



EUVEPRO MARKET SURVEYS EXTERNAL SUMMARY

Since 2005, EUVEPRO (European Vegetable Protein Association) has conducted 8 studies on the European vegetable protein market for food products. The eight reports are: Spain (2005, 2009 & 2013), Poland (2006 & 2010), UK (2007 & 2012), and Germany (2008).

External experts from Ghent University were asked to undertake a study of these market survey reports and to extrapolate the key trends for vegetable proteins per section, type of protein and content.

Regarding the typology of food products on which the studies on vegetable proteins are based, country differences were found.

- The number of product categories varies between 10 (UK2012) and 13 (ES2005, POL2006, ES2009, POL2010), with several studies also targeting 12 categories (UK2007, DE2008, ES2013).
- All studies have included product categories for: baby and infant foods, savoury (salt) biscuits, sweet (sugar) biscuits, bread and bakery (pastry) products, dairy products (often including dairy free, dairy analogues), and soups and sauces (generally including pasta).
- Most countries make a distinction between frozen products including meat-free (in few cases 3 or 4 subcategories are used: ice cream, meat, fish, and/or meat free) and fresh products, of which the latter is in most cases split up into non-frozen fish based and non-frozen meat based preparations.
- Except for the 2007-2009 studies, all studies make reference to dietetic/natural products.
- Few countries distinguish three groups of dairy products (beverages, desserts and cheese), while nearly all countries have a specific category for cereals (and cereal bars).
- In the Spanish and Polish studies, vegetarian products are also separately analysed.

With respect to the data collection, different types of supermarket were analysed in each of the targeted countries. Supermarkets are the type of retailers that were most frequented, followed by hard discounters, grocery stores, and hypermarkets (megastores). Ethnic and healthfood stores were also included in some of the surveys.

Protein Categories and Sub-categories

- Soya
 - Soya beans
 - Soya sauce
 - Soya oil
 - Grain of soybean
 - Soya extract
 - Soya smoothie
 - Soya drink
 - Soya flour

- Vegetable Proteins
 - Soya Protein
 - Gluten (e.g. wheat, seitan)
 - Cereal protein
 - Wheat flour
 - Vegetal protein
 - Plant protein (e.g. Tamari, amaranth, green peas, carob)
 - Whey protein

- Other plant protein
 - Tapioca (+ flour)
 - Lupin (+ flour)
 - [Tofu (soy based; fresh, smoked, dried) + (red) kombu seaweed + shoyu]
 - Tofu
 - [Miso (soy based) + kombu seaweed]
 - Mycoprotein
 - Turnip lecithin

Total number of proteins and products with proteins

| Country | Year | Proteins | Products with Proteins | |
|--------------|------------|-------------|------------------------|-------------|
| | | Total | Encountered | Total |
| ES | 2005 | 1054 | | 1441 |
| POL | 2006 | 1506 | | 1310 |
| UK-retailer | 2007 | 681 | 960 | 580 |
| UK-ethnic | 2007 | 252 | | 219 |
| DE | 2008 | 125 | 125 | 125 |
| ES | 2009 | 415 | 945 | 830 |
| POL | 2010 | 1729 | | 1592 |
| UK | 2012 | 418 | 501 | 373 |
| ES | 2013 | 474 | 463 | 427 |
| Total | ALL | 6518 | | 6897 |

Number of food products containing vegetable protein, by food product

The main uses for vegetable proteins across all countries, with the exception of Germany, are in meat based preparations (non-frozen), dairy/dairy alternative products (especially in Germany, where 80.8% of all vegetable protein presence is in this category), soups, sauces & pasta, and in bread and baked goods. In Poland alone, the second highest product category for vegetable proteins is vegetarian products.

Table 3. Total number of products with proteins, per food product section, per country study

| | ES2005 | | POL2006 | | UK2007-retailer | | UK2007 ethnic | | DE2008 | | ES2009 | | POL2010 | | UK2012 | | ES2013 | |
|---|-------------|--------------|-------------|--------------|-----------------|--------------|---------------|--------------|------------|------------|------------|---------------|-------------|---------------|------------|------------|------------|------------|
| | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Baby & Infant food | 5 | 0,3 | 6 | 0,5 | 2 | 0,3 | 7 | 3,2 | 0 | 0,00 | 38 | 4,58 | 4 | 0,25 | 4 | 1,07 | 4 | 0,9 |
| Savoury (salt) | | | | | | | | | | | | | | | | | | |
| biscuits | 0 | 0,0 | 17 | 1,3 | 6 | 1,0 | 13 | 5,9 | 0 | 0 | 28 | 3,37 | 6 | 0,38 | 2 | 0,54 | 15 | 3,5 |
| Sweet (sugar) | | | | | | | | | | | | | | | | | | |
| biscuits | 153 | 10,6 | 84 | 6,4 | 31 | 5,3 | 8 | 3,7 | 0 | 0 | 96 | 11,57 | 78 | 4,90 | 1 | 0,27 | 45 | 10,5 |
| Bread & bakery | 108 | 7,5 | 80 | 6,1 | 104 | 17,9 | 7 | 3,2 | 1 | 0,8 | 167 | 20,12 | 97 | 6,09 | 120 | 32,17 | 65 | 15,2 |
| Fish based | | | | | | | | | | | | | | | | | | |
| preparations (non-frozen) | 31 | 2,2 | 9 | 0,7 | 14 | 2,4 | 5 | 2,3 | 0 | 0 | 8 | 0,96 | 44 | 2,76 | | | 14 | 3,3 |
| Meat based | | | | | | | | | | | | | | | | | | |
| preparations (non-frozen) | 448 | 31,1 | 577 | 44,0 | 111 | 19,1 | 34 | 15,5 | 0 | 0 | 96 | 11,57 | 799 | 50,19 | | | 83 | 19,4 |
| Dietetic/natural | | | | | | | | | | | | | | | | | | |
| products | 343 | 23,8 | 28 | 2,1 | | | | | | | 102 | 12,29 | 9 | 0,57 | 32 | 8,58 | 22 | 5,2 |
| Frozen products | 116 | 8,0 | 67 | 5,1 | 120 | 20,7 | 66 | 30,1 | 9 | 7,2 | 38 | 4,58 | 115 | 7,22 | | | 9 | 2,1 |
| Dairy products | 74 | 5,1 | 57 | 4,4 | 79 | 13,6 | 15 | 6,8 | 101 | 80,8 | 77 | 9,28 | 124 | 7,79 | 65 | 17,43 | 53 | 12,4 |
| Cereals (bars) | 67 | 4,6 | 47 | 3,6 | 19 | 3,3 | 6 | 2,7 | 0 | 0 | 91 | 10,96 | 34 | 2,14 | | | 13 | 3 |
| Soups, sauces and pasta | 49 | 3,4 | 123 | 9,4 | 49 | 8,4 | 56 | 25,6 | 5 | 4 | 68 | 8,19 | 138 | 8,67 | 52 | 13,94 | 28 | 6,6 |
| Vegetarian products | 47 | 3,3 | 215 | 16,4 | | | | | | | 21 | 2,53 | 144 | 9,05 | | | 76 | 17,8 |
| Fresh products | | | | | | | | | | | | | | | | | | |
| Meat based preparations (frozen/non-frozen) | | | | | | | | | | | | | | | | | | |
| Fish based preparations (frozen/non-frozen) | | | | | | | | | | | | | | | | | | |
| Meat free (non frozen) | | | | | 45 | 7,8 | 2 | 0,9 | 9 | 7,2 | | | | | | | | |
| Total | 1441 | 100,0 | 1310 | 100,0 | 580 | 100,0 | 219 | 100,0 | 125 | 100 | 830 | 100,00 | 1592 | 100,00 | 373 | 100 | 427 | 100 |

Vegetable Proteins found on the Country Markets

Soya protein specifically and soya-derived ingredients more generally, represent the main vegetable protein sources in the 8 country studies, being present in >60% of food products sampled across all studies. Other proteins such as vegetable proteins from non-soya origins, and cereal proteins were present in either few foods, or were concentrated in one country (for example, plant and cereal proteins in food products in Poland in 2010).

Vegetable Protein Content Labelling

In only ca 16% of food products containing vegetable proteins is quantitative information on the amount of vegetable protein in the food provided. In the ca 16% that do provide quantitative information, in more than half of the products, the amount of vegetable protein present is less than 10%.

On-pack Claims

A total number of 770 nutrition or health claims and 463 GMO-free claims were made in product labelling, with the highest number of nutrition/health claims seen in the UK retailer survey from 2007 (206 products with claims) and the Spanish survey from 2009 (252 products with claims), while the highest percent of GMO-free claims were recorded in the surveys from Poland in 2006 (158 - absolute numbers) and from the UK in 2012 (109 - relative numbers). GMO-free labelling was found in only 4 surveys: Poland 2006, 2010, UK 2007 (retailer), 2012, and mainly on dairy and vegetarian products.

Since each of the country surveys is, as it were, a snap-shot in time, there are differences in, for example, typology of sectors, food categories, and the types of vegetable proteins present; the data should therefore be interpreted and compared with caution. Nevertheless, the present study provides a comprehensive overview of the eight market studies conducted between 2005 and 2013, and has enabled the development of a supplementary dataset (an integrated database), which allows data to be tracked by filtering on different criteria such as: study characteristics, product category, and protein type.

It is noted that if additional EU market studies on vegetable proteins are conducted in future, it would be beneficial to harmonize the data collection criteria so that trends and comparisons can be made more readily.