

**Application of the Nutrient profiling model:
Definition of 'fruit, vegetables and nuts' and
guidance on quantifying the fruit, vegetable
and nut content of a processed product**

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Contents

1. Summary	3
2. Background	4
3. Definition of fruit and vegetables	5
3.1 Calculating the amount of fruit and vegetables in a processed product	6
3.2. Calculating score before or after cooking	7
4. Definition of nuts	8
4.1 Exceptions	8
5. Summary of recommendations	11
6. Two worked examples	13
Appendix 1– Eurocode groups and sub groups	14

1. Summary

We recommend, for the purposes of estimating the amount of fruit, vegetables and nuts in a product when applying the nutrient profiling model, that:

1. 'Fruit and vegetables' should be defined as products in Eurocode 2:
 - i. Group 7.10 (Pulses);
 - ii. Group 8.10 (Leaf vegetables); 8.15 (Brassicas); 8.20 (Stalk vegetables); 8.25 (Shoot vegetables); 8.30 (Onion-family vegetables); 8.38 (Root vegetables); 8.40 (Fruit vegetables); 8.42 (Flower-head vegetables); 8.44 (Pod vegetables); 8.45 (Seed vegetables and immature pulses); 8.47 (Sprouted seed vegetables); 8.50 (Edible fungi); 8.55 (Seaweeds and algae); 8.60 (Vegetable mixtures)
 - i.e. excluding Group 8.34 (Tubers (including potatoes))
 - iii. Group 9.10 (Malaceous fruit); 9.20 (Prunus species fruit); 9.25 (Other stone fruit); 9.30 (Berries); 9.40 (Citrus fruit); 9.50 (Miscellaneous fruit); 9.60 (Fruit mixtures)

This definition of 'fruit and vegetables' is the same as that of the 5-a-Day programme

2. Nuts should be defined as products in Eurocode 2:
 - i. Group 7.20 (Underground pulses (i.e. peanuts))
 - ii. Group 7.40 (Nuts)
3. Only fruit and vegetables, including those that are sliced, peeled, tinned, frozen, cooked, dried or minimally processed (such as juices or purees) should count for the purpose of calculating a score. Fruit and vegetables which have been subject to further processing (e.g. by converting them to concentrated juices, powders or oils) should not count.
4. Nuts, which are whole, roasted, chopped, grated and ground should count.
5. The weight of dried fruit, vegetables and nuts or pureed tomatoes should be multiplied by 2 (in the numerator and denominator) when calculating the amount in g per 100g of fruit, vegetables and nuts. No multiplier should be applied to the weight of juice and purees (other than tomato).
6. The amount of fruit and vegetables (in g per 100g) in the product can be calculated either before or after cooking.

2. Background

In developing the nutrient profiling model 'fruit and vegetables' are defined in the same way as by the 5 A DAY programme e.g. that 'fruit and vegetables' includes pulses and does not include potatoes.

At a recent meeting of the Scientific Advisory Committee on Nutrition (SACN) it was proposed that, for the purposes of applying the nutrient profiling model, nuts should be counted as equivalent to fruit and vegetables¹. A clear definition of 'nuts' is therefore also required.

To support the application of the model, guidance is also required on whether pureed, concentrated, dried and powdered fruit and vegetables and fruit and vegetable juices should be included when calculating the amount of fruit and vegetables in a product for the purposes of calculating a score, and if so how levels of such processed fruit and vegetables should be calculated.

Finally, guidance is also required on whether, in calculating the levels of fruit, vegetables and nuts in a product, the amounts should be calculated before or after cooking.

We have therefore considered these issues, and make recommendations about how the amount of 'fruit, vegetables and nuts' in a food should be assessed for the purposes of calculating nutrient profiling scores.

¹ <http://www.sacn.gov.uk/> SACN/05/27 – Nutrient profiling meeting

3. Definition of fruit and vegetables

'Fruit and vegetables' were included as a food component to be considered by the nutrient profiling model to ensure that the model was consistent with government advice that fruit and vegetable consumption should be increased. This government advice is based upon recommendations from the World Health Organization² and the Committee on Medical Aspects of Food and Nutrition Policy (COMA)³, and has been used as a basis for the Department of Health's 5 A DAY programme.

The 5 A DAY programme indicated what kinds of fruit and vegetables count towards the daily target. In particular, it states that potatoes and other starchy vegetables (such as yams or cassava) do not count towards the target. The definition for the 5 A DAY programme has been used as the basis for developing a definition of 'fruit and vegetables' for nutrient profiling.

The Eurocode 2 system provides a comprehensive way of categorising foods⁴. Under this system 'Fruits' are defined as products in Group 9 and 'Vegetables' as products in Group 8. The 5 A DAY definition of a fruits and vegetables includes pulses (Eurocode 2 Group 7.10) and excludes potatoes and similar products (Group 8.34).

We therefore recommend that 'fruit and vegetables' should be defined as products within Eurocode 2:

- i. Group 7.10 (Pulses);
- ii. Group 8.10 (Leaf vegetables); 8.15 (Brassicas); 8.20 (Stalk vegetables); 8.25 (Shoot vegetables); 8.30 (Onion-family vegetables); 8.38 (Root vegetables); 8.40 (Fruit vegetables); 8.42 (Flower-head vegetables); 8.44 (Pod vegetables); 8.45 (Seed vegetables and immature pulses); 8.47 (Sprouted seed vegetables); 8.50 (Edible fungi); 8.55 (Seaweeds and algae); 8.60 (Vegetable mixtures)
- iii Group 9.10 (Malaceous fruit); 9.20 (Prunus species fruit); 9.25 (Other stone fruit); 9.30 (Berries); 9.40 (Citrus fruit); 9.50 (Miscellaneous fruit); 9.60 (Fruit mixtures).

See Appendix for a list of the foods under these codes.

² World Health Organisation (2003) Diet, Nutrition and the Prevention of Chronic Diseases. World Health Organisation, Geneva.

³ Department of Health (1994) Nutritional Aspects of Cardiovascular Disease. The Stationery Office, London.
Department of Health (1998) Nutritional Aspects of the Development of Cancer. The Stationery Office, London.

⁴ Eurocode 2 version 00/1 <http://www.ianunwin.demon.co.uk/eurocode/project/ecproject.htm>

3.1 Calculating the amount of fruit and vegetables in processed products

The beneficial effects of fruit and vegetables are associated with the whole product, rather than components extracted from it.

Processing can result in loss of fibre and vitamins. Therefore it would not be appropriate for ingredients such as concentrated fruit juice sugars that are added to foods to increase sweetness to count for the purpose of calculating a score in the same way as intact fruit and vegetables.

We recommend that intact fruit and vegetables (including those that are cooked and dried) and minimally processed fruit and vegetables (peeled, sliced, tinned, frozen, juices* and purees) count for the purpose of calculating a score.

*100% fruit juices whether made from concentrate or freshly squeezed fruit juice

Fruit and vegetables that are subject to further processing (e.g. concentrated fruit juice sugars, powders or 'leathers') should not count.

In 2002 an assessment of the characteristics of dried and processed fruits and vegetables was carried out by Leatherhead Food RA to assist in establishing criteria for the 5 A DAY message⁵. One of the aims of this study was to consider how much dried or pureed fruit and vegetable was equivalent to one standard portion of fruit or vegetable (80g). It concluded that about:

- 15-20g of dried fruit and 25-30g of ready-to-eat (semi-hydrated) fruit are equivalent to 80g fresh fruit.
- 40g of dried pulses are equivalent to 80g of fresh pulses.
- 20g of tomato puree, and 25g of tomato ketchup are equivalent to 80g of fresh tomato.

This would suggest that, for the purposes of calculating nutrient profiling scores, the amount of dried or pureed fruit or vegetable present in a food should be multiplied by a standard factor when calculating the amount per 100g of a product. However, this procedure could result in anomalous results.

For example if the amount of dried fruit in a 'fruit and cereal bar' were to be multiplied by 2 then a bar weighing 75g and containing 50g dried fruit would appear to have a fruit content of $100/75 = 133\%$, despite there being 25g of non-fruit constituents.

We therefore recommend multiplying the amount of dried or pureed fruit or vegetable by an agreed amount and dividing by the weight of the non-fruit/vegetable

⁵ Angus F. Assessment of portions for dried and processed fruits and vegetables to assist in establishing criteria for the 5 A DAY message. 2002.

constituents plus that of the fruit or vegetable multiplied by the agreed amount. The Leatherhead RA study found that the multiplier for dried and pureed fruit or vegetables can vary. The level at which the multiplier should apply was considered, and a multiplier of 2 was viewed as optimal.

Therefore, so as not to over-emphasise their importance to a healthy diet we recommend that the weight of dried fruit and vegetables should be multiplied by 2 when calculating the amount of fruit and vegetables in 100g of food.

In the example given above, using a multiplier of 2, the fruit content of the 'fruit and cereal' bar would be:
 $(50 \times 2) / (25 + (50 \times 2))$ or $100 / 125 = 80\%$.

The application of a multiplier for pureed fruit or vegetable was considered. Pureeing (e.g. when making fruit smoothies) often involves no concentration of the product, whereas in some cases, such as during the manufacture of concentrated tomato puree, it does.

We therefore recommend the multiplier of 2 should only be applied to commercially prepared, concentrated puree such as tomato puree.

These recommendations are consistent with the guidance from the 5 A DAY programme, which allows dried and pureed fruit to contribute to the number of portions consumed a day, but only in a restricted manner.

3.2. Calculating score before or after cooking

The Leatherhead study also considered whether a portion of fruit or vegetables should be determined by the raw or cooked weight. The conclusion of the study's report was that 'the weights of cooked vs. raw fruits and vegetables was assessed using McCance and Widdowson data on moisture contents. The moisture content of most cooked products was found to not be significantly higher than raw products (around 2% higher). It was therefore concluded that for the purposes of the majority the portion of 80g could be used for both raw and cooked fruit and vegetables.'

For similar reasons we recommend that the amount of fruit and vegetables (in g per 100g) in the product can be calculated either before or after cooking. However when calculating the amount of fruit or vegetable in a composite food all the ingredients should be in the same state – either raw or cooked.

4 Definition of nuts

SACN proposed that nuts should be considered to be equivalent to fruit and vegetables for the purposes of calculating nutrient profiling scores, because some evidence indicates that they may have a beneficial effect on health. A systematic review of studies of the consumption of nuts indicated that eating almonds, peanuts, pecans and walnuts was associated with decreases in total cholesterol. Macadamia nuts showed less convincing results⁶.

We therefore recommend that 'nuts' should be defined as products within Eurocode 2:

- i. Group 7.20 (Underground pulses) i.e. peanuts;
- ii. Group 7.40 (Nuts)

See Appendix 1 for a list of the foods under these codes.

4.1 Exceptions

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Coconut presents particular issues because it is eaten in a different way to other nuts.

We therefore recommend for coconut that:

- the fresh coconut 'flesh' should be scored as fruit,
- the 'water' in the centre of the coconut, which is part of the flesh, should be scored as fruit juice
- the juice squeezed from the flesh (coconut milk) is comparable with fruit juice and should be scored accordingly.
- desiccated and dried block coconut are equivalent to dried fruit and should be scored accordingly.
- coconut which is processed beyond the original product being 'juiced' or 'dried' should not be included.

⁶ Mikkelsen-Petersen J, Oosthuizen W, Jerling JC. A systematic review of the effects of nuts on blood lipid profiles in humans. *J Nutr*, 2005; 135; 2082-9.

5. Summary of Recommendations

The amount of fruit, vegetables or nuts in 100g of food is calculated as follows:

$$\text{The amount of f,v \& n within a product} = \frac{(\text{Weight of f,v\&n}) + (2 \times \text{weight of dried f,v\& n})}{(\text{Weight of f,v \& n}) + (2 \times \text{weight of dried f,v\& n}) + (\text{weight of non-f,v \& n ingredients})}$$

Key: f,v & n : fruit, vegetables and nuts, includes juices and purees other than tomato puree;
dried f,v & n: includes tomato puree

Definition of fruit, vegetables and nuts

Fruit and vegetables are defined as products within Eurocode 2:

- i. Group 7.10 (Pulses);
- ii. Group 8.10 (Leaf vegetables); 8.15 (Brassicas); 8.20 (Stalk vegetables); 8.25 (Shoot vegetables); 8.30 (Onion-family vegetables); 8.38 (Root vegetables); 8.40 (Fruit vegetables); 8.42 (Flower-head vegetables); 8.44 (Pod vegetables); 8.45 (Seed vegetables and immature pulses); 8.47 (Sprouted seed vegetables); 8.50 (Edible fungi); 8.55 (Seaweeds and algae); 8.60 (Vegetable mixtures)
- iii Group 9.10 (Malaceous fruit); 9.20 (Prunus species fruit); 9.25 (Other stone fruit); 9.30 (Berries); 9.40 (Citrus fruit); 9.50 (Miscellaneous fruit); 9.60 (Fruit mixtures).

Nuts are defined as products within Eurocode 2:

- i. Group 7.20 (Underground pulses) i.e. peanuts;
- ii. Group 7.40 (Nuts)

Calculating the amount of fruit and vegetables in a processed product

- Only intact and minimally processed fruit and vegetables should count for the purpose of calculating a score. Fruit and vegetables that have been subject to further processing should not count.

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Calculating score before or after cooking

The amount of fruit and vegetables in the product (g per 100g) can be calculated either before or after cooking. However when calculating the amount of fruit or vegetable in a composite food all the ingredients should be in the same state – either raw or cooked.

6. Two worked examples

The recommendations we have made above would affect the nutrient model in the following way:

$$\text{The amount of f,v \& n within a product} = \frac{(\text{Weight of f,v\&n}) + (2 \times \text{weight of dried f,v\& n})}{(\text{Weight of f,v \& n}) + (2 \times \text{weight of dried f,v\& n}) + (\text{weight of non-f,v \& n ingredients})}$$

Key: f,v & n : fruit, vegetables and nuts, includes juices and purees other than tomato puree;
dried f,v & n: includes tomato puree

1. Suppose a portion of fruit cake weighing 150g consists of

- ◆ 15g of cherries,
- ◆ 25g of raisins,
- ◆ 15g of mixed nuts,
- ◆ 95g of other non-fruit, vegetable or nut ingredients.

Using the new guidance, the proportion of fruit, vegetables and nuts calculated is:

$$\frac{(30 \text{ ie the cherries and nuts only}) + (2 \times 25 \text{ ie the raisins only})}{(30 + (2 \times 25) + 95 \text{ ie the other ingredients})} = 46\%$$

2. Suppose a pizza weighing 320g consists of

- ◆ 50g of cooked vegetables
- ◆ 20g of tomato puree
- ◆ 250 g of other ingredients

Using the new guidance the proportion of fruit, vegetables and nuts calculated is:

$$\frac{(5 \text{ ie the vegetables} + (2 \times 20 \text{ ie the puree}))}{(50 + (2 \times 20) + 250 \text{ ie the other ingredients})} = 26\%$$

Appendix 1

Eurocode groups and sub groups.

7.10	Pulses			
7.10.10	Dried pea	Pisum sativum		Inc. Whole dried pea, Split pea
7.10.15	Chick pea	Cicer arietinum		(whole or split) Bengal gram, Garbanzo, Ceci
7.10.18	Pigeon pea	Cajanus cajan		
7.10.20	Dried broad bean	Vicia faba		
7.10.25	Lentil	Lens esculenta		Varieties: Green, Orange, Yellow, Puy, Indian brown
7.10.28	Lablab bean	Dolichos lablab		Hyacinth bean
7.10.30	Common bean	Phaseolus vulgaris		
7.10.34	Dried lima bean	Phaseolus lunatis		Dried butter bean
7.10.36	Aduki bean	Phaseolus angularis		Adzuki bean
7.10.38	Mung bean	Phaseolus aureus		Green gram, Golden gram
7.10.40	Rice bean	Phaseolus calcaratus		
7.10.42	Urd bean	Phaseolus mungo		Black gram
7.10.46	Black eye bean	Vigna unguiculata		Blackeye pea, Chloris, Cowpea
7.10.50	Soya bean	Glycine max		Chinese black bean, Manchurian bean, Soybean
7.10.64	Carob fruit	Ceratonia siliqua		Carob bean, Locust bean.
7.10.68	Lupin(e)s	Lupinus spp		
7.20	Underground pulses			
7.20.10	Peanut	Arachis hypogea		Groundnut, Monkey nut
7.40	Nuts			
7.40.10	Walnut	Juglans regia		
7.40.14	Hazelnut	Corylus avellana		
7.40.18	Filbert	Corylus maxima		
7.40.22	Coconut	Cocos nucifera		Cokernut
7.40.26	Brazil nut	Bertholletia excelsa		Paranut, Cream nut
7.40.30	Hickory nut	Carya illinoensis		Pecan nut
7.40.34	Cashew nut	Anacardium occidentale		
7.40.38	Almond, sweet	Prunus dulcis	amygalus	
7.40.42	Almond, bitter	Prunus amara	amygalus	

7.40.46	Pistachio nut	Pistacia vera
7.40.50	Sweet chestnut	Castanea vulgaris

8. Vegetables and vegetable products

8.10	Leaf vegetables		
8.10.10	Endive	Cichorium endivia	inc. Curly endive, Batavian endive, Radicchio
8.10.12	Lettuce	Lactuca sativa	inc. Iceberg lettuce, Cabbage lettuce, Cos lettuce, Leaf Lettuce
8.10.16	Lamb's lettuce	Valerianella olitoria	Corn salad, Mâche (Fr)
8.10.18	Amaranth leaves	Amaranthus spp.	
8.10.20	Swiss chard	Beta vulgaris <i>var cicla</i>	syn. Beet greens (US), Chard, Silver/Seakale/Leaf beet; inc. Spinach/Ruby/Rhubarb beet
8.10.24	Spinach	Spinacia oleracea	Spinage
8.10.28	Garden orache	Atriplex hortensis	Orach
8.10.34	Land cress	Barbarea verna	American cress, Winter cress
8.10.36	Watercress	Nasturtium officinale	
8.10.40	Vine leaf	Vitis vinifera	
8.10.44	Dandelion leaf	Taraxacum officinalis	
8.10.48	Nettle	Urtica dioica	Perennial nettle
8.10.50	Sorrel	Rumex spp.	syn. Sour grass; inc. Common sorrel, French sorrel
8.10.52	Jew's mallow	Corchorus olitorius	Bush okra, Jute mallow
8.10.55	Purslane	Portulaca oleracea	
8.10.60	Parsley	Petroselinum crispum	
8.10.64	Chicory leaf	Cichorium intybus	
8.10.79	Other leaf vegetables		
8.15	Brassicas		
8.15.10	Broccoli	Brassica oleracea <i>var italica</i>	
8.15.12	Broccoli tops	Brassica oleracea <i>var italica</i>	Mainly leaves
8.15.15	Cauliflower	Brassica oleracea <i>var botrytis</i>	
8.15.20	Cabbage	Brassica oleracea <i>var</i>	Inc. White cabbage, Spring

		capitata alber greens	
8.15.24	Red cabbage	Brassica oleracea var capitata rubra	
8.15.28	Chinese cabbage	Brassica oleracea var pekinensis	Celery cabbage
8.15.32	Cabbage penca		
8.15.36	Curly kale	Brassica oleracea var acephala	Borecole
8.15.40	Brussels sprouts	Brassica oleracea var gemmifera	
8.15.42	Brussels tops	Brassica oleracea var gemmifera	Cabbage-like top of plant
8.15.46	Kohlrabi	Brassica oleracea var gongylodes	Turnip cabbage
8.15.50	Turnip tops	Brassica rapa var rapifera	
8.15.54	Pak choi	Brassica rapa var chinensis	
8.15.58	Komatsuna	Brassica rapa var perviridis	Japanese mustard
8.15.62	Chinese mustard	Brassica juncea	
8.15.70	Arugula	Eruca sativa	
8.20	Stalk vegetables		
8.20.10	Celery	Apium graveolens var dulce	
8.20.20	Fennel	Foeniculum vulgare var dulce	Florence fennel
8.20.30	Sea kale	Crambe maritima	
8.20.50	Rhubarb	Rheum rhaponticum	Pie-plant
8.25	Shoot vegetables		
8.25.10	Asparagus	Asparagus officinalis var altilis	
8.25.20	Chicory	Cichorium intybus	Belgian / white chicory, Witloof;
8.25.30	Globe artichoke	Cynara scalymsus	French artichoke, Leafy artichoke
8.25.40	Bamboo shoots	Bambusa spp.	
8.25.50	Palm hearts	Palmaceae spp.	
8.25.54	Taro shoots	Colocasia esculenta	
8.25.60	Pokeberry shoots	Phytolacca americana	
8.30	Onion-family vegetables		
8.30.10	Onion	Allium cepa	inc. Pickling onion, Red onion, Spanish onion
8.30.15	Spring onion	Allium cepa	
8.30.20	Shallot	Allium ascalonicum	
8.30.30	Leek	Allium ampeloprasum	

	8.30.40	Garlic	<i>var porrum</i> Allium sativum	
	8.30.50	Chives	Allium schoenoprasum	Chive garlic
8.34	Tubers			
	8.34.12	Potato	Solanum tuberosum	
	8.34.20	Jerusalem artichoke	Helianthus tuberosus	Root artichoke
	8.34.30	Sweet potato	Ipomea batatas	
	8.34.40	Yam	Dioscorea spp.	
	8.34.45	Yam bean	Pachyrhizus spp.	Jicama
	8.34.50	Cassava	Manihota esculenta	Tapioca, Manioc, Manihot
	8.34.55	Taro	Colocasia spp.	
8.38	Root vegetables			
	8.38.10	Carrot	Daucus carota	
	8.38.20	Salsify	Scorzonera hispanica	Vegetable oyster; inc. Scorzonera (Black salsify)
	8.38.30	Celeriac	Apium graveolens <i>var</i> rapaceum	
	8.38.34	Parsnip	Pastinaca sativa	
	8.38.38	Turnip	Brassica rapa <i>var</i> rapifera	
	8.38.42	Swede	Brassica napus <i>var</i> napobrassica	Rutabaga, Swedish turnip, Yellow turnip
	8.38.50	Radish	Raphanus sativus	Inc. Red radish, White radish, Black radish, Daikon radish
	8.38.55	Beetroot	Beta vulgaris <i>var</i> conditiva	Red beet
	8.38.60	Parsley root	Petroselinum crispum <i>var tuberosus</i>	Parsley potato, Hamburg parsley
	8.38.64	Chicory root	Cichorium intybus	
	8.38.79	Other root vegetables		
8.40	Fruit vegetables			
	8.40.10	Tomato	Lycopersicum esculentum	Peruvian apple
	8.40.15	Aubergine	Solanum melongena	Egg plant
	8.40.20	Sweet pepper	Capsicum annum <i>var grossum</i>	Bell pepper, Capsicum pepper; inc. various coloured forms
	8.40.25	Chilli pepper	Capsicum frutescens	Pimento
	8.40.30	Cucumber	Cucumis sativa	
	8.40.40	Courgette	Cucurbita pepo	Zucchini; inc. Marrow (mature)
	8.40.45	Cucurbita squash	Cucurbita spp.	Inc. Acorn squash, Spaghetti squash, Custard squash, Golden nugget, Pumpkin
	8.40.49	Other	Cucurbitaceae spp.	Inc. Ash gourd, Bottle

		gourds		gourd, Butternut squash, Chayote, Snake squash Akee, Akee apple
	8.40.50	Akee	Blighia sapida	
	8.40.52	Breadfruit	Artocarpus attilis	
	8.40.54	Matoki	Musa sapientium	Green banana;
	8.40.56	Plantain	Musa paradisiaca	Adam's fig;
	8.40.60	Avocado	Persea americana	Alligator pear
	8.40.65	Olive	Olea europaea	
8.42	Flower-head vegetables			
	8.42.10	Pumpkin flower	Cucurbita maxima	
	8.42.20	Dandelion flower	Taraxacum spp.	
8.44	Pod vegetables			
	8.44.10	Mangetout	Pisum sativum var macrocarpon	Snow pea, Sugar pea
	8.44.30	French bean	Phaseolus vulgaris	Green bean
	8.44.32	Runner bean	Phaseolus coccineus	Green bean, String bean
	8.44.46	Black eye bean pods	Vigna unguiculata	(Blackeye pea, Chloris, Cowpea)
	8.44.48	Asparagus bean	Vigna unguiculata sesquipedalis	Yardlong bean, Chinese longbean
	8.44.54	Winged bean	Psophocarpus tetragonolobus <i>syn</i> Lotus tetragonolobus	Asparagus pea
	8.44.60	Okra	Hibiscus esculentus	Gumbo, Ladyfinger, Okro
8.45	Seed vegetables and immature pulses			
	8.45.10	Pea	Pisum sativum	Green / garden pea
	8.45.18	Immature pigeon pea	Cajanus cajan	
	8.45.20	Broad bean	Vicia faba	Faba bean, Field bean, Horse bean
	8.45.34	Wax bean	Phaseolus lunatis	Butter bean, Lima bean
	8.45.46	Immature black eye bean	Vigna unguiculata	(Blackeye pea, Chloris, Cowpea)
	8.45.50	Immature soya bean	Glycine max	Green soybean
	8.45.60	Sweet corn	Zea mays	Sweet maize; inc. "Baby corn" (immature)
8.47	Sprouted vegetables	seed		
	8.45.10	Sprouted pea	Pisum sativum	
	8.47.25	Sprouted lentil	Lens esculenta	Varieties: see Pulses, lentil

	8.47.30	Sprouted common bean	Phaseolus vulgaris	
	8.47.38	Beansprouts	Phaseolus aureus	Mung bean sprouts
	8.47.46	Sprouted black eye bean	Vigna unguiculata	(Blackeye pea, Chloris, Cowpea)
	8.47.50	Sprouted soya bean	Glycine max	
	8.47.70	Cress sprouts	Lepidium sativum	
	8.47.72	Mustard sprouts	Sinapis alba	
	8.47.74	Alfalfa sprouts	Medicago sativa	
8.50	Edible fungi			
	8.50.10	Cultivated mushroom	Agaricus bisporus	Inc. Button mushroom, Cup mushroom, Open mushroom
	8.50.15	Field mushroom	Agaricus spp.	
	8.50.20	Honey mushroom	Armillaria mellea	Honey agaric, Honey fungus
	8.50.25	Boletus	Boletus (and other) spp.	Inc. Yellow boletus, Red boletus, Rough stemmed boletus, Ringed boletus
	8.50.30	Truffle	Tuber melanosporum	Swine bread
	8.50.35	Morel	Morchella esculanta	Sponge mushroom
	8.50.40	Cantharelle	Cantharellus cibarius	
	8.50.45	Orange agaric	Lactarius deliciosus	Saffron milk-cap
	8.50.50	Oyster mushroom	Pleurotus ostreatus	
	8.50.55	Shiitake mushroom	Lentinus edodes	Chinese mushroom, Oak mushroom, Black Forest mushroom
	8.50.57	Maitake mushroom	Grifola frondosa	Hen of the Woods mushroom
	8.50.60	Straw mushroom	Volvaria volvaria	
8.55	Seaweeds and algae			
	8.55.20	Kombu	Laminaria spp.	
	8.55.30	Laver	Porphyra spp.	Inc. Sea lettuce, Nori (Japanese laver)
	8.55.40	Wakame	Undaria spp.	
	8.55.50	Agar	Eucheuma spp.	Guso
	8.55.55	Irish moss	Chondrus crispus	Carrageen moss
8.60	Vegetable mixtures			
	8.60.10	Vegetable		

8.60.20	mixes Mustard and cress	Sinapis alba / Lepidium sativum	
8.60.30	Pot-herb		

9. Fruits and fruit products

9.10	Malaceous fruit		
9.10.10	Dessert apple	Pyrus malus / Malus pumila	Inc. Granny Smith, Golden Delicious, Discovery
9.10.15	Cooking apple	Pyrus malus / Malus pumila	Inc. Bramley's Seedling
9.10.20	Pear	Pyrus communis	Inc. Conference, Doyenne du Comice, William's Bon Chrétien
9.10.25	Nashi pear	Pyrus pyrifolia	Asian pear
9.10.30	Quince	Cydonia oblongo	
9.10.40	Medlar	Mespilus germanica	
9.10.50	Loquat	Eriobotrya japonica	Japanese medlar
9.20	<i>Prunus</i> species fruit		
9.20.10	Apricot	Prunus armeniacea	
9.20.20	Peach	Prunus persica	
9.20.25	Nectarine	Prunus persica var nectarina	
9.20.30	Plum	Prunus domestica	
9.20.32	Damson	Prunus domestica var institia	Inc. Bullace, Prune damson
9.20.34	Mirabelle	Prunus domestica var syriaca	Syrian plum
9.20.36	Greengage	Prunus domestica var italica	
9.20.40	Sweet cherry	Prunus avium	Gean
9.20.45	Sour cherry	Prunus cerasus	Acid cherry; inc. Morello cherry
9.20.50	Chickasaw plum	Prunus angustifolia	
9.20.55	Susina	Prunus salicina	Japanese plum
9.20.60	Sloe	Prunus spinosa	Blackthorn, Sloe plum
9.25	Other stone fruit		
9.25.30	Date	Phoenix dactylifera	
9.25.40	Lychee	Litchi chinensis	Litchi, Lichi
9.25.44	Persimmon plum	Diaspyrous kaki	Date plum, Kaki, Sharon fruit
9.25.48	Barbados cherries	Malpighia spp.	Acerolas, West Indian cherries
9.30	Berries		
9.30.10	White grapes	Vitis vinifera	
9.30.12	Black grapes	Vitis vinifera	
9.30.15	Strawberries	Fragaria vesca	
9.30.20	Raspberries	Rubus idaeus	
9.30.22	Loganberries	Rubus loganobaccus	
9.30.24	Blackberries	Rubus fruticosus	

9.30.26	Dewberries	Rubus caesius	Youngberries
9.30.28	Cloudberrries	Rubus chamaemorus	Averin, Knotberries
9.30.30	Gooseberries	Ribes grossularia	Wine berries
9.30.32	Black currants	Ribes nigrum	
9.30.34	Red currants	Ribes rubrum	
9.30.36	White currants	Ribes sativum	
9.30.40	Cranberries	Vaccinium oxycoccus	
9.30.42	Bilberries	Vaccinium myrtillis	Huckleberries, Whortleberries
9.30.44	Cowberry	Vaccinium vitis <i>var</i> <i>idaea</i>	Foxberries, Mountain cranberries, Red bilberries, Red whortleberries
9.30.46	Blueberries	Vaccinium <i>corymbosum</i> / Vaccinium <i>angustifolium</i>	
9.30.50	Elderberries	Sambuca nigra	
9.30.54	Rowanberries	Sorbus aucaparia	
9.30.58	Physalis berries	Physalis spp.	
9.30.62	Mulberries	Morus spp.	Inc. Black mulberry, White mulberry
9.30.66	Bearberries	Arctostaphylos uva- ursi	Foxberries, Marranitas
9.30.70	Sea buckthorn	Hippophae <i>rhamnoides</i>	
9.40	Citrus fruit		
9.40.10	Lemon	Citrus limonum	
9.40.20	Orange	Citrus sinensis	Sweet orange
9.40.25	Tangerine	Citrus reticulata	Mandarin orange; inc. Clementine, Satsuma
9.40.30	Grapefruit	Citrus paradisi	
9.40.35	Pomelo	Citrus grandis	Pummelo, Shaddock
9.40.40	Lime	Citrus aurantifolia	
9.40.50	Kumquat	Fortunella japonica	Cumquat
9.50	Miscellaneous fruit		
9.50.10	Banana	Musa (infertile hybrid)	
9.50.14	Pineapple	Ananas comosus	Ananas, Pine
9.50.18	Kiwi fruit	Actinidia chinensis	Chinese gooseberry, Monkey peach
9.50.22	Melon	Cucumis melo	Inc. Ogen, Cantaloupe, Honeydew, Gallia melons
9.50.26	Water melon	Citrullus vulgaris <i>var</i> <i>lanatus</i>	
9.50.30	Fig	Ficus carica	
9.50.32	Mango	Mangifera indica	
9.50.34	Pomegranate	Punica granatum	
9.50.36	Passionfruit	Passiflora edulis	Purple granadilla
9.50.38	Cashew fruit	Anacordium <i>occidentale</i>	Christmas apple
9.50.40	Guava	Psidium guayava	
9.50.42	Papaya	Carica papaya	Papaw

9.50.44	Custard apple	Anona spp.	Inc. Sour sop, Sweet sop, Bullock's heart
9.50.46	Prickly pear	Opuntia ficus indica	Indian fig cactus
9.50.48	Rose hip	Rosa canina	Rose berry, Rose haw
9.50.50	Sapodilla	Achras sapota	Naseberry, Sapodilla plum
9.50.52	Carambola	Averrhoa carambola	Star apple, Star fruit
9.50.54	Durian	Durio zibethinus	Durion
9.50.56	Jack fruit	Artocarpus heterophylla	Jack
9.50.58	Chayote	Sechium edule	
9.50.60	Rambutan	Nephelium lappaceum	
9.50.62	Tamarillo	Cyphomandra betacea	Tree tomato
9.50.64	Tamarinde	Tamarindus indica	
9.60	Fruit mixtures		
9.60.10	Fruit cocktail		Contg. pear, peach, pineapple, grape, cherry
9.60.20	Fruit salad		Contg. banana, orange, apple, pear, grape