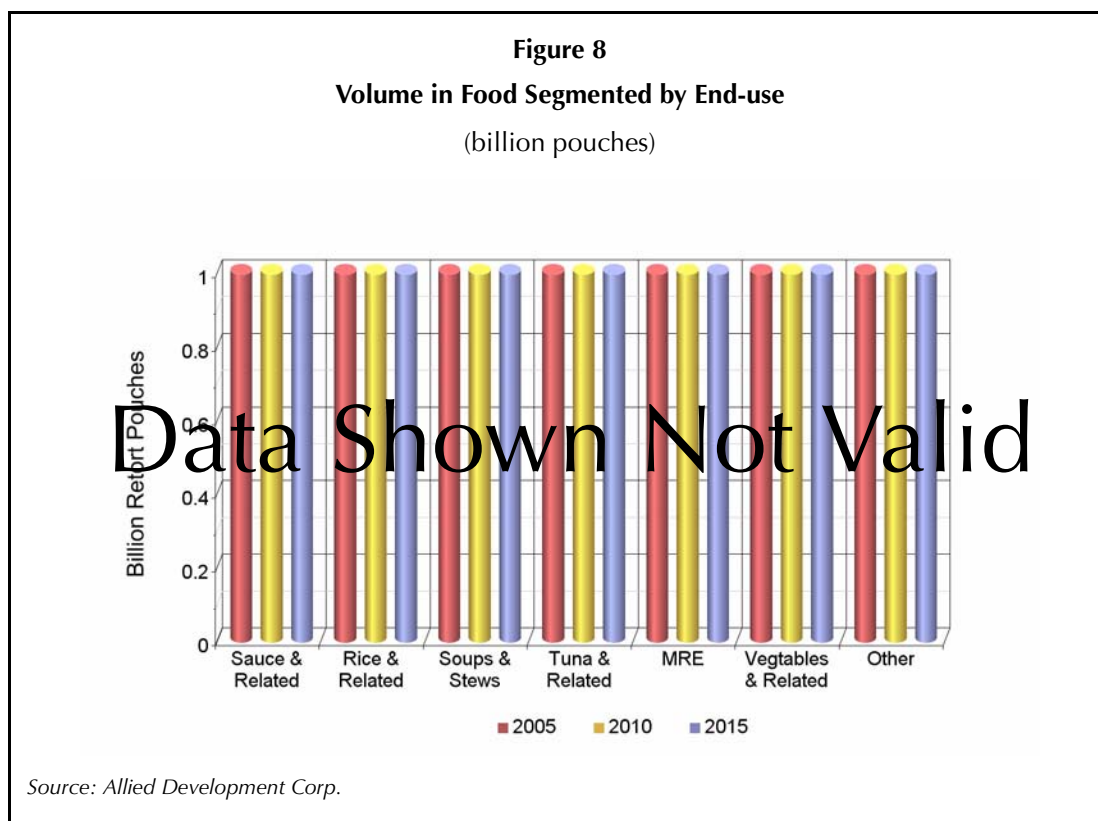


3. Food

The food segment has many more applications than pet food, although, as previously explained, it has no application that can match the volume of wet cat food or wet dog food. Figure 8 provides the forecast for each application in the food segment, based on retort pouch volume.



The sauce and related products category leads all food categories (Figure 8). This category includes a wide variety of products, with curry and curry sauces among the most popular. The sauce category leads all others because the included products were among the first to be commercialized in retort pouches. Japan led these efforts, which began in the 1970s.

E. Competitive response

Trays and similar packages (bowls, cups, etc.) have taken significant market share from retort pouches in pet food, the most important end-use for retort pouches. The reason is that these packages can function as both a shipping container and a serving container.

Recently, a microwaveable pre-cooked rice was introduced in a bowl, threatening another end-use important to retort pouches. Trays are a serious competitive threat to retort pouches, and The retort pouch industry has not developed an effective counter to this threat

However, industry participants have recognized and responded to this challenge. Figure 17 pictures a retort pouch designed to transform into a serving bowl and to eliminate the need to transfer pouch contents to a secondary container.



P. Case 11: Polymer Tray LCA

The metrics for the environmental analysis include energy consumption, greenhouse gas releases, and waste disposal during the entire life cycle of the tray, which are presented in the following paragraphs.

1. Energy

The energy consumption results for the manufacture and filling of the polymer tray are shown in Table 18.

Table 18				
Case 11: Polymer tray – Energy Results				
CATEGORY	MJ	%	MJ/lb	MJ/unit
Package Manufacture				
Raw Materials				
Raw Materials Packaging				
Raw Materials & Packaging Transport				
Process				
Distribution Packaging				
Distribution Packaging Transport				
Transport to Customer				
Sub-total				
Product Filling				
Process Energy				
Packaged Product Packaging				
Packaged Product Packaging Transport				
Packaged Product Transport				
Sub-total				
Total Energy				

Data Removed

Source: Allied Development Corp.

M. Volume in Japan by segmented end-use

Table 23 provides retort pouch volume in Japan, segmented by end-use.

END-USE	2005	2010	CAGR	2015	CAGR
Sauce & related					
Rice & related					
Soups and stews					
Tuna & related					
MRE					
Meat & poultry					
Vegetables & related					
Baby food					
Nutraceuticals					
Other food					
Wet cat food					
Wet dog food					
Total					

Data Removed

Source: Allied Development Corp.

1. Food

Japan's large consumption of retort pouches in the food market is concentrated in the sauce and related category (Table 23). This category includes a wide variety of products, with curry and curry sauce among the most popular. The product category is mature and has a relatively low growth rate. It controls the growth rate of the entire food market, which we forecast at ???% per year through 2015.