly impossible to tamper with a steel pack without leaving obvious evidence.

A quantitative TNS study carried out in 2004 amongst 4,500 consumers in Europe confirms that the European consumer rates the metal pack highly on all protective qualities.

Steel packaging is unrivalled when it comes to protecting the packed content and its resistance parameters (crushing, perforation, and denting) are considerably higher than alternative packaging solutions.



## ... trusted and recognised by customers Protective qualities - according to consumer perceptions



## Unrivalled barrier properties & longest shelf life

Due to its 100% oxygen barrier properties and unrivalled protection against light and moisture, the steel can offers the longest shelf life compared to all alternative packaging solutions - 3 years compared to competing solutions which offer from 4 weeks to 2 years.

Steel packaging is the only container that is totally lightproof and oxygen tight, offering excellent barrier properties against light, ultra-violet rays, oxygen and humidity for a wide range of products. When used to package sensitive products such as food, steel is hygienic, non-toxic and retains the product's flavour.

### High performance in barrier properties

Oxygen intake - measured in cm<sup>3</sup>/m<sup>2</sup>/day/1 bar atmosphere, for 100 microns thickness of packaging

|   |  |                       |   |
|---|--|-----------------------|---|
| 1 |  | <b>Steel can</b>      | <b>0 + total LIGHT barrier</b>                            |
| 2 |  | <b>Glass</b>          | <b>0</b>  |
| 3 |  | <b>Pouch</b>          | <b>&lt;0.1 (with aluminium foil)<br/>17.4 (with EVOH)</b> |
| 4 |  | <b>Carton</b>         | <b>&lt; 1</b>   |
| 5 |  | <b>Rigid Plastics</b> | <b>1,000</b>  |

Source: Industry expert

Steel packaging plays an essential role in keeping the content fresh and protecting it from external influences, thereby guaranteeing a long shelf-life, less waste, wider distribution and improved distribution scheduling.

### Evaluation by packaging decision-makers of Steel Packaging vs. Average Competition

|                                 |  |  |     |     |
|---------------------------------|--|--|-----|-----|
| Offers great barrier properties |  |  | 6,9 | 7,8 |
| Ensures food safety             |  |  | 6,9 | 7,4 |
| Preserves the taste             |  |  | 7,0 | 7,0 |
| Protects products               |  |  | 6,9 | 7,6 |
| Is tamper proof                 |  |  | 6,1 | 6,7 |
| Long shelf-life                 |  |  | 7,1 | 7,5 |

Average Competition

Steel

Source: IPSOS Belgium, 2003

### ... as well as for shelf-life

|   |  |                       |                  |
|---|--|-----------------------|------------------|
| 1 |  | <b>Steel can</b>      | <b>3 years</b>   |
| 2 |  | <b>Glass</b>          | <b>2 years</b>   |
| 3 |  | <b>Pouch</b>          | <b>18 months</b> |
| 4 |  | <b>Carton</b>         | <b>12 months</b> |
| 5 |  | <b>Rigid Plastics</b> | <b>4 weeks</b>   |

Source: Industry expert



### Steel packaging: first in class for reliability

The trust by brand owners, as expressed by their packaging executives, is rooted in the fact that steel packaging is best in class

for reliability (one failure of the closing device per million cans detected and discarded), as well as for filling speeds. As a mature, reliable packaging solution, the combination of these aspects with the long shelf life of the can means less spoilage for the brand owner and less product recalls directly linked to the packaging itself.

Furthermore, at every stage of the logistics chain, steel packs are more resistant to severe transport and handling conditions with fewer damaged packs resulting in less product spoilage.



### ...steel cans are also best in class for reliability Failure rate of closing devices

|   |  |                       |   |
|---|--|-----------------------|---|
| 1 |  | <b>Steel can</b>      | <b>1/1,000,000</b>                            |
| 1 |  | <b>Glass</b>          | <b>1/1,000,000 (excluding glass breakage)</b> |
| 2 |  | <b>Pouch</b>          | <b>1/10,000</b>                               |
| 2 |  | <b>Carton</b>         | <b>1/10,000</b>                               |
| 2 |  | <b>Rigid Plastics</b> | <b>1/10,000</b>                               |

Source: Industry expert



## Excellent traceability

Steel packaging has an excellent traceability record. Quality management systems implemented in the steel industry and during can manufacture enable fast and detailed upstream and downstream traceability of steel packaging up to the production lot.

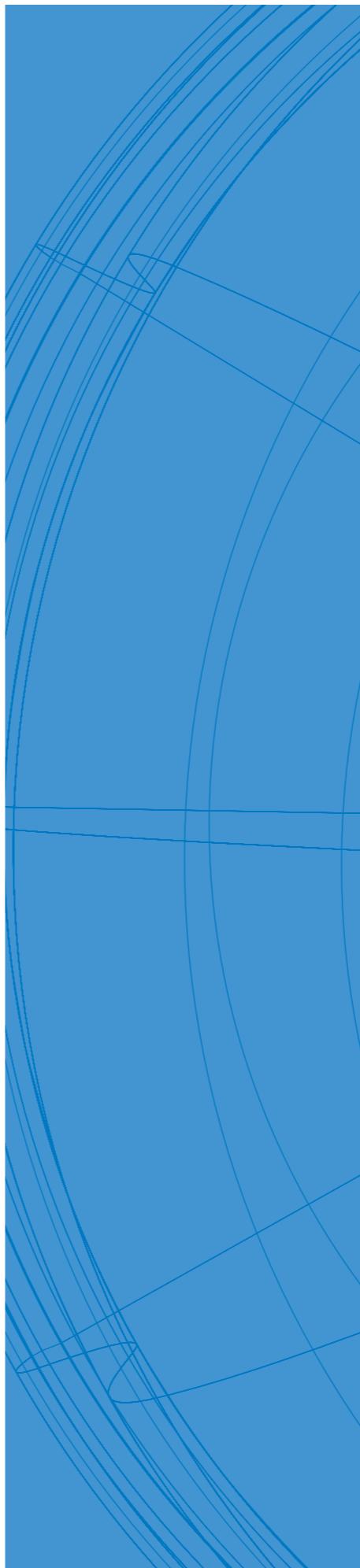
Stringent steel mill certifications give the food contact raw material a "pedigree" that identifies each coil by its composition, physical and mechanical properties. A unique serial coil number, computer generated and archived, is printed on a label and accompanies the coil shipment to the can manufacturer with all the relevant information.

In case of product recalls, this is an asset for brand owners and retailers since it allows to target with greater precision the quantities of products to be recalled and the response time needed.



## Summing it up

- Consumers are becoming more aware of health, nutrition, and food safety issues.
- The steel food pack is associated with trust in the consumer's mind.
- Although canned foods are often overlooked as a convenient source of nutrition, the fact is that many canned foods are bursting with nutrients and are an easy way to include additional vitamins and minerals in one's diet.
- Studies confirm that canned food is as healthy as fresh food and in some cases, even more.
- Foods packed in steel need no additives and preserving agents, but are preserved via controlled heat sterilisation.
- Canning is one of the best-studied forms of food preservation, as well as the best means of avoiding certain forms of food-borne bacteria.
- Steel packaging has an excellent traceability record and offers unrivalled barrier properties, shelf life, reliability, and is also tamper proof - values that are highly regarded by the consumer today.



Promoting the values of canned foods

> ANFIMA - ITALY

[www.anfima.it](http://www.anfima.it)



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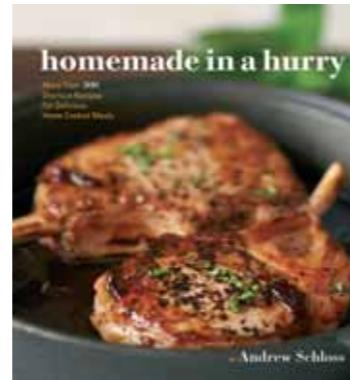
> CANNED FOOD ALLIANCE - USA

[www.mealtime.org](http://www.mealtime.org)



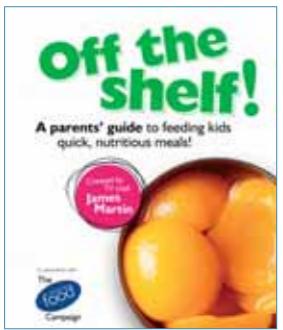
Canned Food.  
The Easy Way to Eat Right.

Mealtime.org



> CANNED FOOD UK - UK

[www.cannedfood.co.uk](http://www.cannedfood.co.uk)



Celebrity TV chef  
James Martin



> CICE - SPAIN

[www.conservasenlata.com](http://www.conservasenlata.com)



> DIE DOSENKÖCHE - GERMANY

[www.die-dosenkoeche.de](http://www.die-dosenkoeche.de)



> UPIA - FRANCE

[www.upia.org](http://www.upia.org)



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