DEFINITION AND CLASSIFICATION OF COMMODITIES

(Draft)

3. SUGAR CROPS AND SWEETENERS AND DERIVED PRODUCTS

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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 percent of the total weight of the plants. The sugar content of sugar cane ranges from 10 to 15 percent of the total weight, while that of sugar beets is between 13 and 18 percent. The protein and fat content of both beets and cane is almost nil.

Production data on sugar beets and sugar cane relate to the harvested crop, free of soil, plant tops and leaves.

FAO lists three primary sugar crops.

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.

Sugar Crops and Sweetners

Sugar Cane

FAOSTAT CODE	COMMODITY	DEFINITIONS, COVERAGE, REMARKS
0156	**SUGAR CANE** *Saccharum officinarum*	In some producing countries, marginal quantities of sugar cane are consumed, either directly as food or in the form of juice.
0158	**Cane Sugar**	A non-refined, crystallized material derived from the juices of sugar-cane stalk and consisting either wholly or essentially of sucrose.
0159	**Beet Sugar**	A non-refined, crystallized material derived from the juices extracted from the root of the sugar beet and consisting either wholly or essentially of sucrose.
0162	**Sugar, Raw Centrifugal**	The sum of codes 0158 and 0159. Processed further to obtain refined sugar.
0164	**Sugar, Refined**	Production covers domestic production, plus or minus imports and/or exports of raw centrifugal sugar in terms of refined sugar.
0163	**Sugar, Non-Centrifugal**	Generally derived from sugar cane through traditional methods without centrifugation.
0165	**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.
0169	**Beet Pulp**	See Chapter 11.
0170	**Bagasse**	See Chapter 11.
0629	**Beet Tops**	See Chapter 11.
0630	**Cane Tops**	See Chapter 11.

Sugar Crops and Sweetners

Sugar Beet

FAOSTAT CODE	COMMODITY	DEFINITIONS, COVERAGE, REMARKS
0157	**SUGAR BEET** *Beta vulgaris var. altissima*	In some producing countries, marginal quantities are consumed, either directly as food or in the preparation of jams.
0158	**Cane Sugar**	A non-refined, crystallized material derived from the juices of sugar-cane stalk and consisting either wholly or essentially of sucrose.

0159	**Beet Sugar**	A non-refined, crystallized material derived from the juices extracted from the root of the sugar beet and consisting either wholly or essentially of sucrose.
0162	**Sugar, Raw Centrifugal**	The sum of codes 0158 and 0159. Processed further to obtain refined sugar.
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Sugar Crops and Sweetners

Sugar Crops nes

FAOSTAT CODE	COMMODITY	DEFINITIONS, COVERAGE, REMARKS
0161	**SUGAR CROPS NES** Including inter alia: sugar maple *(Acer saccharum);* sweet sorghum *(Sorghum saccharatum);* sugar palm *(Arenga saccharifera)*	Includes minor sugar crops of local importance. In the case of saps, production is to be expressed in liquid equivalent.
0160	**Maple Sugar and Syrups**	Maple syrup is produced by atmospheric boiling of maple sap in an open-pan evaporator. Continuing the evaporation process until the syrup crystalizes yields maple sugar.
0167	**Sugar and Syrups nes**	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.
0155	**Maltose, Chemically Pure**	Produced industrially from starch by hydrolysis with malt diastase. Used in the brewing industry.
0172	**Glucose and Dextrose**	Glucose is 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.
0175	**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.

0154	**Fructose, Chemically Pure**	Or levulose, monosaccharide, present with glucose in sweet fruits and honey.
0166	**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). Especially suitable for use by diabetics.
0168	**Sugar Confectionery**	Sugar confectionery, including chewing gum, that does not contain cocoa. Includes white chocolate.
0173	**Lactose**	Also known as milk sugar. Produced commercially from whey.

Sugar Crops and Sweetners

Honey

FAOSTAT CODE	COMMODITY	DEFINITIONS, COVERAGE, REMARKS
1182	**HONEY**	Honey produced by bees *(Apis mellifera)* or by other insects.
0174	**Artificial Sweeteners**	High-intensity or low-caloric sweetening agents that are produced chemically.

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