**II. CONCEPTS AND DEFINITIONS USED IN FOOD BALANCE SHEETS[[1]](#footnote-1)**

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July 2015

**DRAFT**

1. **COMMODITY COVERAGE**

All potentially edible commodities, in principle, should be taken into account in preparing food balance sheets (FBS) regardless of whether they are actually eaten or used for non-food purposes.

Generally, FBS are constructed for primary crops~~,~~ livestock and fish[[2]](#footnote-2) commodities up to the first stage of processing in the case of crops, and to the second (and sometimes the third) stage of processing in the case of livestock and fish products: it is difficult to obtain data for all the different forms of processed products, and it is even more difficult, in tracing the components of the processed composite products.

The list of definitions[[3]](#footnote-3), for commodities and processed products expressed in terms of primary equivalent, is proposed for FBS purposes. It should, however, be adjusted according to the availability of commodities at country level.

**CEREALS AND CEREAL PRODUCTS**

CEREALS are generally of the gramineous family and, in the FAO concept, refer to crops harvested for dry grain only. Crops harvested green for forage, silage or grazingare are classified as fodder crops. Also excluded are industrial crops, e.g. broom sorghum (Crude organic materials n.e.c.) and sweet sorghum when grown for syrup (Sugar crops n.e.c.). For international trade classifications, fresh cereals (other than sweet corn), whether or not suitable for use as fresh vegetables, are classified as cereals. Cereals are identified according to their genus. However, when two or more genera are sown and harvested as a mixture they should be classified and reported as "mixed grains".

Production data are reported in terms of clean, dry weight of grains (12-14% moisture) in the form usually marketed. Rice, however, is reported in terms of paddy. Apart from moisture content and inedible substances such as cellulose, cereal grains contain, along with traces of minerals and vitamins, carbohydrates - mainly starches - (comprising 65-75% of their total weight), as well as proteins (6-12%) and fat (1-5%). Cereal products derive either from the processing of grain through one or more mechanical or chemical operations, or from the processing of flour, meal or starch.

**FBS 2511 - Wheat**

Wheat, species of *Triticum*, *T. aestivum* (common wheat), *T. durum* (durum) *and T. spelta* (spelt). Common and durum wheat are the main types. Among common wheat, the main varieties are: spring and winter, hard and soft, red and white, whether or not processed.

It includes meslin (a mixture wheat/rye).

Processed products expressed in terms of primary equivalent:

* bread and wafers (23410; 23490); breakfast cereals (23140.03); bulgur (23140.02); flour of wheat (23110; 23130.01); macaroni (23710); pastry (23420; 23430); starch of wheat (23220.01)

Nutrient data only are available for: bran of wheat (39120.01), germ of wheat (23140.01), gluten of wheat (23220.02), mixes and doughs and food preparations of flour (23180), meal or malt extract (23999.02).

# FBS 2805 - Rice (Milled Equivalent)

Rice, species of *Oryza*, mainly *oryza sativa*, not husked, also known as rice in the husk and rough rice. Used mainly for human food.

Processed products expressed in terms of primary equivalent:

* rice husked (23162); starch of rice (23220.03); rice flour (23120.01);
* Rice, semi- or wholly milled (23161)
  + milled (husked) rice (23161.01);
  + rice milled (23161.02);
  + rice broken (23161.03).

Nutrient data only are available for: rice gluten (39130.01) and bran of rice (39120.02).

# FBS 2513 - Barley and products

Barley, species of *Hordeum*, mainly *H. disticum* (two-row barley), *H.* *hexasticum* (six-row barley)and *H. vulgare* (four-row barley), whether or not processed, including with husk and without (naked).

Barley tolerates poorer soils and lower temperatures better than wheat and it is used as a livestock feed, for the manufacture of malt and, when polished or pearled, for preparing foods. The roasted grains are a coffee substitute.

Barley does not include sprouted barley (malt), nor roasted malt, roasted barley (coffee substitutes), malt sprouts separated from the malted grain during the kilning process and other brewing wastes.

Processed products expressed in terms of primary equivalent: pot barley (23140.04); barley pearled (23140.05); malt (24320); malt extract (23999.01).

Nutrient data only: bran of barley (39120.03), barley flour and grits (23120.02).

# FBS 2514 - Maize and products

Maize, species of *Zea mays* (corn, Indian corn, mealies), is a grain with a high germ content. At the national level, hybrid and ordinary maize should be reported separately owing to widely different yields and uses. Used largely for animal feed and commercial starch production.

It includes:

* corn seed; maize, hybrid, seed; maize seed.
* White maize (not considered necessary for popcorn);
* Corn, unmilled, golden-yellow or white;
* Corn, unmilled, reddish-brown or mottled;
* Corn-on-the-cob, fresh (excl. sweet corn);
* Grain, maize, not hushed or otherwise worked;
* Kernels, corn, fresh, suitable for human consumption;
* Maize in sheaves, cobs or threshed;
* Maize not husked or otherwise worked;
* Maize, cut before maturity, complete with husks;
* Maize, unmilled;
* Popcorn, on or off the cob, not popped.

Maize does not include green corn (01290.01).

Processed products expressed in terms of primary equivalent: flour of maize (23120.03); starch of maize (23220.04); gluten feed and meal (39130.04).

Nutrient data only: germ of maize (23140.06), bran of maize (39120.04), maize gluten (39130.02).

# FBS 2515 - Rye and products

Rye, species of *Secale cereale*, whether or not processed, including rye denatured and unmilled, is a grain that is tolerant of poor soils, high latitudes and altitudes. Mainly used in making bread, whisky and beer. When fed to livestock, it is generally mixed with other grains.

Processed products expressed in terms of primary equivalent: flour of rye (23120.04; 23130.05), including groats, meal and pellets.

Nutrient data only: bran of rye (39120.05).

# FBS 2516 – Oats

Oats, species of *Avena sativa,* grains with their husks as well as those which in their natural state have no husk or hull, whether or not processed, is plant with open, spreading panicle-bearing large spikelets.

There are two main kinds of oats: grey (or black) oats and white (or yellow) oats.

Used primarily in breakfast foods, it makes excellent fodder for horses.

It includes unmilled oats.

Processed products expressed in terms of primary equivalent: oats rolled (23140.07)

Nutrient data only: bran of oats (39120.06).

# FBS 2517 - Millet and products

Millet, small-grained cereals that include a large number of different botanical species, with many different local names, whether or not processed, including among all:

*Echinocloa frumentacea* (barnyard or Japanese millet)

*Eleusine coracana* (ragi, finger or African millet)

*Panicum miliaceum* (common, golden or proso millet)

*Paspalum scrobiculatum* (koda or ditch millet)

*Pennisetum glaucum* (pearl or cattail millet)

*Setaria italic* (foxtail millet)

Originated by the domestication of wild African grasses in the Nile valley and the Sahel zone, millets were subsequently taken to China and India. These cereals tolerate arid conditions and possess a small, highly nutritious grain that stores well.

Used locally, both as a food and as a livestock feed. In all areas where they are cultivated, millets are used in traditional beer brewing. Also used as a feed for birds.

It does not include indian, large african millet, and teff (*Eragrostis abyssinica*) cf. 01199.01.

Processed products expressed in terms of primary equivalent: flour of millet (23120.05; 23130.06), including groats, meal and pellets.

Nutrient data only: bran of millet (39120.07).

# FBS 2518 - Sorghum and products

Sorghum, species of *Sorghum*, mainly *S. guineense* (guinea corn), *S. vulgare* (common, milo, feterita, kaffir corn), *S. dura* (durra, jowar, kaoliang), is a cereal that has both food and feed uses. Sorghum is a major food grain in most of Africa, where it is also used in traditional beer brewing. It is desirable to report hybrid and other varieties separately.

It includes unmilled Doura (durra), Federita (feterita), Grain sorghum, Kafir, Kaoliang, Milo, Sorghum.

Sorghum does not include forage sorghums (which are used for making hay or silage) such as halepensis (halepense), grass sorghums (which are used for grazing) such as sudanensis (sudanense) or sweet sorghums (which are used primarily for the manufacture of syrup or molasses) such as saccharatum. It also excludes broomcorn (*Sorghum vulgare var. technicum*).

Processed products expressed in terms of primary equivalent: flour of sorghum (23120.06; 23130.07), including groats, meal and pellets.

Nutrient data only: bran of sorghum (39120.08).

# FBS 2520 - Cereals, other

Other cereals include the following species:

* Buckwheat, *Fagopyrum esculentum (Polygonaceae)*, a minor cereal cultivated primarily in northern regions. Buckwheat is considered a cereal, although it does not belong to the gramineous family.
* Quinoa, *Chenopodium quinoa (Chenopodiaceae)*, a minor cereal, which tolerates high altitudes, quinoa is cultivated primarily in Andean countries. Used for food and to make chicha, a fermented beverage.
* Fonio, *Digitaria spp.* mainly *Digitaria exilis* (fonio or findi) and *Digitaria iburua* (black fonio or hungry rice), a minor cereal of importance only in West Africa where it is eaten in place of rice during famines. The seeds are cooked by steaming the whole grain.
* Triticale, a minor cereal that is a cross between wheat and rye, combining the quality and yield of wheat with the hardiness of rye.
* Canary seed, a minor cereal normally used as bird feed.
* Mixed grain, a mixture of cereal species that are sown and harvested together. It does not include: meslin (a mixture wheat/rye).

It includes among all other cereal crops that are not identified separately because of their minor relevance at the international level. Because of their limited local importance, some countries report cereals under this commodity heading that are classified individually by FAO (rice Canada, rice wild, teff and other hybrid grains).

Processed products expressed in terms of primary equivalent: flour of buckwheat (23120.07; 23130.08); flour of fonio (23120.08; 23130.09); flour of mixed grain (23120.10; 23130.11); flour of cereals n.e.c. (23120.90; 23130.90). Including groats, meal and pellets; cereal preparations, n.e.c. (23140.08; 23130.90)

Nutrient data only: bran buckwheat (39120.09), bran of fonio (39120.10), bran of triticale (39120.11), bran of mixed grains (39120.12), bran of cereals (39120.13).

# ROOTS AND TUBERS AND DERIVED PRODUCTS

ROOTS AND TUBERS are plants yielding starchy roots, tubers, rhizomes, corms and stems. They are used mainly for human food (as such or in processed form), for animal feed and for manufacturing starch, alcohol and fermented beverages including beer. The denomination "roots and tubers" excludes crops which are cultivated mainly for feed (mangolds, swedes) or for processing into sugar (sugar beets), and those classified as "roots, bulb and tuberous vegetables" (onions, garlic and beets). It does include starch and the starchy pith and flour obtained from the trunk of the sago palm and the stem of the Abyssinian banana (Musa ensete). Certain root crops, notably bitter cassava, contain toxic substances, particularly in the skins. As a result, certain processes must be undertaken to make the product safe for human consumption.

Apart from their high water content (70-80%), these crops contain mainly carbohydrates (largely starches that account for 16-24% of their total weight) with very little protein and fat (0-2% each). Methods of propagating root crops vary. A live potato tuber or seed must be planted but only part of the live yam tuber and a piece of the stalk (not the root) in the case of cassava. Production data of root crops should be reported in terms of clean weight, i.e. free of earth and mud.

**FBS 2520 – Cassava**

Cassava, species of *Manihot esculenta; Manihot utilissima* (manioc, mandioca, yuca), *Manihot palmata; Manihot dulcis* (yuca dulce).

A semi-permanent crop grown in tropical and subtropical regions. Sometimes bitter and sweet cassavas are referred to as separate species, the former being M. esculenta and the latter M. palmata, but this is incorrect since the toxicity varies according to location. Cassava is the staple food in many tropical countries. It is not traded internationally in its fresh state because tubers deteriorate very rapidly.

It includes among all cassava, fresh or dried, whole or sliced; root, manioc, fresh or dried, whole or sliced; pellets, of manioc, whether or not disintegrated (manioc pellets may be disintegrated, but are classified here provided that they are identifiable by physical characteristics: non‑homogeneous particles with broken pieces of manioc pellets, brownish colour with black spots, pieces of fibre visible to the naked eye and a small quantity of sand or silica left in).

Processed products expressed in terms of primary equivalent: flour of cassava (23170.01); tapioca of Cassava (23230.02); cassava dried (01520.01); cassava starch (23220.06).

**FBS 2531 – Potatoes**

Potatoes, species of *Solanum tuberosum* (Irish potato).

A seasonal crop grown in temperate zones all over the world, but primarily in the northern hemisphere.

It includes, inter alia, fresh or chilled potatoes of all kinds, seed potatoes intended for sowing and new potatoes.

Potatoes does not include sweet potatoes (01530).

Processed products expressed in terms of primary equivalent: flour of potatoes (21392) meal, including powder, flakes, granules and pellets of potatoes; frozen potatoes (21313); tapioca of potatoes (23230.01); starch potatoes (23220.05).

**FBS 2533 - Sweet potatoes**

Sweet potatoes, species of *Ipomoea batatas*, a seasonal crop grown in tropical and subtropical regions. Used mainly for human food. Trade data cover fresh and dried tubers, whether or not sliced or in the form or pellets made either from pieces of the roots or tubers of this heading or from their flours, meals or powders.

**FBS 2535 - Yams**

Yams, tubers from vines of the genus *Dioscorea*, include among all *D. batatas*, *D. trifida*, *D. alata*, *D. bulbifera*, *D. rotunda*, *D. cayenensis*, *D. exculenta*, *D. dumetorum*.

The principal edible yams are widely grown throughout the tropics. A starchy staple foodstuff, normally eaten as a vegetable, boiled, baked or fried. In West Africa they are consumed mainly as "fufu", a stiff glutinous dough. Trade data cover both fresh and dried yams.

It includes fresh, chilled, frozen or dried, whether or not sliced or in the form of pellets made either from pieces of the roots or tubers of this heading or from their flours, meals or powders.

**FBS 2534 - Roots, other**

Other cereals includes the following species:

* Yautia, *Xanthosoma spp* mainly *X. sagittifolium* (malanga, new cocoyam, ocumo, tannia). Several plants are included in this group, some with edible tubers and others with edible stems (also called aroids). Yautia is grown mainly in the Caribbean and is used for food. ~~Trade data cover both fresh and dried yautia~~.
* Taro, *Colocasia esculenta* (Dasheen, eddoe, taro, old cocoyam), aroids cultivated for their edible starchy corms or underground stems. Taro is grown throughout the tropics for food.

It includes among all other tubers, roots or rhizomes, fresh, that are not identified separately because of their minor relevance at the international level. B

ecause of their limited local importance, some countries report roots and tubers under this commodity heading that are classified individually by FAO:

* *Arracacoa xanthorrhiza* (arracacha)
* *Maranta arundinacea* (arrowroot)
* *Cyperus esculentus* (chufa)
* *Metroxylon spp.* (sago palm)
* *Oxalis tuberosa and Ullucus tuberosus* (oca and ullucu)
* *Pachyrxhizus erosus, Pachyrxhizus angulatus* (yam bean, jicama)
* *Tropaeolum tuberosum* (mashua)
* *Helianthus tuberosus* (Jerusalem artichoke, topinambur)

Products included may be fresh, chilled, frozen or dried, whether or not sliced or in the form of pellets made either from pieces (e.g., chips) of the roots or tubers of this heading or from their flours, meals or powders.

Processed products expressed in terms of primary equivalent: flour of roots and tubers (23170.02); roots and tubers dried (01599.10).

**SUGAR CROPS AND SWEETENERS AND DERIVED PRODUCTS**

In addition to providing the source for the manufacture of sugar, SUGAR CROPS are used to produce alcohol and ethanol. In certain countries, sugar cane is eaten raw in minor quantities. It also is used in the preparation of juices and for animal feed. There are two major sugar crops: sugar beets and sugar cane. However, sugar and syrups are also produced from the sap of certain species of maple trees, from sweet sorghum when cultivated explicitly for making syrup and from sugar palm. Sugar beets that are cultivated solely as a fodder crop and red or garden beets that are classified as vegetable crops are excluded from the FAO list of sugar crops. Sugar cane is a perennial grass (replanted at intervals using pieces of the cane stalks) that is cultivated mainly in the tropics. Sugar beet is an annual crop that is propagated by the seeds of the flowers. It is cultivated in cooler climates than sugar cane, mainly above the 35th parallel of the Northern Hemisphere. Both sugar beets and sugar cane have a high water content, accounting for about 75% of the total weight of the plants. The sugar content of sugar cane ranges from 10 to 15% of the total weight, while that of sugar beets is between 13 and 18%. The protein and fat content of both beets and cane is almost nil.

Under the name SWEETENERS, FAO includes products used for sweetening that are derived from sugar crops, cereals, fruits or milk, or that are produced by insects. This category includes a wide variety of monosaccharides (glucose and fructose) and disaccharides (sucrose and saccharose). They exist either in a crystallized state as sugar, or in thick liquid form as syrups. The traditional sources of sugar are sugar cane and sugar beets. But in recent years, ever larger quantities of cereals (mainly maize) have been used to produce sweeteners derived from starch.

OTHER DERIVED PRODUCTS. In addition to sugar, molasses is also obtained with various degrees of sugar content. The by-product obtained from the extraction of sugar is called bagasse in the case of sugar cane, and beet pulp in the case of sugar beets.

**FBS 2536 - Sugar cane**

Sugar cane, species of *Saccharum officinarum,* fresh, chilled, frozen or dried, whether or not ground*,* in some producing countries, marginal quantities of sugar cane are consumed, either directly as food or in the form of juice.

Sugar cane does not include bagasse, the fibrous portion of the sugar cane remaining after the juice has been extracted

**FBS 2537 - Sugar beet**

Sugar beet, species of *Beta vulgaris var. altissima*, fresh, chilled, frozen or dried, whether or not ground, in some producing countries, marginal quantities are consumed, either directly as food or in the preparation of jams.

**FBS 2541 - Sugar non-centrifugal**

Sugar non centrifugal, generally derived from sugar cane through traditional methods without centrifugation

in the form of brown crystals or other solid forms, the colour being due to the presence of impurities, generally destined for processing into refined sugar products. . Raw sugar may, however, be of such a high degree of purity that it is suitable for human consumption without refining.

**FBS 2827 - Sugar (Raw Equivalent)**

Sugar (Raw Equivalent), a non-refined, crystallized material derived from the juices of sugar-cane stalk and consisting either wholly or essentially of sucrose, and from the juices extracted from the root of the sugar beet (raw, in solid form, not containing added flavouring or colouring matter) and consisting either wholly or essentially of sucrose.

**FBS 2543 - Sweeteners, Other**

Other sweeteners includes the following species:

* Fructose, chemically pure, or levulose, monosaccharide, present with glucose in sweet fruits and honey.
* Maltose, chemically pure, produced industrially from starch by hydrolysis with malt diastase. Used in the brewing industry. Invert sugar and other sugar and sugar syrup blends containing in the dry state 50% by weight of fructose are included.
* Maple sugar and syrups, is produced by atmospheric boiling of maple obtained from the sap of varieties of the maple tree, chiefly the Acer saccharum and the Acer nigrum, in an open-pan evaporator. Continuing the evaporation process until the syrup crystalizes yields maple sugar.
* Sugar crops n.e.c., including among all *Sorghum saccharatum* (sugar palm) and *Arenga saccharifera* (sweet sorghum). This subclass does not include: sugar cane (01802), sugar beet (01801), sugar beet seeds (01803), locust beans (carobs) (01356).
* Other fructose and syrup, monosaccharide found in fruits and honey, commercially produced from glucose, sucrose or by hydrolysis of inulin (polysaccharide found mainly in the tubers of the dahlia and the Jerusalem artichoke), containing in the dry state more than 50 % by weight of fructose, excluding invert sugar. Especially suitable for use by diabetics.

Both commercial and chemically pure fructose are included.

* Sugar and Syrups n.e.c. includes invert sugar, caramel, golden syrup, artificial honey, maltose other than chemically pure, sorghum and palm sugars. See also the general note in the introduction.

Invert sugar and other sugar and sugar syrup blends containing in the dry state 50 % by weight of fructose are included.

* Glucose and dextrose, a monosaccharide produced by hydrolysing starch with acids and/or enzymes. Dextrose is chemically pure glucose. Used in the food industry, in brewing, in tobacco fermentation and in pharmaceutical products.

It includes glucose and glucose syrup, not containing fructose or containing in the dry state less than 20 % by weight of fructose, as well as containing in the dry state at least 20 % but less than 50 % by weight of fructose.

Invert sugar is not included.

* Lactose, also known as milk sugar. Produced commercially from whey. Such products must contain by weight more than 95 % lactose, expressed as anhydrous lactose, calculated on the dry matter. Both commercial and chemically pure lactose included.
* Isoglucose, also known as HFCS (high-fructose corn syrup), HFSS (high-fructose starch syrup), HFGS (high-fructose glucose syrup). Isoglucose is a new type of starch syrup where glucose has been isomerized to fructose by using one or more isomerizing enzymes. Most important of the sweeteners manufactured from maize starch. Widely used in the production of food and soft drinks.
* Beverages, non-alcoholic, includes sweetened or flavoured mineral waters and other non-alcoholic beverages, such as lemonade, orangeade, cola, etc. Excludes fruit and vegetable juices. It includes waters, including mineral waters and aerated waters, containing added sugar or other sweetening matter or flavoured, and other non-alcoholic beverages, not including fruit or the following vegetable juices orange juice, grapefruit (including pomelo) juice, juice of any other single citrus fruit, pineapple juice, tomato juice, grape juice (including grape must), apple juice, cranberry (*Vaccinium macrocarpon, Vaccinium oxycoccos, Vaccinium vitis‑idaea*) juice, mixtures of juices, and juice of any other single fruit or vegetable

Molasses, a by-product of the extraction or refining of beet or cane sugar or of the production of fructose from maize. Used for feed, food, industrial alcohol, alcoholic beverages and ethanol.

**FBS 2745 - Honey**

Honey produced by bees (Apis mellifera) or by other insects, centrifuged, or in the comb or containing comb chunks, provided that neither sugar nor any other substance has been added.

It excludes artificial honey and mixtures of natural and artificial honey.

# PULSES AND DERIVED PRODUCTS

# PULSES are annual leguminous crops yielding from one to 12 grains or seeds of variable size, shape and colour within a pod. They are used for both food and feed. The term "pulses" is limited to crops harvested solely for dry grain, thereby excludingcrops harvested green for food (green peas, green beans, etc.) which are classified as vegetable crops. Also excluded are those crops used mainly for oil extraction (e.g.soybeand and groundnuts) and leguminous crops (e.g. seeds of clover and alfalfa) that are used exclusively for sowing purposes. In addition to their food value, pulses also play an important role in cropping systems because of their ability to produce nitrogen and thereby enrich the soil. Pulses contain carbohydrates, mainly starches (55-65% of the total weight); proteins, including essential amino acids (18-25%, and much higher than cereals); and fat (1-4%). The remainder consists of water and inedible substances. Production data should be reported in terms of dry clean weight, excluding the weightof the pods. Certain kinds of pulses can be skinned and partially crushed or split toremove the seed-coat, but the resulting products are still considered raw for classification purposes.

**FBS – 2546 Beans**

Beans dry, species of *Phaseolus and Vigna spp*, P*. vulgaris* (kidney, , including white pea beans and haricot bean), *P. lunatus* (lima, butter bean), *P. angularis or Vigna angularis* (adzuki bean), *P. aureus* (mungo bean, golden, green gram), *P. mungo or Vigna mungo* (black gram, urd), *P. coccineus* (scarlet runner bean), *P. calcaratus* (rice bean), *P. aconitifolius* (moth bean), *P. acutifolius* (tepary bean), *Vigna radiata* and *Vigna aconitifolia*, dried, shelled, whether or not skinned or split.

The class does not include: *Vigna sinensis* (Cow peas) (01706), *Vigna or Voandzeia subterranea* (Bambara beans) (01708); soya beans (0141); green beans (01241); lentils, green (01241.02); bean shoots and sprouts, (01290); locust beans (carobs) (01356); castor beans (01447); broad beans and horse beans (01243); garbanzo beans (chickpeas) (01703); lentils, dry (01704).

**FBS 2547 – Peas**

Peas, species of *Pisum sativum* (garden pea) and *Pisum arvense* (field pea), dried, shelled, whether or not skinned or split

It includes: dried peas, shelled, whether or not skinned or split; peas for fodder, dried, shelled; green peas, dried, shelled, whether or not skinned or split; peas seed, dried

**FBS 2549 – Other pulses and products**

Other pulses and products includes the following commodities (dried and shelled, of a kind used for human or animal consumption, even if intended for sowing or for other purposes):

* Broad beans, horse beans, species of *Vicia faba,* mainly *V. faba var. equina* (horse-bean), *V. faba var. major* (broad bean) and *V. faba var. minor* (field bean);
* Chick-peas, species of *Cicer arietinum* (chickpea, Bengal gram, garbanzos);
* Cow peas, species of *Vigna unguiculata*;
* Pigeon peas, species of *Cajanus cajan*;
* Lentils and dhal;
* Bambara beans, species of Vigna subterranea or Voandzeia subterranean;
* Lupines, vetches and similar forage products, fresh or dried, whole, cut, chopped or pressed. These products remain in the heading whether or not they have been salted or otherwise treated in a silo to prevent fermentation or deterioration.

Seeds of vetches (other than broad beans and horse beans) are not included.

Processed products expressed in terms of primary equivalent: flour of pulses (23170.03).

Nutrient data only are available for: Bran of Pulses (39120.14)

# NUTS AND DERIVED PRODUCTS

Tree NUTS are dry fruits or kernels enclosed in woody shells or hard husks, which in turn are generally covered by a thick, fleshy/fibrous outer husk that is removed during harvest. Similar products, such as groundnuts, sunflower seeds and melon seeds, although often used for similar purposes, are included with oil-bearing crops. FAO includes in this group only dessert or table nuts. Nuts that are used mainly for flavouring beverages and masticatory and stimulant nuts should be excluded. An exception is made for areca nuts and kola nuts, which FAO considers to be inedible nuts, but which are included with the nut and derived products group to be consistent with international trade classifications. Nuts used mainly for the extraction of oil or butter, (e.g. sheanuts) as well as nuts contained in other fruits (e.g. peaches) are excluded. It should be noted that some countries report certain nut crops (chestnuts, pignolia nuts) with forestry products. Production data relate to the weight of nuts in the shell or husk, but without the outer husk. The weight of the kernel contained in the nut ranges from as low as 30% for cashew nuts to as high as 80% in the case of chestnuts. The edible portion of nut kernels is, with the major exception of chestnuts, very rich in fat content at between 50% and 65%. Protein content makes up 15-20% and carbohydrate content is between 10% and 15%. Starch and saccharose are the main components of dry chestnuts, accounting for about 75%.

NUT PRODUCTS include shelled nuts, whole or split, and further processed products, including roasted nuts, meal/flour, paste, oil, etc. Nut oils are not separately identified in the FAO classification; instead they are included under the heading "oil of vegetable origin n.e.c.". The most commonly marketed oils are almon oil and cashew nut oil and its derivative cardol.

**FBS 2551 – Nuts**

Nuts includes the following commodities, fresh or dried, whether or not shelled or peeled:

* Brazil nuts, species of *Bertholletia excelsa* (Brazil, Para or cream nut).
* Cashew nuts, species of *Anacardium occidentale*, produced mainly in East Africa, India and Brazil.
* Chestnuts, species of *Castanea spp, C. vesca, C. vulgaris, C. sativa*, produced mainly in Europe and Asia.
* Almonds, species of *Prunus amygdalus*, *P. communis* and *Amygdalus communis*, produced mainly in Mediterranean countries, the United States and Asia.
* Walnuts, species of *Jugland spp., J. regia*, produced in temperate zones of the Northern Hemisphere, particularly in the United States.
* Pistachios, species of *Pistacia vera*, produced mainly in the Near East and the United States.
* Kolanuts, species of *Cola nitida; Cola vera; Cola acuminata* (kola, cola, Sudan cola nut), produced mainly in Africa. Kola nuts, containing 2.4 to 2.6% caffeine, are commonly chewed by the local population. Much used in Europe and America in the production of beverages.
* Hazelnuts (Filberts), species of *Corylus avellana*, produced mainly in Mediterranean countries and the United States.
* Arecanuts, species of *Areca catechu* (areca, betel nut), produced mainly in the Far East. Areca nuts are used mainly as masticatory. These nuts contain alkaloids (arecoline and arecaidine).
* Nuts n.e.c., including among all:
* *Carya illinoensis* (pecan nut)
* *Caryocar nuciferum* (butter or swarri nut)
* *Canarium spp.* (pili nut, Java almond, Chinese olives)
* *Lecythis zabucajo* (paradise or sapucaia nut)
* *Macadamia ternifolia* (Queensland, macadamia nut)
* *Pinus pinea* (pignolia nut)

Other nuts that are not identified separately, and because of their minor relevance at the international level. Because of their limited local importance, some countries report nuts under this heading that are classified individually by FAO.

Wild edible nuts and groundnuts are not included.

**OIL-BEARING CROPS AND DERIVED PRODUCTS**

OIL-BEARING CROPS OR OIL CROPS include both annual (usually called oilseeds) and perennial plants whose seeds, fruits or mesocarp and nuts are valued mainly for the edible or industrial oils that are extracted from them. Dessert and table nuts, although rich in oil, are listed under Nuts (see Group 5). Annual oilseed plants tha are either harvested green or are used for grazing and for green manure are included with Fodder Crops (see Group 11). Some of the crops included in this group are also fibre crops in that both the seeds and the fibres are harvested from the same plant. Such crops include: coconuts, yielding coir from the mesocarp; kapok fruit; seed cotton; linseed; and hempseed. In the case of several other crops, both the pulp of the fruit and the kernels are used for oil. The main crops of this type are oil-palm fruit and tallow tree seeds. Production data are reported in terms of dry products as marketed. Exceptions to this general rule include: groundnuts, which are reported as groundnuts in the shell; coconuts, which are reported on the basis of the weight of the nut including the woody shell, but excluding the fibrous outer husk; and palm oil, which is reported in terms of oil, by weight. Because of the very different nature of the various oil crops, the primary products cannot be aggregated in their natural weight to obtain total oil crops. For this reason, FAO converts the crops to either an oil equivalent or an oilcake equivalent before aggregating them. Only 5-6% of the world production of oil crops is used for seed (oilseeds) and animal feed, while about 8% is used for food. The remaining 86% is processed into oil. The fat content of oil crops varies widely. Fat content ranges from as low as 10-15% of the weight of coconuts to over 50% of the weight of sesame seeds and palm kernels. Carbohydrates, mainly polysaccharides, range from 15 to 30% in the oilseeds, but are generally lower in other oil-bearing crops. The protein content is very high in soybeans, at up to 40%, but is much lower in many other oilseeds, at 15-25%, and is lower still in some other oil-bearing crops.

PRODUCTS DERIVED FROM OIL CROPS. Edible processed products from oil crops, other than oil, include flour, flakes or grits, groundnut preparations (butter, salted nuts, candy), preserved olives, desiccated coconut and fermented and non-fermented soya products.

**FBS 2555 - Soyabeans**

Soyabeans, species of Glycine soja, is the most important oil crop. Also widely consumed as a bean and in the form of various derived products because of its high protein content, e.g. soya milk, meat, etc.

Roasted soya beans used as a coffee substitute are not included.

Processed products expressed in terms of primary equivalent: soya sauce (23995.01); soya paste (23995.02); soya curd (23999.03).

**FBS 2556 - Groundnuts (Shelled Equivalent)**

Groundnuts (Shelled Equivalent), species of *Arachis hypogaea* (peanuts), whether or not shelled or broken, which are not roasted or otherwise cooked, used as direct food and for extracting oil.

For trade data, groundnuts in shell are converted at 70% and reported on a shelled basis.

Processed products expressed in terms of primary equivalent: prepared groundnuts (21495.01); peanut butter (21495.02).

**FBS 2557 - Sunflower seed**

Sunflower seed, species of *Helianthus annuus*, whether or not broken. Valued mainly for its oil, minor uses include as a human food and as feed for birds.

No processed products expressed in terms of primary equivalent available.

**FBS 2574 - Rape and Mustard Oil**

Rape and mustard oil is obtained by dry pressure extraction of seeds of several species and. Generally containing a high level of erucic acid, it has both food and industrial uses.

Oil of rapeseed or canola oil is obtained for food use from seeds of *Brassica*, particularly *B. napus* and *B. rapa* (or *B. campestris*). Canola oil is produced from new varieties of rapeseed. Oil recovered with solvent from the residues of the pressure extraction is used for industrial purposes, it is used for salad dressings, to produce margarine, and for other industrial products. The refined oils (generally colza oil) are edible.

Oil of mustard seed is obtained of seeds of Sinapsis alba and Brassica hirta (white mustard), *Brassica nigra* (black mustard) and *Brassica juncea* (Indian mustard), and it is used in medicines, for cooking or in industrial products.

**FBS 2575 - Cottonseed oil**

Cottonseed oil, several species of the genus *Gossypium*, obtained first by pressure extraction from the kernels of cotton seeds, used mainly as a food but also in industry. The pure refined oil is of great value as a salad or cooking oil and for making margarine and lard substitutes. The residue from the extraction process is then exposed to a solvent.

**FBS 2560 - Coconuts (Including Copra)**

Coconuts including copra, species of *Cocos nucifera* (Husked coconut), in shell, including meat, coconut, fresh, whether or not shredded, covered by the endocarp, while exocarp (the smooth outer skin) and mesocarp (the fibrous covering) are removed. Immature nuts contain a milky juice that is consumed as a refreshing drink. Mature nuts are consumed as such, or processed for copra or desiccated coconut. The flesh, from which copra/oil is extracted, constitutes 40-70% of the weight of the husked coconut. The oil content is about 36% of the flesh.

Copra is the dried flesh of coconut from which the oil is extracted and it is unsuitable for human consumption.

**FBS 2561 – Sesameseed**

Sesameseed, species of *Sesamum indicum,* whether or not broken, valued for its oil, but also as a food, either raw or roasted, as well as in bakery products and other food preparations.

**FBS 2576 - Palmkernel oil**

Palmkernel oil, obtained mainly from the African oil palm *Elaeis guineensis*, obtained from the kernel of the nut of the fruits of the oil palm by pressure in two or three stages at different temperatures. Including oil of babassu kernels and, used in the margarine and candy industries and in the manufacture of glycerol, shampoos, soap and candles.

**FBS 2563 – Olives**

Olives, species of *Olea europaea,* fresh or chilled, includes table olives and olives for oil.

**FBS 2570 - Oilcrops, Other**

Other oilcrops include the following seeds and fruits of a kind used for the extraction of edible or industrial oils and fats:

* Karite Nuts (Sheanuts), species of *Butyrospermum parkii.* Production data refer only to the nut contained in the fruit although the pulp around the nut is also edible.
* Castor Beans, species of *Ricinus communis*, valued mainly for their oil, which is used in pharmaceutical products. Ground seedcakes are used as fertilizers (castor oil pomace).
* Tung Nuts, species of *Aleurites cordata* and *Aleurites fordii*, valued mainly for their oil.
* Jojoba Seeds, species of *Simmondsia californica* or *S. chinensis*, from the shrub or small tree of the Buxaceae family.
* Safflower seed, species of *Carthamus tinctorius*, whether or not broken, valued mainly for its oil. Minor uses include as a human food and as poultry feed.
* Poppy seed, species of *Papaver somniferum*, the source of opium, poppy seeds are also used in baking and confectionery.
* Melonseed, species of *Cucumis melo*, includes seeds of other Cucurbitaceae.
* Tallowtree Seeds, species of *Shorea aptera; Shorea stenocarpa* (Borneo tallow tree) and *Sapium sebiferum; Stillingia sebifera* (Chinese tallow tree), grown wild and cultivated. FAO considers vegetable tallow (21691.09) and stillingia oil (21691.10) to be primary products.
* Kapok fruit, species of *Ceiba pentandra*, the fruit of kapok contains fibre and seeds, which FAO treats as primary crops.

When in shell the soft shell is approximately 40-50% of the total weight of the nut; if shelled it is used for extracting oil.

* Linseed, species of *Linum usitatissimum* (Flaxseed), whether or not broken an annual herbaceous that is cultivated for its fibre as well as its oil. It includes the seeds of the flax plant.
* Hempseed, species of *Cannabis sativa, is a*n annual herbaceous that is cultivated for its fibre as well as its oil. In major producing countries oil is extracted from the seeds.
* Oilseed n.e.c., including among all:
* *Fagus sylvatica* (beech nut)
* *Aleurites moluccana* (candlenut)
* *Carapa guineensis* (carapa seed)
* *Croton tiglium* (croton seed)
* *Bassia latifolia* (illipe seed)
* *Guizotia abyssinica* (niger seed)
* *Licania rigida* (oiticica seed)
* *Perilla frutescens* (perilla seed)
* *Jatropha curcas* (physic nut)
* *Shorea robusta* (sal tree seed)
* *Pongamia glabra* (pongam seed)
* *Astrocaryum spp*. (tukuma kernel)

Other oilseeds, oleaginous fruits and nuts that are not identified separately because of their minor relevance at the international level. Because of their limited local importance, some countries report commodities under this heading that are classified individually by FAO. Also included under this code are tea seeds, grape pips and tomato seeds from which oil is extracted.

Processed products expressed in terms of primary equivalent: flour of oilseeds (21920 - flours and meals of oil seeds or oleaginous fruits, except those of mustard).

**VEGETABLE OILS AND FATS**

VEGETABLE OILS AND FATS. Oil extraction by traditional methods often requires various preliminary operations, such as cracking, shelling, dehulling, etc., after which the crop is ground to a paste. The paste, or the whole fruit, is then boiled with water and stirred until the oil separates and can be collected. Such traditional methods have a low rate of efficiency, particularly when performed manually. Oil extracted by pressing without heating is the purest method and often produces an edible product without refining. Modern methods of oil recovery include crushing and pressing, as well as dissolving the crop in a solvent, most commonly hexane. Extracting oil with a solvent is a more efficient method than pressing. The residue left after the removal of oil (oilcake or meal) is used as feedstuff. Crude vegetable oils are obtained without further processing other than degumming or filtering. To make them suitable for human consumption, most edible vegetable oils are refined to remove impurities and toxic substances, a process which involves bleaching, deodorization and cooling (to make the oils stable in cold temperatures). The loss involved in these processes ranges from 4 to 8%. The FAO concept includes raw, refined and fractioned oils, but not chemically modified oils. With some exceptions, and in contrast to animal fats, vegetable oils contain predominantly unsaturated (light, liquid) fatty acids of two kinds: monounsaturated (oleic acid - mainly in extra virgin olive oil) and polyunsaturated (linoleic acid and linolenic acid - in oils extracted from oilseeds). Vegetable oils have a wide variety of food uses, including salad and cooking oils, as well as in the production of margarine, shortening and compound fat. They also enter into many processed products, such as mayonnaise, mustard, potato chips, French fries, salad dressing, sandwich spread and canned fish. Industrial and non-food uses of vegetable oils include the production of soaps, detergents, fatty acids, paint, varnish, resin, plastic and lubricants.

**FBS 2571 - Soyabean Oil**

Soyabean oil, crude and refined, obtained by hydraulic or expeller presses or solvent extraction from the seeds of the soya bean. Used mainly for food, and also for industrial purposes.

**FBS 2572 - Groundnut Oil**

Groundnut oil (or peanut oil), crude and refined, obtained by pressure or solvent extraction from the seeds of nuts of the common ground‑nut (*Arachis hypogaea*). Used mainly for food, and also for making soaps or lubricants.

**FBS 2573 - Sunflowerseed Oil**

Sunflowerseed oil, whether or not refined, but not chemically modified, obtained by pressure extraction from the seeds of seeds of the safflower (*Carthamus tinctoris*). Used mainly for food, and also for making medicines, alkyd resins, paints and varnishes.

**FBS 2577 - Palm oil**

Palm oil, whether or not refined, mainly from the African oil palm (Elaeis guineensis), obtained from the mesocarp of the fruit of the oil palm by pressure, and also by solvent from the residues of the pressure extraction, used in the manufacture industry. Refined palm oil is used as food stuff.

Palm kernel oil or babassu oil not included (2576).

Processed products expressed in terms of primary equivalent: industrial monocarboxylic fatty acids; acid oils from refining (34120); residues of fatty substances (21932.02).

**FBS 2578 - Coconut oil**

Coconut oil, whether or not refined, is obtained from copra of the coconut (*Cocos nucifera*) by pressure and by solvent from the residues of pressure extraction. Used in manufacture industry, when refined is used as food.

**FBS 2579 - Sesameseed Oil**

Sesameseed oil, whether or not refined, but not chemically modified, from the seeds of an annual herb (*Sesamum indicum*), is obtained by pressure extraction in two or three stages at different temperatures. Sometimes the oil is also extracted by solvent from the residue of the pressure extraction.

Used mainly for food, also used also for industrial purposes.

**FBS 2580 - Olive Oil**

Olive oil, whether or not refined but not chemically modified, is obtained from the fruit of the olive tree (*Olea europaea L.*) by mechanical or other physical means. Olive oil is the only vegetable oil that can be consumed without refining.

It includes oil of olive residues, extracted with solvents from olive residues left after the olives have been pressed to produce olive oil.

**FBS 2581 - Ricebran Oil**

Ricebran oil, whether or not refined, but not chemically modified, from the seeds of an annual herb (*Sesamum indicum*), is extracted from bran by pressure or, more frequently, by solvents.

**FBS 2582 - Maize Germ Oil**

Maize germ oil, whether or not refined but not chemically modified, is extracted from germ of maize or Indian corn by pressure or by solvents. The refined oil is edible and is used for cooking, in bakeries, for mixing with other oils.

**FBS 2586 - Oilcrops Oil, Other**

Other oilcrops oil includes the following vegetable fats and oils, whether or not refined, but not chemically modified:

* Butter of karite nuts, a very important vegetable oil in West Africa. Used as a substitute for cocoa butter and in cosmetics.
* Oil of castor beans, from the seeds of *Ricinus communis*, obtained by pressure or by solvent. Uses include mainly industrial ones, in pharmaceuticals and cosmetics.
* Oil of tung nuts, from the seeds of different species of the genus *Aleurites* (*A. fordii, A. montana*), obtained by pressure and used exclusively for industrial purposes. The resulting cake contains a toxic protein and thus cannot be used for feed.
* Oil of jojoba, from the seeds of desert shrubs of the genus *Simmondsia* (*S. californica or S. chinensis*), obtained by cold pressure. Its peculiar chemical properties make it the only vegetable oil in nature having the same characteristics as spermaceti. Below 15˚C it solidifies and assumes the characteristics of wax. It is used as a lubricant, in cosmetics and in pharmaceuticals, and is considered a product with good growth prospects.
* Safflower oil, from the seeds of the safflower (*Carthamus tinctoris*), obtained either by pressure or by solvent. Has both food and industrial uses.
* Poppy oil, obtained by pressure extraction. Has both food and industrial uses.
* Vegetable tallow, obtained by pressure extraction or by solvent from the kernels of the fruit of the Borneo tallow tree and from the outer coating that surrounds the seeds of the fruit of the Chinese tallow tree. Used as a substitute for cocoa butter. Also used in soap, candles, medicines and cosmetics.
* Stillingia oil, obtained by solvent from the seeds of Stillingia sebifera. Used as a drying agent in paints and varnishes.
* Oil of kapok, obtained from shelled seeds by pressure. Used for food and soap.
* Linseed oil, from the seeds of the flax plant (*Linum usitatissimum*), obtained by pressure extraction. Used mainly in non-food items. Cold -pressed linseed oil fits for human consumption.
* Oil of hempseed, obtained either by pressure extraction or by solvent. Used mainly in non-food items.
* Oil of vegetable origin n.e.c., includes, inter alia, myrtle wax and Japan wax.
* Cocoa butter, obtained by hot-pressing either cocoa paste or the whole bean. Includes the fat and oil. Used in chocolate‑making to enrich cocoa pastes, in confectionery, perfumery, in the manufacture of cosmetics and in pharmacy.
* Liquid margarine and margarine short, made principally from one or more hydrogenated vegetable or animal fats or oils in which is dispersed an aqueous potion containing milk products, salt, flavouring agents and other additives. Shortening is a product similar to margarine, but with a higher animal fat content. Shortening and compound fats are used primarily for baking and frying. The fat content of margarine and shortening varies from 70 to 90%.
* Castor Oil, Hydrogenated, also called "opal wax". Vegetable oil and their fractions, partly or wholly hydrogenated, inter-esterified, re-esterified or elaidinised, frequently used as constituents in the preparation of edible fat.
* Oils boiled dehydrated, also includes oxidized and sulphurized oils. Animal and vegetable fats and oils whose chemical structure has been modified to improve viscosity, drying ability or other properties.

It includes, inter alia:

* Linoxyn
* Mixtures of animal or vegetable fats or oils or fractions of different fats or oils not elsewhere specified or included, inedible
* Oil, castor, dehydrated
* Oils, animal or vegetable, blown
* Oils, animal or vegetable, boiled
* Oils, animal or vegetable, oxidized
* Oils, animal or vegetable, polymerized by heat in vacuum or in inert gas
* Oils, animal or vegetable, sulphurized (excl. fractions)
* Oils, brominated
* Oils, deep-frying, used, containing, e.g., rapeoil, soya bean oil and a small quantity of animal fat, for use in the preparation of animal feeds
* Oils, drying (excl. liquid driers)
* Oils, epoxidised
* Oils, maleic
* Oils, Teka
* Preparations of animal or vegetable fats or oils or fractions of different fats or oils not elsewhere specified or included, inedible
* Stand-oils

Hydrogenated oils and fats, animal and vegetable fats and oils that have been hydrogenated to raise their melting point and increase their consistency by transforming unsaturated glycerides into saturated glycerides.

**VEGETABLES AND DERIVED PRODUCTS**

VEGETABLES, as classified in this group, are mainly annual plants cultivated as field and garden crops in the open and under glass, and used almost exclusively for food. Vegetables grown principally for animal feed or seed should be excluded. Certain plants, normally classified as cereals and pulses, belong to this group when harvested green, such as green maize, green peas, etc. This grouping differs from international trade classifications for vegetables in that it includes melons and watermelons, which are normally considered to be fruit crops. But, whereas fruit crops are virtually all permanent crops, melons and watermelons are similar to vegetables in that they are temporary crops. Chillies and green peppers are included in this grouping when they are harvested for consumption as vegetables and not processed into spices (see also Group 10). FAO production data for green peas and green beand refer to the total weight including pods, although some countries report on a shelled weight basis. The weight of the pods ranges from 40 to 50% for peas to up to 70% for broad beans. Area data on small vegetable gardens are often omitted in agricultural surveys, although production estimates may be reported. Trade data for fresh vegetables also include chilled vegetables, meaning the temperature of the products has been reduced to around 0°C without the products being frozen. Vegetables contain principally water, accounting for between 70% and 95% of their weight. They are low in nutrients, but contain minerals and vitamins.

PRODUCTS DERIVED FROM VEGETABLES refer to processed products. Apart from a few main products, international trade classifications do not permit a sufficiently detailed classification of processed products according to the primary commodity used in the preparation. A similar situation prevails for frozen vegetables.

**FBS 2601 – Tomatoes**

Tomatoes, species of Lycopersicon esculentum, fresh or chilled of all kinds.

Processed products expressed in terms of primary equivalent:

•juice of tomatoes (21321); paste of tomatoes (21399.01); tomato peeled (21399.02).

**FBS 2602 – Onions**

Onions, species of *Allium cepa,* includes onion sets, Welsh and spring onions, scallions and shallots at a mature stage, but not dehydrated.

**FBS 2605 - Vegetables, Other**

Vegetables other includes the following vegetable fresh or chilled:

* Cabbages, species of *Brassica chinensis* (Chinese, mustard cabbage, pak-choi), *Brassica oleracea all var. except botrytis* (white, red, savoy cabbage, Brussels sprouts, collards, kale and kohlrabi).

It includes inter alia: edible brassicas; brussels sprouts; cabbage (Chinese, red, savoy, spring, turnip-rooted, white); collards; kale; kohlrabi.

* Artichokes, species of *Cynara scolymus*.

It does not include Jerusalem artichokes (01599); artichokes, Chinese and Artichokes globe

* Asparagus, species of *Asparagus officinalis*.
* Lettuce and chicory, species of *Lactuca sativa, Cichorium intybus var. foliosum* (witloof chicory), *Cichorium endivia var. crispa* (endive) and *Cichorium endivia var. latifolia* (escarole chicory).

It includes inter alia: chicory (blanched, curly, escarole and witloof); endive; escarole; lettuce (cabbage, head, romaine).

It excludes chicory plants and chicory roots.

* Spinach, species of *Spinacia oleracea*. Trade figures may include New Zealand spinach (Tetragonia espansa) and orache (garden) spinach (Atriplex hortensis).

It includes inter alia: spinach (garden, New Zealand, orache).

* Cassava leaves, species of *Manihot esculenta* and *Manihot utilissima.* Young cassava leaves are eaten in some areas of Africa as a vegetable.
* Cauliflowers and broccoli, species of *Brassica oleracea var. botrytis*, *subvariety cauliflora and cymosa,* includes headed broccoli.
* Pumpkins, squash and gourds, species of *Cucurbita* (squash, pumpkins, zucchini, etc.),and *Lagenaria* (gourds) genus of the Cucurbitaceae family, including marrows.

It includes inter alia: marrows; pumpkins; squash.

* Cucumbers and gherkins, species of *Cucumis sativu*.
* Eggplants, species of *Solanum melongena*, also called aubergines.
* Chillies and peppers green. Species of *Capsicum annuum*, and *Pimenta officinalis*. Production data exclude crops cultivated explicitly as spices.

In contrast, trade data include these crops, provided they are fresh, uncrushed and unground.

It includes inter alia: paprika; peppers (bell, cayenne, chilli, clove, English, Indian, Jamaica, pimento, Spanish, sweet, Turkish); Pimentos (*Capsicum frutescens*).

* Onions, shallots (green), species of *Allium ascalonicum* (shallots), *Allium cepa* (onions) and *Allium fistulosum* (welsh onions). Young onions pulled before the bulb has enlarged; used especially in salads. Includes onion sets.
* Garlic, species of *Allium sativum*.
* Leeks and other alliaceous vegetables, species of *Allium porrum* (leeks) and *Allium schoenoprasum* (chives). It includes, inter alia, vegetables alliaceous. Onions and shallots green (01253.01), onions and shallots dry excluding dehydrated (01253.02) and green garlic (01252) excluded.
* Beans green, species of *Phaseolus spp*. and *Vigna spp*., for shelling. It includes lima or butter beans, mung beans and beans in edible pods~~.~~
* Peas green, species of *Pisum sativum*, mostly for shelling, but including edible - podded peas or sugar peas. Fodder peas included.
* Broad Beans green, species of *Vicia faba*, for shelling.
* String Beans, species of *Phaseolus vulgaris, n*ot for shelling.
* Carrot, species of *Daucus carota*, trade data may include edible turnips (*Brassica rapa var. rapifera*). Forage carrots excluded.
* Okra, species of *Abelmoschus esculentus* and *Hibiscus esculentus*, also called gombo.
* Green Corn (Maize), species of *Zea mays, particularly var. saccharata*, harvested green for food. It includes *Saccharata variety,*commonly known as sweet corn, whether or not on the cob.
* Mushrooms, including among all *Boletus edulis*, *Agaricus campestris*, *Morchella spp*. and *Tuber magnatum*, cultivated or spontaneous. Includes truffles.
* Chicory roots, species of *Cichorium intybus* and *Cichorium sativum*, unroasted chicory roots of a kind used primarily for human consumption, whether fresh or dried, whole or chopped.
* Carobs, species of *Ceratonia silique* (Carob-tree, locust bean), includes also seeds. Mainly used as an animal feed and for industrial purposes. Rich in pectin.

Including inter alia: locust beans (or carob), with or without seeds, fresh or dried, whether or not kibbled or ground but not further prepared; locust endosperm (or carob) bean (excl. endosperm flour); flour of locust (or carob) bean germ or pericarp; germ, locust (or carob) bean, whether or not powdered; seeds, locust (or carob) bean, fresh or dried, not roasted, whether or not kibbled or ground but not further prepared (excl. endosperm flour).

* Vegetables fresh n.e.c., including among all: *bambusa spp*. (bamboo shoots), *beta vulgaris* (beets, chards), *capparis spinosa* (capers), *cynara cardunculus* (cardoons), *apium graveolens* (celery), *anthriscus cerefolium* (chervil), *lepidium sativum* (cress), *foeniculum vulgare* (fennel), *cochlearia armoracia* (horseradish), *majorana hortensis* (marjoram, sweet), *tragopogon porrifolius* (oyster plant), *petroselinum crispum* (parsley), *pastinaca sativa* (parsnips), *raphanus sativu* (radish), *rheum spp*. (rhubarb), *brassica napus* (rutabagas, swedes), *satureja hortensis* (savory), *scorzonera hispanica* (scorzonera), *rumex acetosa* (sorrel), *artemisia dracunculus* (soybean sprouts tarragon), *nasturtium officinale* (watercress), that are not identified separately because of their minor relevance at the international level. Because of their limited local importance, some countries report vegetables under this heading that are classified individually by FAO.
* Watermelons, species of *Citrullus vulgaris.*
* Melons Cantaloupes, species of *Cucumis melo.*

Including inter alia: cantaloupes; melons (casaba, citron, cranshaw, honeydew, Persian, musk

Processed products expressed in terms of primary equivalent: sweet corn frozen (21319.01); sweet corn prep or preserved (21399.03); dried mushrooms (21393.01); canned mushrooms (21397.01); juice of vegetables n.e.c. (21329); vegetables dehydrated (21393.90); vegetables in vinegar (21340); vegetables preserved n.e.c. (21394, 21395, 21396, 21399.92); vegetable frozen (21311, 21312, 21319.90); vegetables provisionally preserved (21330); vegetables prepared or preserved frozen (21394, 21399.93); homogenized vegetable preparations (23991.02); coffee substituted (23912.01).

**FRUITS AND DERIVED PRODUCTS**

FRUIT CROPS consist of fruits and berries that, with few exceptions, are characterized by their sweet taste. Nearly all are permanent crops, mainly from trees, bushes and shrubs, as well as vines and palms. Fruits and berries grow on branches, stalks or the trunks of plants, usually singly, but sometimes grouped in bunches or clusters (e.g. bananas and grapes). Commercial crops are cultivated in plantations, but significant quantities of fruits are also collected from scattered plants that may or may not be cultivated. Although melons and watermelons are generally considered to be fruits, FAO groups them with vegetables because they are temporary crops. Fruit crops are highly perishable. Their shelf life may be extended through the application of chemical substances that inhibit the growth of micro-organisms and through careful control of the surrounding temperature, pressure and humidity once the fruit has been picked. Fruits and berries have a very high water content accounting for some 70- 90% of their weight. They contain, in various degrees, minerals, vitamins and organic acids, some of which reside in the peel or skin. Some fruits have a high fibre content and other inedible components, so that wastage is high, e.g. 60% for passion fruit and 35-45% for pineapples. The waste in temperate zone fruit is lower, generally of the order of 10-15%, while berries contain very little waste. The carbohydrate content of fruits varies widely. Protein content is very low, averaging less than 1%, or below that in vegetables. Fat content in fruit is negligible, with the notable exception of avocados. Fruit crops are consumed directly as food and are processed into dried fruit, fruit juice, canned fruit, frozen fruit, jam, alcoholic beverages, etc. Fruit crops are not normally grown for animal feed, although significant quantities of diseased and substandard fruits, as well as certain by-products of the fruit processing industry, are fed to animals. Production data for fruit crops should relate to fruits actually harvested. Data on bananas and plantains should relate to the weight of single bananas or banana hands, excluding the weight of the central stalk.

FRUIT CROPS PRODUCTS. Apart from a few main products, international trade classifications do not permit a sufficiently detailed classification of processed products according to the primary commodity used in the preparation. Fruit crops are processed for preservation and conservation, or for transformation from one substance into another, e.g. sugar into alcohol. Drying and wine making are two of the oldest methods of preservation. The manufacture of fruit syrups and juices, jams, jellies, marmalade, chutney and sauces are also traditional methods of preservation. Modern processes include canning, freezing, quick-freezing and dehydration. Other fruit products include fruit squashes, i.e. juice with some fruit tissues included, fruit nectars containing at least 30% fruit solids, and some soft drinks that contain a very small amount of fruit juice. Essential oils are extracted from some fruits and fruit peels, while the peel of some fruit is also used in confectionery.

**FBS 2611 - Oranges, Mandarines**

Oranges and mandarines, species of *Citrus sinensis* (common, sweet orange), *Citrus aurantium* (bitter orange), *Citrus reticulate* (mandarin, tangerine) and *Citrus unshiu* (clementine, satsuma), fresh or chilled. Bitter oranges are used primarily in the preparation of marmalade. It includes oranges, green for preserving, oranges Seville and Wilkings.

Processed products expressed in terms of primary equivalent: orange juice, single strength (21431.01); orange juice, concentrated (21431.02); tangerine juice (21439.01).

**FBS 2612 - Lemons, Limes**

Lemons and limes, species of *Citrus limon* (lemon), *Citrus latifolia* (limes), *Citrus aurantifolia* (sour lime) and *Citrus limetta* (sweet lime), fresh or chilled.

Processed products expressed in terms of primary equivalent: lemon juice, single strength (21439.02); lemon juice, concentrated (21439.03).

**FBS 2613 - Grapefruit**

Grapefruit, species of *Citrus maxima* and *Citrus grandis* (pomelos, shaddocks) and *Citrus paradise* (grapefruits, fruit of the grapefruit tree).

Processed products expressed in terms of primary equivalent: juice of grapefruit (21432); grapefruit juice, concentrated (21432.01).

**FBS 2614 - Citrus, other**

Citrus other, species of *Citrus bergamia* (bergamot), *Citrus medica var. cedrata* (citron), *Citrus myrtifolia* (chinotto, fruit of the myrtle-leaved orange) and *Fortunella japonica* (kumquat), fresh or chilled. Some minor varieties of citrus are used primarily in the preparation of perfumes and soft drinks.

Processed products expressed in terms of primary equivalent: citrus juice, single strength (21439.04); citrus juice, concentrated (21439.05).

**FBS 2615 – Bananas**

Bananas, species *Musa sapientum*, *Musa cavendishii* and *Musa nana* (sweet/dessert bananas)*,* normally eaten without further preparation.

Trade figures may include dried bananas. Data should be reported excluding the weight of the central stalk.

Plantains (*Musa paradisiaca*), cooking bananas, are excluded (01313).

**FBS 2616 – Plantains**

Plantains, species of *Musa paradisiaca*, starchy bananas that are less sweet than other bananas generally known as a cooking banana, primarily consumed after being fried, roasted, steamed, boiled or otherwise cooked. Data should be reported excluding the weight of the central stalk.

Bananas (*Musa sapientum, M. cavendishii, M. nana*), cooking bananas, are excluded (01312).

**FBS 2617 – Apples**

Apples, species of *Malus pumila*, *Malus sylvestris*, *Malus communis* and *Pyrus malus*, suitable for dessert, making beverages or industrial purposes.

Processed products expressed in terms of primary equivalent: apple juice, single strength (21435.01); apple juice, concentrated (21435.02).

**FBS 2618 – Pineapples**

Pineapples, species of *Ananas comosus* and *Ananas sativus,* fresh, dried or chilled. Trade figures may include dried pineapples.

Processed products expressed in terms of primary equivalent: pineapples, otherwise prepared or preserved (21491); pineapple juice (21433); juice of pineapples, concentrated (21433.01).

**FBS 2619 - Dates**

Dates, species of *Phoenix dactylifera*, include fresh, dried and chilled fruit.

**FBS 2620 – Grapes**

Grapes, species of *Vitis vinifera*, fresh or chilled, whether or not rough-packed in barrels, for dessert purposes or for wine‑production, whether grown outdoors or under glass.

Includes both table and wine grapes.

Processed products expressed in terms of primary equivalent: raisins (21411); grape juice (21434); must of grapes (24212.01).

**FBS 2625 - Fruits, Other**

Other fruits include the following vegetable fresh or chilled:

* Pears, species of *Pyrus communis*,suitable for dessert, for making beverages or for industrial purposes.
* Quinces, species of *Cydonia oblonga*, *Cydonia vulgaris* and *Cydonia japonica*,suitable for dessert, for making beverages or for industrial purposes. Mainly used for making jam or jelly.
* Apricots, species of *Prunus armeniaca*.
* Sour cherries, species of *Prunus cerasus* and *Cerasus acida*.
* Cherries, species of *Prunus avium*, *Cerasus avium* (mazzard, sweet cherry) *var. duracina* (hard-fleshed cherry) and *var. juliana* (heart cherry). Whiteheart cherries and morello cherries included.
* Peaches and nectarines, species of *Prunus persica*, *Amygdalus persica* and *Persica laevis*, including nectarines.
* Plums of all kinds (greengages, mirabelles, damsons, etc.) and sloes, species of *Prunus domestica* (greengage, mirabelle, damson) and *Prunus spinosa* (sloe)
* Stone fruit fresh n.e.c.. Other stone fruit not separately identified. In some countries, apricots, cherries, peaches, nectarines and plums are reported under this general category.
* Pome fruit n.e.c.. Other pome fruit not separately identified. In some countries apples, pears and quinces are reported under this general category.
* Strawberries, species of *Fragaria spp*.
* Raspberries, species of *Rubus idaeus.* Trade data may include blackberries, mulberries and loganberries (a cross between the raspberry and blackberry).
* Gooseberries , species of *Ribes grossularia*. Trade data may sometimes include black, white or red currants.
* Currants, species of *Ribes nigrum* (black) and *Ribes rubrum* (red and white). Trade data may sometimes include gooseberries..
* Blueberries, species of *Vaccinium myrtillus* (European blueberry, wild bilberry, whortleberry) and *Vaccinium corymbosum* (American blueberry). Trade data may include cranberries, myrtle berries and other fruits of the genus *Vaccinium*.
* Cranberries, species of *Vaccinium macrocarpon* (American cranberry) and *Vaccinium oxycoccus* (European cranberry). Trade data may include blueberries, myrtle berries and other fruits of the genus *Vaccinium*.
* Berries n.e.c., including among all species of *Morus nigra* (blackberry), *Morus alba*, *Morus rubra* (loganberry; white, red mulberry), *Myrtus communis* (myrtle berry) and *Gaylussacia spp*. (huckleberry, dangleberry). Other berries not separately identified. In some countries, some or all of the berries listed previously are reported under this general category.
* Watermelons, species of *Citrullus vulgaris,* and *Melons Cantaloupes*, species of *Cucumis melo.* It includes, inter alia, casaba, citron, cranshaw, honeydew, Persian and musk melons.
* Figs, species of *Ficus carica*, whether or not to be used for distillation.
* Mangoes, species of *Mangifera indica*. Trade figures may include dried mangoes, guavas and mangosteens, including both fresh and dried.
* Avocados, species of *Persea Americana*.
* Persimmons (kakis), species of *Diospyros kaki and Diospyros virginiana.*
* Cashewapple, species of *Anacardium occidentale, t*he thickened, fleshy stem below the cashew nut. When soft it is used for jam.
* Kiwi fruit, species of *Actinidia chinensis* or *Actinidia deliciosa*.
* Papayas, species of *Carica papaya*.
* Fruit tropical fresh n.e.c., including among all:
  + *Artocarpus incisa* (breadfruit)
  + *Averrhoa carambola (carambola)*
  + *Annona spp. (cherimoya, custard apple)*
  + *Durio zibethinus (durian)*
  + *Feijoa sellowiana (feijoa)*
  + *Psidium guajava (guava)*
  + *Spondias spp. (hog plum, mombin)*
  + *Artocarpus integrifolia (jackfruit)*
  + *Nephelium longan (longan)*
  + *Mammea americana (mammee)*
  + *Garcinia mangostana (mangosteen)*
  + *Solanum quitoense (naranjillo)*
  + *Passiflora edulis (passion fruit)*
  + *Nephelium lappaceum (rambutan)*
  + *Calocarpum mammosum (sapote, mamey colorado)*
  + *Achras sapota (sapodilla)*
  + *Chrysophyllum spp (star apple, cainito).*

Other tropical fresh fruit are not identified separately because of their minor relevance at the international level. In some countries mangoes, avocados, pineapples, dates and papayas are reported under this general category.

* + Fruit fresh n.e.c., includes among all: *crataegus azarolus* (azarole); *carica pentagona* (babaco); *sambucus nigra* (elderberry); *zizyphus jujuba* (jujube); *nephelium litchi* (litchi); *eriobotrya japonica* (loquat); *mespilus germanica* (medlar); *asimina triloba* (pawpaw); *punica granatum* (pomegranate); *opuntia ficus-indica* (prickly pear); *rosa spp.* (rose hips); *sorbus aucuparia* (rowanberry); *sorbus domestica* (service-apple); *tamarindus indica* (tamarind); *arbutus unedo* (tree-strawberry)

Other fresh fruit that are not identified separately because of their minor relevance at the international level. Because of their limited local importance, some countries report fresh fruit under this heading that are classified separately by FAO.

Processed products expressed in terms of primary equivalent: dry apricots (21419.01); plums dried (prunes) (21412); plum juice, single strength (21439.06); plum juice, concentrated (21439.07); mango juice (21439.08); fruit tropical dried n.e.c. (including mango and pineapple) (21419.90); fruit dried n.e.c. (21419.05); fruit juice n.e.c. (21439.90); peaches, otherwise prepared or preserved (21492); fruits uncooked or cooked, frozen (21493.01), jams, fruit jellies, marmalades, fruit or nut purree and fruit or nut pastes (21494),jams, fruit jellies, marmalades, fruit purree and fruit pastes (21494.01), fruit, provisionally preserved, not for immediate consumption (21496.01), other prepared and preserved fruit, n.e.c. (21499.02); flour of fruits (23170.04); fruit, nuts, peel, sugar preserved (23670.02); homogenized cooked fruit, prepared (23991.03).

**STIMULANT CROPS AND DERIVED PRODUCTS**

**COFFEE** is a tropical shrub that yields fruits or cherries which are processed so as to free the seeds or "beans" from the fruit pulp and then from the mucilage and silver skin covering the beans. Coffee with the mucilage and skin retained is called parchment coffee. By weight, the fresh cherries consist of 45-55% pulp, mucilage and skin, and 45-55% beans. The clean beand are called "green coffee" or "clean coffee" and this is considered to be a primary crop. Coffee contains caffeine, an alkaloid. Coffee is a stimulant, not a food crop.

**COCOA** is a rain-forest tree that is cultivated for its beans. The beand are contained in ovoid pods that grow directly on the trunk and on major branches. The beand and the white mucilage or pulp that surrounds them represent about one-third of the total weight of the pods. The fermented and dried beand are considered to be a primary crop from which various processed products are derived, including roasted beand (still in the shell) and nibs, or fragments of roasted, shelled and crushed beans. The nibs are ground to give cocoa mass, from which cocoa fat or butter is extracted by pressing. Pods, shells, pulp and cake have only limited use as an animal feed owing to their high alkaloid content. Cocoa beand contain carbohydrates, protein and particularly fat, making them a food crop as well as a stimulant.

**TEA** is a shrub of the Camellia family that is cultivated for its tender leaves. The two main varieties are assamica and sinensis. The primary crop consists of the tender leaves, which may be withered, rolled, fermented and dried (black tea). Green tea is black tea that is not fermented. Tea is a stimulant, not a food crop.

**FBS 2630 – Coffee**

Coffee, species of *Coffea Arabica*, *Coffea robusta* and *Coffea liberica*. Raw coffee in all forms.

It includes, inter alia: coffee beans, not roasted, with or without their skins, not decaffeinated; coffee berries, , as gathered from the shrub; green coffee; coffee, not roasted, not decaffeinated; coffee raw, in all forms, not decaffeinated; coffee seeds, with or without skins

Processed products expressed in terms of primary equivalent: coffee, decaffeinated or roasted (23911); coffee extracts (23912.02).

**FBS 2633 - Cocoa Beans**

Cocoa beans, species of *Theobroma cacao*, the seeds contained in the fruit of the cacao- tree, whether or not separated from their shells, husks, skins or germs, including whole or broken, raw or roasted.

Processed products expressed in terms of primary equivalent: cocoa paste not defatted (23610.01); cocoa paste defatted (23610.02); cocoa powder, sweetened (23640), chocolate and other food preparations containing cocoa (except sweetened cocoa powder), in bulk forms (23650), chocolate and other food preparations containing cocoa (except sweetened cocoa powder), other than in bulk forms) (23660).

**FBS 2635 – Tea**

Tea, species of *Camellia sinensis*, *Thea sinensis* and *Thea assaamica*, includes green tea (unfermented), black tea (fermented), and partially fermented tea. Excludes green tea eaten as a vegetable.

Mate, species of *Ilex paraguayensis*, the dried leaves of certain shrubs of the holly family which grow in South America. Sometimes known as “Paraguay tea” or “Jesuits’ tea”, it is prepared by infusion, in a way similar to tea, and used for drinks containing a little caffeine.

Processed products expressed in terms of primary equivalent: cocoa paste not defatted (23610.01); cocoa paste defatted (23610.02); cocoa powder, sweetened (23640), chocolate and other food preparations containing cocoa (except sweetened cocoa powder), in bulk forms (23650), chocolate and other food preparations containing cocoa (except sweetened cocoa powder), other than in bulk forms) (23660).

**SPICES**

SPICES are vegetable products such as leaves, flowers, seeds and roots that are rich in essential oils and aromatic principles. They are used mainly as condiments. The FAO definitions include ten spices. For practical reasons, spices are considered to be primary crops.

Production data of spices should be reported in terms of ripe, dried or powdered products. Essential oils extracted from spices are included under FAO Group TOBACCO AND RUBBER AND OTHER CROPS, along with other essential oils.

**FBS 2640 - Pepper**

Pepper, species of *Piper nigrum* (black, white pepper) and *Piper longum* (long pepper) is a perennial climbing vines. Includes whole, crushed or ground berries, and also covers pepper dust and sweepings. Black pepper is produced from partially ripe berries, while white pepper is from fully ripe berries which have had the outer hull removed.

Cubeb pepper (*Piper cubeba*) is not included.

**FBS 2641 - Pimento**

Pimento, species of the genus Capsicum(capsicum sweet pepper and chilli pepper), *Capsicum frutescens; Capsicum annuum* (red and cayenne pepper, paprika, chillies, jalapeno pepper, anaheim pepper and pimento) and *Pimenta officinalis* (allspice, Jamaica pepper). In may include Sweepings, of pepper of the genus Capsicum or of the genus Pimenta.

It includes inter alia fresh or dried, whether or not crushed or ground: Hungarian paprika; pepper (clove, English, Indian, Sierra Leone, Spanish, sweet, Turkish, Zanzibar).

Uncrushed or unground fresh pimentos are considered to be vegetables.

**FBS 2642 - Cloves**

Cloves, fruits of evergreen trees Syzygium aromaticum, *Eugenia caryophyllata* and *Caryophyllus aromaticus*, the whole fruit of the clove tree, including the flowers picked before maturity and dried in the sun, and the stems of the clove flowers, whether or not crushed or ground.

**FBS 2645 - Spices, Other**

Spices other, wether raw or processed, crushed or ground, includes:

* Vanilla, species of *Vanilla planifolia* and *Vanilla pompona.* The fruit (or bean) of a climbing plant of the orchid family. Includes whole, crushed or ground.

It includes inter alia, whether or not fresh, crushed or ground vanilla (pompon, long, short) and vanillin.

* Cinnamon (canella), species of Cinnamomum zeylanicum (Ceylon cinnamon) and Cinnamomum cassia (Chinese, common cinnamon, cassia).

The inner bark of young branches of certain trees of the Laurus family. Includes cinnamon- tree flowers, cinnamon fruit and cinnamon waste (chips), whether whole, crushed or ground.

It includes inter alia, whether or not fresh, crushed or ground cinnamon (bark, Ceylon dried, Chinese dried, common or fine); cinnamon-tree flowers and cinnamon fruit.

* Nutmeg, whether or not shelled, mace and cardamoms, species of *Myristica fragrans* (Nutmeg, mace), *Elettaria cardamomum* (cluster cardamon), *Aframomum angustifolium*, *Aframomum hambury*, *Amomun aromaticum*, *Amomun cardamomum* (other cardamons) and *Aframomum melegueta* (Malaguetta pepper, grains of paradise).

Nutmeg is the inner brown kernel of the fruit of the nutmeg tree. Mace is the net-like membrane between the outer shell and the kernel. Cardamon seeds are enclosed in the capsule produced by perennial herbs of the Zingiberaceae family.

* Anise, badian, fennel, corian, whether or not raw, crushed or ground, fresh or chilled, including among all:

*Pimpinella anisum* (anise)

*Illicium verum* (badian or star anise)

*Carum carvi* (caraway)

*Coriandrum sativum* (coriander)

*Cuminum cyminum* (cumin)

*Foeniculum vulgare* (fennel)

*Juniperus communis* (juniper berries)

Seeds and berries from the various plants listed. They are normally used as spices, but also have industrial (e.g. in distilleries) and medicinal applications. Fennel seeds, raw, used as spice

* Ginger, whether or not crushed or ground, species of *Zingiber officinale*. Rhizome of a perennial herb. It also is used for making beverages. Includes fresh, provisionally preserved or dried, whereas ginger preserved in sugar or syrup is excluded.
* Spices n.e.c., species of:

*Laurus nobilis* (bay leaves)

*Anethum graveolens* (dill seed)

*Trigonella foenum-graecum* (fenugreek seed)

*Crocus sativus* (saffron)

*Thymus vulgaris* (thyme)

*Curcuma longa* (turmeric)

Other spices that are not identified separately because of their minor relevance at the international level. Because of their limited local importance, some countries report spices under this heading that are classified individually by FAO. This group also includes curry powder and other mixtures of different spices.

**ALCOHOLIC BEVERAGES**

**BEVERAGES** includes five main groups of commodities that differ by source, use, nutritive value and in their commercial importance. The first group includes those products usually found in nature and used mainly for drinking purposes, such as water, ice and snow. Mineral water and aerated water, even when artificially produced, are also included here. The second group includes water to which sweeteners and flavourings have been added. This group of beverages has been gaining large markets in recent years and represents an important contribution to food consumption in some areas because of the sweetener content (up to 20% by weight) of these beverages. The third group includes the most traditional alcoholic beverages consumed by humans. Typically, the alcohol content of these beverages, which is obtained through fermentation of many vegetable crops, varies between 3 and 25%. The fourth group refers to undenatured ethyl alcohol with alcoholic strength by volume of less than 80%, and usually between 40 and 50%. This category includes all the distilled alcoholic beverages, whether or not sweeteners and/or flavourings have been added. The fifth and final group includes products that are not for human consumption, but are included here because they are closely related to alcoholic beverages. In this case, the strength of alcohol by volume is 80% and higher. This group includes both undenatured and denatured alcohol.

**FBS 2655 - Wine**

Wine of fresh grapes, the final product of the alcoholic fermentation of the must of fresh grapes of all qualities, including sparkling (charged with carbon dioxide), fortified and dessert wines (generally obtained from must with a high sugar content, only part of which is converted to alcohol by fermentation).

Dessert (or liqueur) wines include, inter alia, Canary, Cyprus, Lacryma Christi, Madeira, Malaga, Malmsey, Marsala, Port, Samos and Sherry.

It includes Champagne.

Vermouths, etc., includes beverages made with wine of fresh grapes and flavoured with aromatic substances.

**FBS 2656 - Beer of Barley**

Beer of Barley is a beverage that may be alcoholic or non-alcoholic, that is made from fermented malted cereals (mainly barley), water and hops. Non-malted cereals may also be used.

The FAO definition differs from the main international classifications in that it includes non-alcoholic beer.

**FBS 2657 - Beverages, Fermented**

Fermented beverages includes:

* Wheat Fermented Beverage, low-alcohol beverages from fermented flour (e.g. Korean jakju and takju), either naturally sparkling or artificially charged with carbon dioxide, may also contain added vitamins or iron compounds. Fruit juices are excluded.
* Rice Fermented Beverages, low-alcohol beverages, such as rice wine and sake.
* Beer of maize, prepared either from malted or unmalted cereal, and beer of millet and sorghum, a traditional beer prepared in African countries in which millets are cultivated. It is normally consumed while still fermenting.

Cider, fermented beverages n.e.c. (e.g. cider, perry, mead), including alcoholic beverages (that are not distilled) made from cereals, roots and fruits, that are not included under other headings, e.g. beer from plantains and ginger.

**FBS 2658 - Beverages, Alcoholic**

Distilled alcoholic beverages includes undenatured ethyl alcohol (strength by volume < 80%), spirits, liqueurs and other spirituous beverages and preparations.

It includes, inter alia:

Alcohol, ethyl, undenatured, of an alcoholic strength by volume of less than 80%

Anisette

Aperitifs (excl. those with a basis of wine of fresh grapes)

Aquavit

Armagnac

Arrack

Beverages, spirituous, obtained by distilling alcohol with fruits or other plant parts

Bitters

Brandy (excl. from wine or grape marc)

Brandy obtained by distilling wine or grape marc

Calvados

Cocktails, alcoholic, ready-mixed

Cognac

Cordials, alcoholic

Crèmes (liqueurs)

Curaçao

Egg-nog, alcoholic

Geneva

Gin

Grappa

Juice (fruit (excl. fermented grape juice and grape must), with added alcohol; grape, unfermented, with added alcohol; vegetable, with added alcohol)

Kirsch

Kümmel

Lemonade, alcoholic, unmedicated

Liqueurs

Mirabelle spirits

Quetsch

Rum

Spirits, excl. whisky (obtained by distilling fermented mash of cereal grains; consisting of emulsions of spirit with egg yolk or cream; flavoured with caraway or cumin seeds; from bitter orange peel; from cherries; from cider; from green anise or badian; from juniper berries; from palm wine; from plums; from rice wine; obtained by distilling fermented locust bean juice, mash of potatoes, sugar cane molasses or sugar cane juice, fruits (excl. grapes); wine or grape marc; neutral, undenatured, of an alcoholic strength by volume of less than 80%)

Tafia

Vodka

Whisky, bourbon

Whisky, rye

Whisky, Scotch

Wine, distilled (excl. wine of fresh grapes).

**PRODUCTS FROM SLAUGHTERED ANIMALS**

**MEAT AND EDIBLE OFFALS**

FAO defines MEAT as the flesh of animals used for food. In productiondata, meat is normally reported inclusive of bone and exclusive ofmeat that is unfit for human consumption. As reported by individualcountries, meat production data may refer either to commercialproduction (meat entering marketing channels), inspected production (from animals slaughtered under sanitary inspection), or totalproduction (the total of the above- mentioned categories plusslaughter for personal consumption). All FAO annual production datarefer to total production.

Country statistics on meat production adhere to one or more of thefollowing concepts:

1. Live weight: the weight of the animal immediately before slaughter.

2. Killed weight: the live weight less the uncollected blood lost during slaughter.

3. Dressed carcass weight: weight minus all parts - edible and inedible - that are removed in dressing the carcass. The concept varies widely from country to country and according to the various species of livestock. Edible parts generally include edible offals (head or head meat, tongue, brains, heart, liver, spleen, stomach or tripes and, in a few countries, other parts such as feet, throat and lungs. Slaughter fats (the unrendered fats that fall in the course of dressing the carcasses) are recorded as either edible or inedible according to country practice. Inedible parts generally include hides and skins (except in the case of pigs), as well as hoofs and stomach contents.

Meat production data for minor animals (poultry, rabbits, etc.) arereported in one of the following three ways: ready-to-cook weight (giblets are sometimes included and sometimes excluded); evisceratedweight (including the feet and head); or dressed weight, i.e. the liveweight less the blood, feathers and skin.

FAO data relate to dressed carcass weight for livestock and, whereverpossible, ready-to- cook weight for poultry.

Among individual countries, one of the following three concepts isused to measure production:

A. Production from all animals, of both indigenous and foreignorigin, that are slaughtered within national boundaries.

B. Production from the slaughter of indigenous animals plus exports of live indigenous animals during the reference period. Derived frommeat production as follows: production from slaughtered animals plusthe meat equivalent of all animals exported alive, minus the meatequivalent of all animals imported alive. As imports/exports of liveanimals are recorded by FAO in numbers, not weight, animal type andsize are of significance.

C. The biological production concept covers indigenous animals thatare either slaughtered or exported live, plus net additions to thestock during the reference period.

Derived from indigenous productionas follows: indigenous production plus (or minus) the meat equivalentof the change in the stock numbers during the reference period.Production is expressed in terms of live weight. Changes in the totallive weight of all animals are not taken into account.

FAO uses the first concept of meat production in the construction ofits food balance sheets and for related indicators. The second concept, indigenous meat production, in measuring the output of thenational livestock sector, is useful mainly in the construction ofindex numbers of agricultural production. The third concept,biological production, would be the most complete as it also reflectschanges in the livestock herd, but it is not used because ofdifficulties in obtaining information from national reporting offices.The prices applied to indigenous meat production are derived fromprices of live animals. This covers not only the value of meat, butalso the value of offals, fats, hides and skins.

**PROCESSED PRODUCTS FROM SLAUGHTERED ANIMALS**. Meat (including chilled or frozen), edible offals, fats and hides and skins are consideredprimary products. The main processed meat products are the following:

1. Cured meats include meats processed with salt and usually containingvarious additives (such as flavouring and preserving agents), anddried or smoked meat, e.g. bacon and ham made from pig meat. Paté is a spread of finely mashed, seasoned and spiced meat or liver of pigsand poultry.

2. Sausages are highly seasoned products made from meat (usually beef orpig) that has been ground, chopped and encased. Sausages may befresh, pickled, dry or semi-dry, cooked or uncooked and smoked orunsmoked. Sausages usually contain various additives, such as salt,onions and spices. The casings are made either of prepared animalintestines or synthetic material.

3. Other preserved meats include meat and meat offals that have beenboiled, steamed, grilled, fried, roasted or otherwise cooked.

The codes and names of all livestock products - with primary in uppercase letters and processed in upper and lower case letters - are shown in the list that follows, along with any accompanying remarks.

**FBS 2731 - Bovine Meat**

Bovine meat, including meat of bovine animals (common trade names are beef and veal) fresh, chilled or frozen, with bone in, and buffalo meat fresh, chilled or frozen, with bone in or boneless.

It includes, inter alia:

Beef, of buffalo, whether with bones or boneless, fresh, chilled or frozen;

Meat, of buffalo, whether with bones or boneless, fresh, chilled or frozen; boneless, packed with salt as a temporary preservative during transport;

Meat, of buffalo, of bovine animals, whether with bones or boneless, fresh or chilled;

Meat, of buffalo, of bovine animals, with bone in, packed with salt as a temporary preservative during transport.

Processed products expressed in terms of primary equivalent: meat of cattle, boneless (21111.01; 21131.02); beef and veal, dried, salted, smoked (21182); meat extracts (21185); sausages of beef and veal (21184.01); beef and veal preparations n.e.c. (21186.01; 21189.01); homogenized meat preparations (23991.04).

**FBS 2732 - Mutton and Goat Meat**

Mutton and goat meat, including meat of sheep (rams, ewes and lambs) and goat, whether domestic or wild, fresh, chilled or frozen, with bone in or boneless.

Meat of lamb comes from animals of the ovine species not more than 12 months of age.

**FBS 2733 - Pigmeat**

Pig meat, with the bone in, of domestic or wild pigs (e.g. wild boars and swines), whether fresh, chilled or frozen, includes pig meat, excluding butcher fat and bones.

It includes ham, fresh or chilled.

Processed products expressed in terms of primary equivalent: pig meat, cuts, salted, dried or smoked (bacon and ham) (21181); sausages and similar products of meat, offal or blood of pig (21184.02); prepared dishes and meals based on meat of pig (21186.02) and prepared or preserved meat, meat offal or blood of pig (21189.02).

**FBS 2734 - Poultry Meat**

Poultry meat may include all types of poultry meat if national statistics do not report separate data.

It includes, inter alia capons, chickens, fowls, domestic (gallus domesticus spp.), guinea-fowls, ducks, geese and turkeys, whether or not cut up, fresh, chilled or frozen.

Chicken, goose or duck livers are also included. Fatty livers of geese or ducks which may be distinguished from other livers by the fact that they are much larger and heavier, firmer and richer in fat.

Processed products expressed in terms of primary equivalent: fatty liver preparations (21189.05); prepared dishes and meals based on meat poultry (21186.03) and prepared or preserved meat, meat offal or blood poultry (21189.03).

**FBS 2735 - Meat other**

Meat other includes fresh, chilled or frozen meat of the following animals: pigeons and other birds n.e.s., horses, asses, mules, camels, rabbits (may include hare meat), other domestic rodents and camelids, games (meat and offals of wild animals) and snails, other than sea snails.

Meat n.e.c. includes, inter alia, frog legs and marine mammals, fresh, chilled or frozen. Some countries include under this heading meats that are listed above, but which are not reported separately.

Processed products expressed in terms of primary equivalent: other meat and edible meat offal, salted, in brine, dried or smoked; edible flours and meals of meat or meat offal (21183); other sausages and similar products of meat, offal or blood n.e.c. (21184.03), other prepared dishes and meals based on meat (21186.90) and other prepared or preserved meat, meat offal or blood n.e.c. (21189.90).

**FBS 2736 - Offals edible**

Edible offals includes fresh, chilled or frozen offals of the following animals: cattle, bovine animals, buffaloes, sheeps, goats, pigs, horses, camels (tongues, livers, heads and cuts thereof (including ears), feet, tails, hearts, udders, livers, kidneys, sweetbreads (thymus glands and pancreas), brains, lungs, throats, thick skirts, thin skirts, spleens, tongues, caul, spinal cords, edible skin, reproductive organs (e.g., uteri, ovaries and testes), thyroid glands, pituitary glands), liver of any animal (excluding fatty livers of ducks and geese when cooked, prepared or preserved (e.g. paté)), chickens including gwinea fowls, turkey, geese and ducks (the poultry offal of greatest importance in international trade is chicken, goose or duck livers. These include “fatty livers” of geese or ducks).

Edible offals includes, inter alia, primates, whales, dolphins and porpoises fresh, manatees and dugongs, seals, sea lions and walruses, reptiles, rabbit, hare, frog, reindeer, beaver and turtle.

**ANIMAL FATS AND OILS**

This group includes animal fats that are obtained in the course of dressing the carcasses of slaughtered animals (slaughter fats), or at a later stage in the butchering process when meat is being prepared for final consumption (butcher fats). Butter and similar products obtained from milk are included in Group 18. Processed animal fats include lard obtained by melting raw pig fat and tallow obtained from raw fat of other animal species. Animal fats are largely used in the production of margarine, shortening and compound fat. They also enter into many processed food products. Industrial and non-food uses of animal fats include the production of soaps, fatty acids, lubricants and feedstuffs.

**FBS 2740 - Butter, Ghee**

Butter of cow milk is an emulsion of milk fat and water that is obtained by churning cream. Trade data cover butter from the milk of any animal.

Ghee from cow milk derives from butter from which the water has been removed. Very common in hot countries. Includes also anhydrous butterfat or butter oil.

This group includes natural butter, whey butter and recombined butter (fresh, salted or rancid, including canned butter). Butter must be derived exclusively from milk, it contains no added emulsifiers, but may contain sodium chloride, food colours, neutralising salts and cultures of harmless lactic-acid-producing bacteria.

Butter and ghee obtained from goat’s or sheep’s milk is also covered by this group.

**FBS 2737 - Fats, Animals, Raw**

Animals fats raw, unrendered slaughter fats from different animals, including edible and inedible fats that are removed in the course of dressing the carcass, whether or not refined, but not chemically modified.

It includes, inter alia, fat of cattle raw (unrendered); sheep and suet of beef, mutton, goats, pigs and butcher fat (unrendered fats that are removed during butchering), poultry fat (including fat of domestic or wild poultry (e.g., of geese), and bone fat and fats obtained from waste), camels and othe camelids; tallow (mainly glycerides of oleic, stearic and palmitic acids); goats, wool grease (extracted from the soapy water in which the wool has been scoured or cloth fulled) and lanolin (obtained by purifying wool grease); lard (rendered pig fat.); lard stearine and lard oil (obtained by pressing lard or tallow (oleo-oil, tallow oil, tallow stearine)); degras (a residue from tanning leather that is obtained either by pressing or by extraction with solvents); tallow (rendered fats of animals other than pigs).

It includes also other animal oils ans fats n.e.c., obtained from other animal species and oils and fats recovered from guts, feet, sweepings, hide trimmings, etc.

It includes, inter alia: fat (bone, of bovine animals, sheep or goats, rendered or solvent-extracted; from waste of bovine animals, sheep or goats, rendered); premier jus (oleo stock); tallow (beef and mutton, whether or not fit for human consumption).

**PRODUCTS FROM LIVE ANIMALS**

Milk, eggs, honey and beeswax are included as products of live animals. Fibres of animal origin (mainly wool and silk) are included with fibres of vegetal and animal origin in Group 9.

**MILK AND DAIRY PRODUCTS**. Estimates of milk production as reported by countries refer to one or more of the following three concepts. Gross production is milk production plus milk sucked by young animals. Net production excludes milk sucked by young animals but includes milk fed to livestock. Production available for consumprion is net production less milk fed to animals, milk retained by farmers for food and feed, direct sales to consumers and farm waste.

The FAO concept relates to net milk production. Data should be reported by kind of milking animal (cow, sheep, goat, etc.) in terms of whole milk and by weight.

In most developed countries only 5-10% of whole milk is used directly for human consumption. The bulk of milk production is processed before being marketed as liquid milk (e.g. standardized, pasteurized, skimmed, etc.), or is manufactured into products such as cream, butter, cheese, evaporated and condensed milk, milk powder, casein, yogurt, ice cream, etc. About 70% of whole milk is processed into dairy products; the by-products of these processes (e.g. skim milk, buttermilk and whey) are used either for feed or are manufactured into other dairy products, e.g. dry skim milk and low-fat cheese. Processed milk and dairy products are often supplemented with vitamins, minerals and various additives.

FAO lists 50 milk and dairy products items in the list that follows, of which five are primary products. Some food products contantining milk are not listedseparately by FAO, e.g. eggnog, shaerbet, malted milk, chocolate milk drink and mellorine.

**EGGS AND EGG PRODUCTS**. Egg production by type of poultry should refer to the total production of eggs in the shell by all types of hens in both the traditional sector (individually owned small flocks) and the modern sector (large-scale, intensive commercial poultry farms). Total production includes eggs for hatching but excludes waste on farms. Countries should report in terms of both numbers and weight.

FAO lists seven egg and egg products items, including four primary and three processed products.

**HONEY AND BEESWAX**. Honey is the nectar of flowers collected and processed by certain insects, especially the honey-bee. Production data should cover the amount sold by the beekeepers plus other recorded collection of honey. Bees store honey in honeycombs that consist of hexagonal wax cells. The beeswax that is obtained by melting honeycombs with boiling water is used in candles, cosmetics and other non-food products.

The FAO codes and the names of milk and dairy products, eggs and egg products, and honey and beeswax are listed below along with any necessary remarks.

**FBS 2744 - Eggs**

Eggs hen, ducks, geese, ostriches, quail and turkeys, fresh, in shell, not for hatching, weight in shell.

Fertilised eggs for incubation and other fresh (including chilled) eggs of all birds are included. It also covers preserved or cooked eggs, in shell.

Processed products expressed in terms of primary equivalent: eggs, liquid (23993.02); egg albumin (23993.01).

**FBS 2848 – Milk, Excluding Butter**

Fresh milk of catte (cow and yak), buffalo, sheep, goat and camel.

Production data refer to raw milk containing all its constituents. Trade data normally cover milk from any animal, and refer to milk that is not concentrated, pasteurized, sterilized or other-wise preserved, homogenized or peptonized. It includes raw milk. Butter is excluded (cf. FBS 2740: 22241.01, 22242.01, 22249.01, 22249.02)

Processed products expressed in terms of primary equivalent: Skim milk of cows (22110.02); Whole Milk, condensed (22222.01); Whey, Condensed (22130.01); Yoghurt (22230.01); Yoghurt, Concentrated or Unconcent (22230.02); Buttermilk, Curdled Milk, Acidifie (22230.03); Whole Milk, Evaporated (22221.01); Skim Milk, Evaporated (22221.02); Skim Milk, Condensed (22222.02); Whole milk powder (22211); Skim milk and whey powder (22212); Dry Buttermilk (22230.04); Dry Whey (22130.02); Cheese from Whole Cow Milk (22251.01); Cheese from Skimmed Cow Milk (22251.02); Whey Cheese (22251.03); Processed Cheese (22251.04); Reconstituted milk (22110.03); Casein (22260); Skim milk of buffalo (22110.04); Cheese from milk of buffalo, fresh or processed (22252); Cheese from milk of sheep, fresh or processed (22253); Skim sheep milk (22110.05); Cheese from milk of goats, fresh or processed (22254); Skim milk of goat (22110.06); Whey, Fresh (22130.03); Dairy products n.e.c. (22290); Ice cream and other edible ice (22270).

1. Draft, prepared by Veronica Gianfaldoni. Definitions to be revised. [↑](#footnote-ref-1)
2. As per the last version of the Food Balance Sheets handbook (FAO. 2011. “*Food Balance Sheet: A Handbook*” <http://www.fao.org/docrep/003/X9892E/X9892E00.HTM>), fish and fisheries products include: freshwater fish, demersal fish, pelagic fish, crustaceans, molluscs, aquatic mammals meat, aquatic plants. Those products are not available in FCL, not owned by ESS, and definitions might be provided by the Fishery Department if needed. [↑](#footnote-ref-2)
3. Definitions are based on different sources: FAO definition and classifications of commodities, the UN Central Product Classification (CPC, Version 2.1 Expanded) and the Harmonised System (HS 2012) explanatory notes. [↑](#footnote-ref-3)