

CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture
Organization of
the United Nations



World Health
Organization

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PRINCIPLES AND GUIDANCE ON THE SELECTION OF REPRESENTATIVE COMMODITIES FOR THE EXTRAPOLATION OF MAXIMUM RESIDUE LIMITS FOR PESTICIDES TO COMMODITY GROUPS

CAC/GL 84-2012

Adopted in 2012. Amended in 2017.

INTRODUCTION

Residue extrapolation is the process by which the residue levels on representative commodities are utilised to estimate residue levels on related commodities in the same commodity group or subgroup for which trials have not been conducted. Representative commodities are chosen based on their commercial importance and the similarity of their morphology and residue characteristics to other related commodities in the group or subgroup. Ideally representative commodities are the most economically important commodities in production and/or consumption in a group or subgroup and have a greater dietary burden and have residue characteristics similar to other members of the group or subgroup. Residue extrapolation is a common consideration utilised by regulators internationally for ensuring that data requirements are only at a level that is scientifically justified in conducting risk assessment and to ensure the regulatory process does not become unnecessarily burdensome especially for minor crops.

The objective of this document is to (1) propose criteria for the selection of representative commodities; (2) propose example representative commodities and (3) provide a detailed justification for the selection of the representative commodities.

GENERAL PRINCIPLES

Representative commodities within each Classification¹ commodity group and subgroup will be selected and proposed, based on consideration of all available information. The following principles will be used for the selection of representative commodities:

- A representative commodity is most likely to contain the highest residues.
- A representative commodity is likely to be major in terms of production and/or consumption.
- A representative commodity is most likely similar in morphology, growth habit, pest problems and edible portion to the related commodities within a group or subgroup.

The application of the three principles in the selection of representative commodities is based on the assumption that all of the commodities, covered by the commodity group maximum residue limit (MRL), are produced following a similar² use pattern or good agricultural practice (GAP).

To facilitate the global use of the commodity groups for MRLs, alternative representative commodities may be selected giving flexibility for use of residue research conducted in different countries or regions that may vary due to regional differences in dietary consumption and/or areas of production for certain commodities.

Note: Table 1 in this document is provided to (1) separate the selection of representative commodities from the Classification itself; (2) propose examples of representative commodities in parallel with the respective Codex commodity grouping Classification revisions; (3) provide flexibility on the selection of representative crops and (4) provide guidance not only to the Committee on Pesticide Residues (CCPR) and Codex members, but also to the Joint Meeting on Pesticide Residues (JMPR), product manufacturers and other data generators.

Detailed background information regarding production, consumption, MRLs and characteristics and justification for selection of the representative commodities according to the indicated principles were provided in working documents considered by the Committee when developing the representative commodities for each commodity group.

GUIDANCE AND PROCEDURES

As proposals for the revision of the Classification are made and revised commodity groupings are developed and provided to CCPR for their review, proposals on representative commodities will also be provided in parallel with the respective commodity grouping revisions and will advance through the Step Procedure for adoption by the Codex Alimentarius Commission (CAC).

¹ Classification of Foods and Animal Feeds (CAC/MISC 4-1989)

² Submission and Evaluation of Pesticide Residues Data for the Estimation of Maximum Residue Levels in Food and Feed (Section 6.7, Point a), FAO Plant Production and Protection Paper 197, Food and Agriculture Organisation of the United Nations, Rome, 2009 (Second Edition)

As comments are addressed on the revisions of the Classification and the proposed representative commodities and these are agreed by CCPR and adopted by CAC, two separate documents will be created and maintained: (1) the Classification (without mention of representative commodities) and (2) principles and guidance on the selection of representative commodities.

The JMPR may be advised to use the representative commodities adopted by CAC. However, JMPR may use other representative commodities (including those which may be specifically requested by member nations) on a case-by-case basis. The JMPR will be requested to provide to CCPR justification for the use of any alternative representative commodities, based on all available data.

ALTERNATIVE REPRESENTATIVE COMMODITIES

To facilitate the global use of the commodity groups for MRLs, alternative representative commodities may be selected giving flexibility for use of residue research conducted in different countries or regions that may vary due to regional differences in dietary consumption and/or areas of production for certain commodities. Table 1 in this document proposes examples of representative commodities for commodity groups. Depending on country or regional differences, alternative representative commodities may be proposed by a country. For example, leeks may be proposed as an alternative representative commodity for green onions in the green onion subgroup of bulb vegetables.

PRECEDENCE IN SELECTION OF REPRESENTATIVE COMMODITIES

In situations where a representative commodity does not meet all three of the above principles, a representative commodity should at least meet the first two principles (likely to contain the highest residues and also major in terms of production and/or consumption).

Selection of Representative Commodities

When representative commodities are utilised to extrapolate residue levels to other members of a commodity group, it is on the assumption that residues in other members of the commodity group will not be significantly different to residues found in the representative commodity. That is, the representative commodities are good indicators of the upper range of residues likely to be encountered for the group or subgroup, based on the same or comparable GAP and other available information.

An MRL for the group may be estimated from the highest residue level for any of the individual representative commodities or from the larger combined data set. The ALARA³ principle should be considered in terms of whether the larger residue data set should be combined and the potential impact of derived values used in the dietary risk assessment.

WIDER EXTRAPOLATIONS

A representative commodity should meet at least the first two principles described above, i.e. likely to contain the highest residues and also major in terms of production and/or consumption. However, it may not always fit well with the growth habits, or pest problems of morphology within one group or subgroup. In such situations, extrapolations beyond the members of a commodity group may be appropriate. These can be considered on a case-by-case basis when commodities (with similar GAPs) have similar size, shape and surface area. Examples of these possible wider extrapolations include (1) translation of certain stone or pome fruit MRLs to a tropical fruit; (2) where residues are all <LOQ (limit of quantification) for pre-emergent herbicide uses and (3) seed treatments for non systemic pesticides.

³ ALARA (as low as reasonable achievable)

**TABLE 1. EXAMPLES OF THE SELECTION OF REPRESENTATIVE COMMODITIES
TYPE 01 - FRUIT COMMODITY GROUPS**

Codex Group / Subgroup	Examples of Representative Commodities¹	Extrapolation to the following commodities
Group 001 Citrus Fruits	Lemon or Lime; Mandarin; Orange and Pummelo or Grapefruit	<u>Citrus Fruit (FC 0001)</u> : Australian blood lime; Australian desert lime; Australian round lime; Brown River finger-lime; Calamondin; Citron; Clementine; Grapefruit; Kaffir Lime; Kumquats; Lemon; Lime; Lime, Sweet; Limequats; Mandarin; Mount White-lime; New guinea wild lime; Orange Sour; Orange, Sweet; Pummelo; Russell River-lime; Tahiti Lime; Trifoliate orange; Unshu orange; Yuzu.
Subgroup 001A, Lemons and Limes	Lemon or Lime	<u>Lemons and Limes (FC 0002)</u> : Australian blood lime; Australian desert lime; Australian round lime; Brown River finger-lime; Citron; Kaffir Lime; Kumquats; Lemon; Lime; Lime, Sweet; Limequats; Mount White-lime; New guinea wild lime; Russell River-lime; Tahiti Lime; Yuzu.
Subgroup 001B, Mandarin	Mandarin	<u>Mandarins (FC 003)</u> : Calamondin; Clementine; Mandarin; Unshu orange.
Subgroup 001C, Oranges, Sweet, Sour	Orange	<u>Oranges, Sweet, Sour (FC 004)</u> : Orange Sour; Orange, Sweet; Trifoliate orange.
Subgroup 001D, Pummelos	Pummelo or Grapefruit	<u>Pummelos and Grapefruit (FC 005)</u> : Grapefruit; Pummelo.
Group 002 Pome Fruits	Apple or Pear	<u>Pome Fruit (FP 0009)</u> : Apple; Azarole; Chinese quince; Crab-apple; Loquat; Mayhaw; Medlar; Nashi pear; Pear; Persimmon, Japanese; Quince; Tejocote; Wild pear.
Group 003 Stone Fruits	Cherry, Sweet or Cherry, Sour; Plum or Prune Plum or Peach or Apricot	<u>Stone fruits (FS 0012)</u> : Apricot; Bullace; Cherry, black; Cherry, Nanking; Cherry plum; Cherry Sour; Cherry, Sweet; Choke cherry; Japanese apricot; Jujube, Chinese; Klamath plum; Nectarine; Peach; Plum; Plum, beach; Plum, Chickasaw; Plumcot; Sloe.
Subgroup 003A, Cherries	Cherry, Sweet or Cherry, Sour	<u>Cherries (FS 0013)</u> : Cherry, black; Cherry, Nanking; Cherry Sour; Cherry, Sweet; Choke cherry
Subgroup 003B, Plums	Plum or Prune Plum	<u>Plums (FS 0014)</u> : Bullace; Cherry plum; Jujube, Chinese; Klamath plum; Plum, Plum, beach; Plum, Chickasaw; Plumcot; Sloe.
Subgroup 003C, Peaches	Peach or Apricot	<u>Peaches (FS 2001)</u> : Apricot; Japanese apricot; Nectarine; Peach.

¹ Alternative representative commodities may be selected based on documented regional/country differences in dietary consumption and/or areas of production.

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Group 004 Berries and other small fruits	Blackberry or Raspberry; Blueberry or Currants, black, red or white; Elderberry; Grape and Strawberry	<u>Berries and other small fruits (FB 0018)</u> : Agritos; Amur river grape; Arguta kiwifruit; Aronia berries; Bayberries; Bearberry; Bilberry; Bilberry, Bog; Bilberry, Red; Blackberries; Blueberries; Buffaloberry; Buffalo currant; Che; Chilean guava; Cloudberry; Cranberry; Currants, Black, Red, White; Dewberries; Elderberries; European barberry; Guelder rose; Gooseberry; Grapes; Huckleberries; Jostaberries; Juneberries; Mulberries; Muntries; Native currant; Partridge berry; Phalsa; Raspberries, Red, Black; Riberies; Rose hips; Salal; Schisandrberry; Sea buckthorn; Service berries; Silverberry, Russian; Strawberry; Strawberries, Wild; Table grapes; Vaccinium berries; Wine grapes.
Subgroup 004A, Cane berries	Blackberry or Raspberry	<u>Cane berries (FB 2005)</u> : Blackberries; Dewberries; Raspberries, Red, Black.
Subgroup 004B, Bush berries	Blueberry or Currants, black, red or white	<u>Bush berries (FB 2006)</u> : Vaccinium berries; Blueberries; Agritos; Aronia berries; Bearberry; Bilberry; Bilberry, Bog; Bilberry, Red; Buffalo currant; Chilean guava; Currants, Black, Red, White; Gooseberry; European barberry; Huckleberries; Jostaberries; Juneberries; Native currant; Riberies; Rose hips; Salal; Sea buckthorn.
Subgroup 004C, Large shrub/tree berries	Elderberry	<u>Large shrub/tree berries (FB 2007)</u> : Bayberries; Buffaloberry; Che; Elderberries; Guelder rose; Mulberries; Phalsa; Service berries; Silverberry, Russian.
Subgroup 004D, Small fruit vine climbing	Grapes	<u>Small fruit vine climbing (FB 2008)</u> : Arguta kiwifruit; Amur river grape; Grapes; Schisandrberry; Table grapes; Wine grapes.
Subgroup 004E, Low growing berries	Strawberry	<u>Low growing berries (FB 2009)</u> : Cranberry; Cloudberry; Muntries; Partridge berry; Strawberry; Strawberries, Wild.

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Group 005 Assorted tropical and sub-tropical fruits – edible peel	Olive; Fig or Guava and Date	<u>Assorted tropical and sub-tropical fruits – edible peel (FT 0026)</u> : Açai; African plum; Almondette; Ambarella; Apak palm; Apple berry; Arazá; Arbutus berry; Babaco; Bacaba palm; Bacaba-de-leque; Barbados cherry; Bayberry, Red; Bignay; Bilimbi; Breadnut; Cabeluda; Cajou (pseudofruit); Cambucá; Carambola; Carandas-plum; Carob; Cashew apple; Ceylon iron wood; Ceylon olive; Cherry-of-the-Rio-Grande; Chinese olive, Black, White; Chirauli-nut; Ciruela verde; Coco plum; Date; Davidson's plum; Desert date; Doum or Dum palm; False sandalwood; Fig; Fragrant Manjack; Gooseberry, Abyssinian; Gooseberry, Ceylon; Gooseberry, Indian; Governor's plum; Grumichama; Guabiroba; Guava; Guava, Brazilian; Guava, Cattley, Guava, Costa Rican; Guava, Para; Guava berry; Guayabillo; Hog plum; Illawarra plum; Imbé; Imbu; Jaboticaba; Jamaica cherry; Jambolan; Java apple; Jelly palm; Jujube, Indian; Kaffir plum; Kakadu plum; Kapundung; Karanda; Kwai muk; Lemon aspen; Mangaba; Marian plum; Mombin, Malayan; Mombin, purple; Monkeyfruit; Monos plum; Mountain cherry; Nance; Natal plum; Noni; Otaheite gooseberry; Papaya, Mountain; Patauá; Peach Palm; Persimmon, Black; Pitomba; Pomerac; Rambai; Rose apple; Rumberry; Sea grape; Sentul; Sete-capotes; Silver aspen; Surinam cherry; Table olives; Uvalha; Water apple; Water berry; Water pear.
Subgroup 005A, Assorted tropical and sub-tropical, Edible Peel – Small	Olives	<u>Edible Peel - Small (FT 2011)</u> : African plum; Almondette; Apple berry; Arbutus berry; Barbados cherry; Bayberry, Red; Bignay; Breadnut; Cabeluda; Carandas-plum; Ceylon iron wood; Ceylon olive; Cherry-of-the-Rio-Grande; Chinese olive, Black, White; Chirauli-nut; Coco plum; Desert date; False sandalwood; Fragrant Manjack; Gooseberry, Abyssinian; Gooseberry, Ceylon; Governor's plum; Grumichama; Guabiroba; Guava berry; Hog plum; Illawarra plum; Jamaica cherry; Jambolan; Java apple; Kaffir plum; Kakadu plum; Karanda; Kapundung; Lemon aspen; Monos plum; Mountain cherry; Otaheite gooseberry; Persimmon, Black; Pitomba; Rumberry; Sea grape; Sete-capotes; Silver aspen; Table olives; Water apple; Water berry; Water pear.

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Subgroup 005B, Assorted tropical and sub-tropical, Edible Peel – Large	Fig or Guava	<u>Edible Peel - Large (FT 2012)</u> : Ambarella; Arazá; Babaco; Bilimbi; Cajou (pseudofruit); Cambucá; Carambola; Carob; Cashew apple; Ciruela verde; Davidson's plum; Fig; Gooseberry, Indian; Guava; Guava, Brazilian; Guava, Cattley, Guava, Costa Rican; Guava, Para; Guayabillo; Imbé; Imbu; Jaboticaba; Jujube, Indian; Kwai muk; Mangaba; Marian plum; Mombin, Malayan; Mombin, purple; Monkeyfruit; Nance; Natal plum; Noni; Papaya, Mountain; Pomerac; Rambai; Rose apple; Sentul; Surinam cherry; Uvalha.
Subgroup 005C, Assorted tropical and sub-tropical, Edible Peel – Palms	Date	<u>Edible Peel - Palms (FT 2013)</u> : Açai; Apak palm; Bacaba palm; Bacaba-de-leque; Date; Doum or Dum palm; Jelly palm; Patauá; Peach Palm.
Group 006 Assorted tropical and sub-tropical fruits – inedible peel	Litchi (lychee) or Longans or Spanish Lime; Avocado; Pomegranate or Mango; Banana and Papaya; Atemoya; Pineapple; Dragonfruit; Prickly pear; Kiwifruit or Passionfruit and Muriti or Palmyra Palm	<u>Assorted tropical and sub-tropical fruits – inedible peel (FI 0030)</u> : Abiu; Aisen; Akee apple; Atemoya; Avocado; Bacuri; Bael fruit; Banana; Binjai; Biriba; Breadfruit; Burmese grape; Cacao (pulp); Canistel; Capuacú; Champadak; Cherimoya; Coconut, young; Custard apple; Durian; Elephant apple; Etambe; Feijoa; Granadilla; Granadilla, Giant; Guriri; Ilaa; Ingá; Jackfruit; Jatobá; Kei apple; Kiwifruit; Kokam; Langsat; Lanjut; Longan; Lucuma; Litchi (lychee); Mabolo; Madras-thorn; Mammy apple; Manduro; Mango; Mango, horse; Mango, Saipan; Mangosteen; Marang; Marmalade-box; Matisia; Mesquite; Mongongo; Monkey-bread tree; Monstera; Muriti; Naranjilla; Paho; Palmyra palm; Papaya; Passionflower, Winged-stem; Passion fruit; Passion fruit, banana; Pawpaw; Pawpaw, small flower; Pelipisan; Pequi; Persimmon, American; Pineapple; Pitaya; Pomegranate; Poshte; Prickly pear, Pulasan; Quandong; Rambutan; Saguaro; Salak; Sapodilla; Sapote, black; Sapote, green; Sapote, Mammey; Sapote, white; Sataw; Satinleaf; Screwpine; Sierra Leone-tamarind; Soncoya; Soursop; Spanish lime; Star apple; Sugar apple; Sun sapote; Tamarillo; Tamarind (sweet varieties); Tamarind-of-the-Indies; Velvet tamarind; Wampi; White star apple; Wild loquat.
Subgroup 006A, Assorted tropical and sub-tropical, Inedible Peel, Small	Litchi (lychee) or Longans or Spanish Lime	<u>Inedible Peel - Small (FI 2021)</u> : Aisen; Bael fruit; Burmese grape; Ingá; Litchi; Longan; Madras-thorn; Manduro; Matisia; Mesquite; Mongongo; Pawpaw, small flower; Satinleaf; Sierra Leone-tamarind; Spanish lime; Tamarind (sweet varieties); Velvet tamarind; Wampi; White star apple.

Codex Group / Subgroup	Examples of Representative Commodities¹	Extrapolation to the following commodities
Subgroup 006B, Assorted tropical and sub-tropical, Inedible Smooth Peel - Large	Avocado; Pomegranate or Mango; Banana and Papaya	<u>Inedible Smooth Peel - Large (FI 2022)</u> : Abiu; Akee apple; Avocado; Bacuri; Banana; Binjai; Cacao (pulp); Canistel; Capuacú; Etambe; Feijoa; Jatobá; Kei apple; Kokam; Langsat; Lanjut; Lucuma; Mabolo; Mango; Mango, horse; Mango, Saipan; Mangosteen; Naranjilla; Paho; Papaya; Pawpaw; Pelipisan; Pequi; Persimmon, American; Pomegranate; Quandong; Sapote, black; Sapote, green; Sapote, white; Sataw; Star apple; Tamarillo; Tamarind-of-the-Indies; Wild loquat.
Subgroup 006C, Assorted tropical and sub-tropical, Inedible, Rough or Hairy Peel - Large	Atemoya and Pineapple	<u>Inedible rough or hairy peel - Large (FI 2023)</u> : Atemoya; Biriba; Breadfruit; Champadak; Cherimoya; Custard apple; Durian; Elephant apple; Ilima; Jackfruit; Mammy apple; Marang; Marmalade-box; Monkey-bread tree; Pineapple; Poshte; Pulasan; Rambutan; Sapodilla; Sapote, Mammey; Screwpine; Soncoya; Soursop; Sugar apple; Sun sapote.
Subgroup 006D, Assorted tropical and sub-tropical, Inedible Peel - Cactus	Pitaya and Prickly pear	<u>Inedible Peel - Cactus (FI 2024)</u> : Pitaya; Prickly pear; Saguaro.
Subgroup 006E, Assorted tropical and sub-tropical, Inedible Peel - Vines	Kiwifruit or Passionfruit	<u>Inedible Peel - Vines (FI 2025)</u> : Granadilla; Granadilla, Giant; Kiwifruit; Monstera; Passionflower, Winged-stem; Passionfruit; Passionfruit, banana.
Subgroup 006F, Assorted tropical and sub-tropical, Inedible Peel - Palms	Muriti or Palmyra Palm	<u>Inedible Peel - Palms (FI 2026)</u> : Coconut, young; Guriri; Muriti; Palmyra Palm; Salak.

**TABLE 2. EXAMPLES OF SELECTION OF REPRESENTATIVE COMMODITIES
TYPE 02 - VEGETABLE COMMODITY GROUPS**

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Group 009 Bulb vegetables	Bulb onion and Spring onion or leek	<u>Bulb vegetables (VA 0035)</u> : Chives; Chives, Chinese; Daylily; Elegans hosta; Fritillaria (bulb); Fritillaria (green); Garlic; Garlic chives; Garlic, Great-headed; Garlic, Serpent; Kurrat; Lady's leek; Leek; Lily; Onion, Beltsville bunching; Onion, Bulb; Onion, Chinese; Onion, fresh; Onion macrostem; Onion, pearl; Onion, potato; Onion, Welsh; Shallot; Silverskin onion; Spring onion; Tree onion; Wild leek
Subgroup 009A, Bulb Onions	Bulb onion	<u>Bulb Onions (VA 2031)</u> : Daylily; Fritillaria (bulb); Garlic; Garlic, Great-headed; Garlic, Serpent; Lily; Onion, Bulb; Onion, Chinese; Shallot; Silverskin onion
Subgroup 009B, Green Onions	Spring onion or leek	<u>Green Onions (VA 2032)</u> : Chives; Chives, Chinese; Elegans hosta; Fritillaria (green); Garlic chives; Kurrat; Lady's leek; Leek; Onion, Beltsville bunching; Onion, fresh; Onion macrostem; Onion, pearl; Onion, potato; Onion, Welsh; Spring onion; Tree onion; Wild leek
Group 010 Brassica vegetables (except Brassica leafy vegetables)	Broccoli (Could be partly replaced by Cauliflower) and Cabbage, Head or Chinese cabbage (type Pe-tsai) and Brussels sprouts and Kohlrabi	<u>Brassica vegetables (except Brassica leafy vegetables), Flowerhead cabbages (VB0040)</u> : Broccoli; Brussels sprouts; Cabbages, Head; Chinese cabbage (type Pe-tsai); Cauliflower; Kohlrabi; Stem mustard
Subgroup 010A, Flowerhead Brassicas	Broccoli (Could be partly replaced by Cauliflower)	<u>Flowerhead Brassicas (VB 0042)</u> : Broccoli; Cauliflower
Subgroup 010B, Head Brassicas	Cabbage, Head or Chinese cabbage (type Pe-tsai) and Brussels sprouts	<u>Head Brassicas (VB 2036)</u> : Brussels sprouts; Cabbages, Head; Chinese cabbage (type Pe-tsai)
Subgroup 010C, Stem Brassicas	Kohlrabi	<u>Stem Brassicas (VB 2016)</u> : Kohlrabi; Stem mustard

¹ Alternative representative commodities may be selected based on documented regional/country differences in dietary consumption and/or areas of production.

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Group 11 Fruiting vegetables, Cucurbits	Cucumber and Squash, Summer and/or gourd and Melon (<i>Cucumis melo</i>)	<u>Fruiting vegetables, Cucurbits (VC 0045):</u> African horned melon; Balsam apple; Bitter melon; Bottle gourd; Casabanana; Chayote; Chieh-quia; Chinese cucumber; Cucumber; Cucumber, exploding; Cucumber, stuffing; Gac; Gherkin; Gherkin, West Indian; Gourd, bitter snake; Gourd, buffalo; Gourd, fluted; Gourd, Malabar; Gourds, other; Gourd, pointed; Gourd, round; Indian spine gourd; Ivy gourd; Japanese snake gourd; Loofah, angled; Loofah, Smooth; Melons, except watermelon; Melon, nara; Pumpkins; Snake gourd; Squash, Summer; Tacaco; Watermelon; Wax gourd (mature fruit); Winter squash
Subgroup 11A, Fruiting vegetables, Cucurbits - Cucumber and Summer squashes	Cucumber and Squash, Summer and/or gourd	<u>Fruiting vegetables, Cucurbits - Cucumber and Summer Squashes (VC 2039):</u> Balsam apple; Bitter melon; Bottle gourd; Chayote; Chieh-quia; Chinese cucumber; Cucumber; Cucumber, exploding; Cucumber, stuffing; Gac; Gherkin; Gherkin, West Indian; Gourd, bitter snake; Gourd, buffalo; Gourd fluted; Gourd, Malabar; Gourds, other; Gourd, pointed; Gourd, round; Indian spine gourd; Ivy gourd; Japanese snake gourd; Loofah, Angled; Loofah, Smooth; Snake gourd; Squash, Summer; Tacaco
Subgroup 11B, Fruiting vegetable, Cucurbits - Melons, Pumpkins and Winter Squashes	Melon (<i>Cucumis melo</i>)	<u>Fruiting vegetables, Cucurbits Cucurbits - Melons, Pumpkins and Winter Squashes (VC 2040):</u> African horned melon; Casababana; Melons, except Watermelon; Melon, nara; Pumpkins; Watermelon; Wax gourd (mature Fruit); Winter squash
Group 012 Fruiting vegetables, other than Cucurbits	One cultivar of large variety Tomato and one cultivar of small variety Tomato and Sweet Pepper and Chili pepper and One cultivar of large variety eggplant and/or tomato and one cultivar of small variety eggplant and/or tomato	<u>Fruiting vegetables, other than Cucurbits (VO 0050):</u> African eggplant; Bush tomato; Cherry tomato; Cocona; Currant tomato; Eggplant; Garden huckleberry; Goji berry; Ground cherries, Martynia; Okra; Pea eggplant; Pepino; Peppers, Chili; Peppers, sweet; Roselle; Scarlet eggplant; Sunberry; Tomatillo; Tomato; Thai eggplant
Subgroup 12A, Tomatoes	One cultivar of large variety Tomato and one cultivar of small variety Tomato	<u>Tomatoes (VO 2045):</u> Bush tomato; Cherry tomato; Cocona; Currant tomato; Garden huckleberry; Goji berry; Ground cherries; Sunberry; Tomatillo; Tomato
Subgroup 12B, Pepper and pepper-like commodities	Sweet Pepper and Chili pepper	<u>Peppers (VO 0051):</u> Martynia; Okra; Peppers, Chili; Peppers, sweet; Roselle;
Subgroup 12C, Eggplant and eggplant-like commodities	One cultivar of large variety eggplant and/or tomato and one cultivar of small variety eggplant and/or tomato	<u>Eggplants (VO 2046):</u> African eggplant; Eggplant; Pea eggplant; Pepino; Scarlet eggplant; Thai eggplant

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Group 013 Leafy vegetables (including Brassica leafy vegetables)	<p>Head lettuce and/or Leaf lettuce and Spinach</p> <p>and</p> <p>Mustard greens or Kale or Broccoli, Chinese or radish leaves</p> <p>and</p> <p>Sweet potato leaves or Arrowroot leaves</p> <p>and</p> <p>Grape leaves</p> <p>and</p> <p>Kangkung or Water mimosa or Watercress</p> <p>and</p> <p>Witloof chicory (sprouts)</p> <p>and</p> <p>Chayote leaves or Pumpkin leaves</p> <p>and</p> <p>Leaf lettuce or any crop intended to use as baby leaves (harvested up to 8 true leaf stage)</p> <p>and</p> <p>Mungbean sprouts</p>	<p><u>Leafy vegetables (including Brassica leafy vegetables) (VL 0053):</u> Acacia shoots; African Eggplant leaves; African nightshade; Agretti; Alexanders leaves; Alfalfa sprouts; Amaranth leaves; Arrowroot leaves; Aster, Indian; Ayoyo; Baby leaves; Balsam pear leaves; Bambara groundnut leaves; Barley shoots; Bell flower, Chinese leaves; Ben moringa leaves; Bitawiri; Bitter leaf; Blackjack; Boxthorn; Broccoli, Chinese; Broccoli raab; Cabbage, Abyssinian; Cabbage, Seakale; Cassava leaves; Cat's Wiskers; Chamchwi; Chamnamul; Chamssuk; Chard; Chayote leaves; Chervil; Chicory leaves; Chili pepper leaves; Chinese cabbage (type Pak-choi); Chinese flat cabbage; Chipilin; Cress, Garden; Cress, Upland; Chrysanthum, edible leaved; Common bean leaves; Corn salad; Cos lettuce; Cosmos; Cowpea leaves; Dandelion; Danggwí; Daylily leaves; Dock; Dolnamul; Ebolo; Endive; Fame flower; Feather cockscomb; Flowering white cabbage; Glasswort, common; Godeulppaegi; Gomchwi; Goosefoot leaves; Grape leaves; Hanover salad; Iceplant; Ivy gourd leaves; Japanese honewort; Jute; Kahurura; Kangkung; Kale; Kohlrabi leaves; Komatsuna; Lettuce, bitter; Lettuce, Head; Lettuce, Leaf; Maca leaves; Mallow leaves; Melientha; Mizuna; Monkey-bread tree leaves; Mungbean sprouts; Mustard greens; Mustard, tuberous rooted leaves, Chinese; New Zealand spinach; Okazi leaves; Orach; Papaya leaves; Peanut leaves; Perilla leaves; Plantain leaves; Polygonatum leaves; Pumpkin leaves; Purple-stem mustard; Purslane; Purslane, Winter; Radish leaves; Radish sprouts; Rampion leaves; Rape greens; Roselle leaves; Rucola; Rutabaga greens; Salsify leaves; Sanmaneul leaves; Shepherd's purse; Sichuan pepper sprouts; Sowthistle; Soya bean leaves; Soya bean sprouts; Spider plant; Spinach; Spinach, Indian; Ssam cabbage; Seumbagwi; Sweet potato, leaves; Tanier spinach; Tannia leaves; Taro leaves; Toona sinensis; Turnip greens; Ullucu leaves; Velvet plant leaves; Violet, Chinese; Wasabi leaves; Water clover; Watercress; Water mimosa; Water shield; White lead tree; Wild Rocket; Witloof chicory (sprouts); Yam leaves</p>

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Subgroup 013A, Leafy greens	Head lettuce and/or Leaf lettuce and Spinach	<u>Leafy greens (VL 2050)</u> : African Eggplant leaves; African nightshade; Agretti; Amaranth leaves; Aster, Indian; Ayoyo; Bambara groundnut leaves; Barley shoots; Bitawiri; Bitter leaf; Blackjack; Boxthorn; Cat's Whiskers; Chamchwi; Chamnamul; Chamssuk; Chard; Chervil; Chicory leaves; Chili pepper leaves; Chipilin; Chrysanthum, edible leaved; Common bean leaves; Corn salad; Cos lettuce; Cosmos; Cowpea leaves; Dandelion; Danggwil; Daylily leaves; Dock; Dolnamul; Ebolo; Endive; Fame flower; Feather cockscomb; Glasswort, common; Godeulppaegi; Gomchwi; Goosefoot leaves; Iceplant; Japanese honewort; Jute; Lettuce, bitter; Lettuce, Head; Lettuce, Leaf; Mallow leaves; New Zealand spinach; Orach; Peanut leaves; Perilla leaves; Plantain leaves; Polygonatum leaves; Purslane; Purslane, Winter; Sanmaneul leaves; Sowthistle; Soya bean leaves; Spider plant; Spinach; Spinach, Indian; Seumbagwi; Tanier spinach; Violet, Chinese
Subgroup 013B, Brassica leafy vegetables	Mustard greens or Kale or Broccoli, Chinese, or radish leaves	<u>Leaves of Brassicaceae (VL 0054)</u> : Broccoli, Chinese; Broccoli raab; Cabbage, Abyssinian; Cabbage, Seakale; Chinese cabbage (type Pak-choi); Chinese flat cabbage; Cress, Garden; Cress, Upland; Flowering white cabbage; Hanover salad; Kale; Kohlrabi leaves; Komatsuna; Maca leaves; Mizuna; Mustard greens; Mustard, tuberous rooted leaves, Chinese; Purple-stem mustard; Radish leaves; Rape greens; Rucola; Rutabaga greens; Shepherd's purse; Ssam cabbage; Turnip greens; Wasabi leaves; Wild Rocket
Subgroup 013C, Leaves of root and tuber vegetables	Sweet potato leaves or Arrowroot leaves	<u>Leaves of root and tuber vegetables (VL 2052)</u> : Alexanders leaves; Arrowroot leaves; Bell flower, Chinese leaves; Cassava leaves; Rampion leaves; Salsify leaves; Sweet potato, leaves; Tannia leaves; Taro leaves; Ullucu leaves; Velvet plant leaves; Yam leaves
Subgroup 013D, Leaves of trees, shrubs and vines	Grape leaves	<u>Leaves of trees, shrubs and vines (VL 2053)</u> : Acacia shoots; Ben moringa leaves; Grape leaves; Melientha; Monkey-bread tree leaves; Okazi leaves; Papaya leaves; Roselle leaves; Sichuan pepper sprouts; Toona sinensis; White lead tree
Subgroup 013E, Leafy aquatic vegetables	Kangkung or Water mimosa or Watercress	<u>Leafy aquatic vegetables (VL 2054)</u> : Kangkung; Water clover; Watercress; Water mimosa; Water shield
Subgroup 13 F, Witloof	Witloof chicory (sprouts)	<u>Witloof chicory sprouts (VL 2832)</u> : Witloof chicory (sprouts)

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Subgroup 13 G, Leaves of Cucurbitaceae	Chayote leaves or Pumpkin leaves	<u>Leaves of Cucurbitaceae (VL 2056)</u> : Balsam pear leaves; Chayote leaves; Ivy gourd leaves; Kahurura; Pumpkin leaves
Subgroup 13 H, Baby leaves	Leaf lettuce or any crop intended to use as baby leaves (harvested up to 8 true leaf stage)	<u>Baby leaves (VL 2057)</u> : Baby leaves
Subgroup 13 I, Sprouts	Mungbean sprouts	<u>Sprouts (VL 2058)</u> : Alfalfa sprouts; Mungbean sprouts; Radish sprouts; Soya bean sprouts
Group 14 Legume vegetables	Beans with pods (<i>Phaseolus</i> spp.) and/or Peas with pods (Garden pea or podded pea) and Succulent beans without pods (<i>Phaseolus</i> spp.) and Garden pea and Bambara groundnut (immature seeds)	<u>Legume vegetables (VP 0060)</u> : Beans with and without pods (<i>Phaseolus</i> spp.); Beans with and without pods (<i>Vigna</i> spp.); Bambara groundnut; Ben moringa; Broad bean; Broad bean; Catjang; Chick-pea; Common bean (poroto); Cowpea; Garden pea; Goa bean; Grass pea; Guar; Jack bean; Lablab bean; Lentil; Lima bean; Lupin; Moth bean; Mung bean; Peas with and without pods (<i>Pisum</i> spp.); Peanut (immature); Pigeon pea; Podded pea; Rice bean; Scarlet runner bean; Soya bean; Stink bean; Sword bean; Urd bean; Velvet bean; Winged pea; Yard-long bean;
Subgroup 14A, Beans with pods	Beans with pods (<i>Phaseolus</i> spp.)	<u>Beans with pods (VP 2060)</u> : Beans with pods (<i>Phaseolus</i> spp.); Beans with pods (<i>Vigna</i> spp.); Broad bean; Catjang; Common bean (poroto); Cowpea; Goa bean; Guar; Jack bean; Lablab bean; Moth bean; Mung bean; Rice bean; Scarlet runner bean; Soya bean; Stink bean; Sword bean; Urd bean; Yard-long bean
Subgroup 14B, Peas with pods	Peas with pods (Garden pea or podded pea) and/or Beans with pods (<i>Phaseolus</i> spp.)	<u>Peas with pods (VP2061)</u> : Peas with pods (<i>Pisum</i> spp.); Ben Moringa; Chick-pea; Garden pea; Grass pea; Lentil; Pigeon pea; Podded pea; Winged pea
Subgroup 14C, Succulent beans without pods	Succulent beans without pods (<i>Phaseolus</i> spp.)	<u>Succulent beans without pods (VP 2062)</u> : Beans, without pods (<i>Phaseolus</i> spp.); Beans, without pods (<i>Vigna</i> spp.); Broad bean, without pods; Catjang; Common bean; Cowpea; Goa bean; Jack bean; Lablab bean; Lima bean; Lupin; Moth bean; Scarlet runner bean; Soya bean; Stink bean; Velvet bean
Subgroup 14D, Succulent peas without pods	Garden pea	<u>Succulent peas without pods (VP 2063)</u> : Peas (<i>Pisum</i> spp.) without pods; Chick-pea; Garden pea; Lentil; Pigeon pea
Subgroup 14E, Underground immature beans and peas	Bambara groundnut (immature seeds)	<u>Underground beans and peas (VC 2064)</u> : Bambara groundnut (immature seeds); Peanut (immature)

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Group 15 Pulses	Beans, dry (<i>Phaseolus</i> spp.) and/or Peas, dry (<i>Pisum</i> spp.) and Soya bean, dry and Bambara groundnut (dry)	<u>Pulses (VD 0070)</u> : Beans (<i>Phaseolus</i> spp.); Beans (<i>Vigna</i> spp.); Adzuki bean; African yam bean; Bambara groundnut; Broad bean; Chick-pea; Common bean; Common Vetch; Cowpea; Field pea; Goa bean; Grass-pea; Guar; Horse gram; Jack bean; Kersting's groundnut; Lablab bean; Lentil; Lima bean; Lupin; Morama bean; Moth bean; Mung bean; Peas; Peas (<i>Pisum</i> spp.); Pigeon pea; Rice bean; Scarlet runner bean; Soya bean; Sword bean; Tepary bean; Thick bean; Urd bean; Velvet bean; Vetches; Winged pea; Yardlong bean
Subgroup 15A, Dry beans	Beans, dry (<i>Phaseolus</i> spp.) and/or Peas, dry (<i>Pisum</i> spp.) and Soya bean, dry	<u>Dry beans (VD 2065)</u> : Beans (<i>Phaseolus</i> spp.); Beans (<i>Vigna</i> spp.); Adzuki bean; African yam bean; Broad bean; Common bean; Common Vetch; Cowpea; Goa bean; Guar; Horse gram; Jack bean; Lablab bean; Lima bean; Lupin; Morama bean; Moth bean; Mung bean; Rice bean; Scarlet runner bean; Soya bean; Sword bean; Tepary bean; Thick bean; Urd bean; Velvet bean; Vetches; Winged pea; Yardlong bean
Subgroup 15B, Dry peas	Peas, dry (<i>Pisum</i> spp.) and/or Beans, dry (<i>Phaseolus</i> spp.)	<u>Dry peas (VD 2066)</u> : Peas (<i>Pisum</i> spp.); Chick-pea; Field pea; Grass-pea; Lentil; Pigeon pea
Subgroup 15C, Dry underground pulses	Bambara groundnut (dry)	<u>Dry underground pulses (VD 2067)</u> : Bambara groundnut (dry); Kersting's groundnut
Group 16 Root and tuber vegetables	Carrot and Radish and Sugar Beet or Beetroot and Potato or Sweet potato and Arrowhead	<u>Root and tuber vegetables (VR 0075)</u> : Alocasia; American potato bean; Arracacha; Arrowhead; Arrowroot; Arrowroot, Guinea; Arrowroot, Polynesian; Banana, Abyssinian; Beetroot; Bellflower, Chinese; Burdock, greater or edible; Canna, edible; Caraway, black root; Carrot; Cassava; Cattail; Celeriac; Chayote root; Chervil, Turnip-rooted; Chicory roots; Chinese artichoke; Chinese potato; Chinese water chestnut; Cowpea, wild; Dandelion root; Deodeok; Earthnut pea; Elephant foot yam; Gastrodia tuber; Giant swamp taro; Ginseng; Goa bean root; Horseradish; Jerusalem artichoke; Kaffir potato; Konjac; Kudzu; Ladybell root; Lotus tuber; Maca; Madeira vine; Mashua; Mauka; Murnong; Mustard, tuberous rooted Chinese; Oca; Olbanga; Parsley, Turnip-rooted; Parsnip; Pencil yam; Pignut; Potato; Radish; Radish, Black; Radish, Japanese; Rampion roots; Salsify; Salsify, Spanish; Scorzonera; Skirret; Sugar beet; Swede; Sweet potato; Tannia; Taro; Tiger nut; Ti palm; Turnip, Garden; Ullucu; Yacon; Yams; Yam vean

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Subgroup 16A, Root vegetables	Carrot and Radish and Sugar beet or Beetroot	<u>Root vegetables (VR 2070)</u> Beetroot; Bellflower, Chinese; Burdock, greater or edible; Caraway, black root; Carrot; Celeriac; Chervil, Turnip-rooted; Chicory roots; Dandelion root; Deodeok; Ginseng; Horseradish; Kudzu; Ladybell root; Maca; Madeira vine; Mauka; Murnong; Mustard, tuberous rooted Chinese; Parsley, Turnip-rooted; Parsnip; Pencil yam; Radish; Radish, Black; Radish, Japanese; Rampion roots; Salsify; Salsify, Spanish; Scorzonera; Skirret; Sugar beet; Swede; Ti palm; Turnip, Garden
Subgroup 16B, Tuberous and corm vegetables	Potato or Sweet potato	<u>Tuberous and corm vegetables (VR 2071):</u> Alocasia; American potato bean; Arracacha; Arrowroot; Arrowroot, Guinea; Arrowroot, Polynesian; Banana, Abyssinian; Canna, edible; Cassava; Chayote root; Chinese artichoke; Chinese potato; Cowpea, wild; Earthnut pea; Elephant foot yam; Gastrodia tuber; Giant swamp taro; Goa bean root; Jerusalem artichoke; Kaffir potato; Konjac; Mashua; Oca; Pignut; Potato; Sweet potato; Tannia; Taro; Tiger nut; Ullucu; Yacon; Yams; Yam bean
Subgroup 16C, Aquatic root and tuber vegetables	Arrowhead	<u>Aquatic root and tuber vegetables (VR 2072):</u> Arrowhead; Cattail; Chinese water chestnut; Lotus tuber; Olbanga
Group 17 Stalk and stem vegetables	Celery and Asparagus and/or Artichoke, globe	<u>Stalk and stem vegetables (VS 0078):</u> Agave; Artichoke, globe; Asparagus; Bamboo shoots; Burdock, edible, tops; Cardoon; Celery; Celtuce; Dokhwal shoot; Dureup young shoot; Eumnamu shoot; Fennel, Bulb; Ferns, edible; Giant butterbur; Palm hearts; Prickly pear pads; Rhubarb; Kale, sea; Sweet potato stems; Taro stems; Udo; Water celery; Zuiki
Subgroup 17A, Stems and petioles	Celery	<u>Stems and petioles (VS 2080):</u> Burdock, edible, tops; Cardoon; Celery; Celtuce; Fennel, Bulb; Giant butterbur; Rhubarb; Sweet potato stems; Taro stems; Zuiki
Subgroup 17B, Young shoots	Asparagus	<u>Young shoots (VS 2081):</u> Agave; Asparagus; Bamboo shoots; Dokhwal shoot; Dureup young shoot; Eumnamu shoot; Ferns, edible; Kale, sea; Udo
Subgroup 17C, Others	Artichoke, globe	<u>Other stalk and stem vegetables (VS 2082)</u> Artichoke, globe; Palm hearts; Prickly pear pads, Water celery

Codex Group / Subgroup	Examples of Representative Commodities ¹	Extrapolation to the following commodities
Group 18 Edible fungi	Mushrooms	<u>Edible fungi (VF 2084)</u> : Fungi, Edible, except mushrooms; Black poplar mushroom; Blewitt; Bunashimeji; Cauliflower mushroom; Cep; Chanterelle; Enoke; Hirmeola; Ink mushroom; Maitake; Morel; Mushrooms; Nameko; Net bearing Dictyophora; Oyster mushroom; Pine mushroom; Pom pom; Reishi mushroom; Shiitake mushroom; Shimeji; Straw mushroom; Stropharia; Truffle; Wangsongi; White jelly mushroom; Wood ears mushroom

**TABLE 3. EXAMPLES OF SELECTION OF REPRESENTATIVE COMMODITIES
TYPE 03 - GRASS COMMODITY GROUPS**

Codex Group / Subgroup	Examples of Representative Commodities¹	Extrapolation to the following commodities
Group 020 Cereal Grains	Wheat and Barley and Rice and Sorghum Grain and Maize and Sweet corn	<u>Cereal grains (GC 0080)</u> : Amaranth, grain; Baby corn (immature corn); Barley; Buckwheat; Buckwheat, tartary; Canarygrass, annual; Cañihua; Chia; Corn-on-the-cob (kernels plus cob with husk removed); Cram-cam; Hungry rice; Huauzontle; Job's tears; Maize; Millet; Oats; Popcorn; Psyllium sp., Quinoa; Rice; Rice, African; Rye; Sorghum; Sweet corn (whole kernel without cob or husk); Teff or Tef; Teosinte; Triticale; Wheat; Wild rice
Subgroup 020A, Wheat, similar grains and pseudocereals without husks	Wheat	<u>Wheat, similar grains, and pseudocereals without husks (GC 2086)</u> : Amaranth, grain; Cañihua; Chia; Cram-cam; Huauzontle; Psyllium sp., Quinoa; Rye; Triticale; Wheat
Subgroup 020B, Barley, similar grains, and pseudocereals with husks	Barley	<u>Barley, similar grains, and pseudocereals with husks (GC 2087)</u> : Barley; Buckwheat; Buckwheat, tartary; Canarygrass, annual; Oats
Subgroup 020C Rice cereals	Rice	<u>Rice Cereals (GC 2088)</u> : Rice; Rice, African; Wild rice
Subgroup 020D Sorghum Grain and Millet	Sorghum Grain	<u>Sorghum Grain and Millet (GC 2089)</u> : Hungry rice; Job's tears; Millet; Sorghum Grain; Teff or Tef;
Subgroup 020E Maize Cereals	Maize	Maize; Popcorn; Teosinte
Subgroup 020F Sweet corns	Sweet corn (Corn-on-the-cob) (kernels plus cob with husk removed)	<u>Sweet corns (GC 2090)</u> : Baby corn; Sweet corn (Corn-on-the-cob) (kernels plus cob with husk removed); Sweet corn (whole kernel without cob or husk)
Group 021 Grasses for sugar production and grasses and other plants for syrup production	Sugar cane or Sorgo or Sorghum, Sweet	Sorgo or Sorghum, Sweet; Sugar cane

¹ Alternative representative commodities may be selected based on documented regional/country differences in dietary consumption and/or areas of production.