

C O D E X A L I M E N T A R I U S C O M M I S S I O N



**Food and Agriculture
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Agenda Item 7

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**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON FRESH FRUITS AND VEGETABLES**

**17th Session
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PROPOSALS FOR NEW WORK ON CODEX STANDARDS FOR FRESH FRUITS AND VEGETABLES

(Prepared by India)

This document is divided into two parts: Part I refers to a proposal for new work on a Codex Standard for Fresh Okra and Part II refers to a proposal for new work on a Codex Standard for Fresh Ware Potato.

PART I: PROPOSAL FOR NEW WORK ON CODEX STANDARD FOR FRESH OKRA

Background

Okra (*Abelmoschus esculentus*) also known as lady's fingers or gumbo, is a flowering plant of the Malvaceae family. It is valued for its edible green seed pods. The plant is cultivated in tropical, subtropical and warm temperate regions around the world. Okra is an important vegetable of the tropical countries and popular among consumers in Cameroon, Ghana, India, Iraq, Nigeria, Pakistan, Switzerland, UAE and USA. It is believed to have originated in Africa and is, currently, being grown in most subtropical and tropical regions of the world. India, Pakistan, Iraq etc. are major okra growing countries.

1. Purpose and the Scope of the Standard

The scope of the work is to establish a worldwide standard for okra obtained from varieties of *Abelmoschus esculentus* L. Moench of Malvaceae family, which must be supplied fresh to the consumers after proper preparation and packaging. The objective of the standard is to consider the characteristics of okra for fresh consumption within the framework of an international document.

2. Relevance and timelines

Due to the growing trend of worldwide okra production and trade, it is necessary to establish a standard covering the safety, quality, hygiene and labeling in order to have a reference that has been internationally agreed by consensus between the main producing and trading countries. More significantly, the present status of okra is not limited to any particular region and hence justifies the elaboration of an international standard commensurate with the okra's true standing as an increasingly valuable worldwide commodity. In addition, the drafting of a Codex Standard for Okra will help to protect consumers' health and to promote fair trade practices in accordance with the different international agreements.

3. Main aspects to be covered

The most relevant items which may be considered are related to:

- Establish the minimum requirements of okra, which shall be complied with, independently from the quality class.
- Define the categories to classify okra in accordance with its characteristics.
- Consider the sizing classes to commercialize okra depending on its length.
- Establish the tolerance as regards quality and size that may be permitted in okra contained in a package.
- Include the provisions to be considered relating to the uniformity of the packaged product and the package used.
- Include provisions for the labeling and marking of the product in accordance with the General Standard for the Labelling of Prepackaged Foods.
- Include provisions for contaminants with reference to the General Standard for Contaminants and Toxins in Foods.
- Include provisions for hygiene and handling with reference to the Recommended International Code of Practice for Hygiene - General Principles of Food Hygiene.

4. Assessment against the Criteria for the Establishment of Work Priorities

General criterion

Okra comes in different varieties and size. Generally, the size determines the consumption of okra in a recipe. Hence, trading in okra is done according to its quality and size. An international standard for okra to protect the consumers from fraudulent practices and for protection of consumer health will assist in removing obstacles to international trade.

Criteria applicable to commodities

(a) Volume of production and consumption in individual countries and volume and pattern of trade between countries

The total production of okra is reported to be 6.48 million MTs during the year 2009. It is grown mainly in India, Nigeria, Sudan, Pakistan, Ghana, Egypt, Benin, Saudi Arabia, Mexico and Cameroon. Largest area and production is in India followed by Nigeria, Sudan and Iraq.

Part I

PRODUCTION OF OKRA

Qty. (in MTs)

COUNTRY	2007	2008	2009
Benin	49122	48060	49143
Burkina Faso	27000	22433	17838
Cameroon	40552	41585	40000
Cote d'Ivoire	112537	115913	115000
Egypt	117940	104690	100000
Ghana	108000	89731	71350
Guatemala	6375	6018	6209
India	4070000	4179000	4528000
Iraq	140579	132015	152751
Jordan	-	5550	-
Mexico	35946	35711	28671
Nigeria	1280000	1039000	826170
Oman	-	-	5400
Philippines	27886	29485	29710
Pakistan	103659	114657	116096
Saudi Arabia	55000	52000	56974
Senegal	11835	4700	3200
Sudan	216950	223650	249000
Syrian Arab Republic	15290	20100	13812
Turkey	36992	37543	38432
United States of America	10000	9673	9825
Yemen	20730	21530	22519

Source: As provided by national governments and FAOSTAT.

Part I

Pattern of International Trade in Okra

Qty. (MTs)

EXPORTING COUNTRY	2005	2006	2007	2008	2009	2010
Egypt	26.00	53.00	110.00	110.00	-	-
Greece	-	-	-	-	0.035	0.180
Hong Kong, Special Administrative Region	-	-	-	2.914	4.132	0.027
India	24317	43513	38098	55311	73161	69963
Japan	-	-	-	1374.76	1352.21	1815.64
Jordan	6.00	14.00	653.00	3.00	11.00	-
Malaysia	1.00	-	-	-	-	-
Pakistan	-	-	-	1987	1875	2100

Source: As provided by national governments.

Qty. (MTs)

IMPORTING COUNTRY	2005	2006	2007	2008	2009
Kuwait	40	9	87	87	-
Malaysia	3	27	10	-	-
Switzerland	150	410	391	401	370
United Arab Emirates	-	5	36	-	-
United States of America	39145	38694	40601	38223	34995

Source: As provided by national governments.

(b) Diversification of national legislation and apparent resultant or potential impediments to international trade

As mentioned above, okra is traded according to varieties and size. The size of okra varies largely ranging from baby okra to more than 11 cm long. Currently, US and India have national legislations (quality and grading standards) for okra. ISO and UNECE do not have standard for okra. This new work will provide guidance, which countries will be able to use to develop their own quality and grading standards for okra, and when applied internationally, may assist in providing a harmonized approach.

(c) International or regional market potential

The import of okra by most countries is increasing. The trade can be enhanced by developing quality and grading standards for okra.

(d) Amenability of the commodity to standardization

The characteristics of okra from its cultivation to harvest, cultivar varieties, composition, quality and packaging all lead to adequate parameters for the standardization of the product.

(e) Coverage of the main consumer protection and trade issues by existing or proposed general standards

There is no general commodity standard covering okra. Currently, size is the only criteria taken into the consideration. Therefore, the new work will enhance consumer protection and facilitate okra trade by establishing an internationally agreed quality standard covering minimum requirements, classes, size, color, uniformity, packaging etc.

Part I

(f) Number of commodities, which would need separate standards including whether raw, semi-processed or processed

A single standard for okra will cover all varieties of okra traded worldwide.

(d) Work already undertaken by other international organizations in this field and/or suggested by the relevant international intergovernmental body(ies)

There is no other international organization that has undertaken international standard for okra. Even ISO and UNECE have not undertaken work on okra. Therefore, this new work does not duplicate work undertaken by other international Organizations.

5. Relevance to the Codex strategic objectives

The elaboration of a codex standard for okra is in line with the strategic objective to promote the maximum application of codex standards by countries in their national legislation and to facilitate international trade. This proposal is relevant to Activity 1.2 “Review and develop Codex standards and related texts for food quality” of the Strategic Plan 2008-2013. The new work contributes to state the minimum quality requirements for okra for human consumption, different classes based on quality parameters and size with the purpose of protecting the consumer's health and achieving fair practices in the food trade.

6. Information on the relation between the proposal and other existing Codex documents

This is proposed as a new global standard and has no relation to any other existing Codex text on this item, except that the standard will make references to relevant standards and related texts developed by general subject committees. In fact, there is no comparable standard for okra framed by any global body including ISO and UNECE.

The proposal for the elaboration of a Codex Standard for okra is part of the Terms of Reference of the Codex Committee on Fresh Fruits and Vegetables. This new work has been recommended by the CCFFV at its 16th session.

7. Identification of any requirement for and availability of expert scientific advice

There is no need foreseen for expert scientific advice.

8. Identification of any need for technical input to the standard from external bodies

There is no need of technical input from external bodies.

9. Proposed timeline for completion of the new work

DATE	PROCEDURES
September, 2012 CCFFV	India: Presentation of the proposal CCFFV: Agreement to start new work on a proposed draft Codex Standard for Okra.
June/July, 2013 CCEXEC/CAC	CCEXEC: Critical Review Process: Recommendation to start new work on a proposed draft Standard for Okra CAC: Approval of New work. Circulation of draft standard for comments at Step 3.
May, 2014	CCFFV: Consideration of the proposed draft Standard at Step 4.
June/July, 2014 CCEXEC/CAC	CCEXEC: Critical Review Process: Recommendation for adoption at Step 5. CAC; Adoption at Step 5. Circulation for comments at Step 6. <u>Effort will be made for adoption of the standard at Step 5/8 in June/July, 2014 depending upon relevant inputs from members.</u>
September, 2015 CCFFV	CCFFV – Consideration of the draft Standard at Step 7.
June/July, 2016 CCEXEC/CAC	CCEXEC – Critical Review Process: Recommendation for adoption at Step 8. CAC – Adoption at Step 8 (Codex Standard for Okra)

A draft of Codex standard for fresh okra has also been prepared and is annexed.

PROPOSED DRAFT CODEX STANDARD FOR FRESH OKRA

1. DEFINITION OF PRODUCE

This Standard applies to commercial varieties of okra grown from varieties of *Abelmoschuss esculentus L. Moench* of the Malvaceae family, to be supplied fresh to the consumers after preparation and packaging. Okra for industrial processing is excluded.

2. PROVISIONS CONCERNING QUALITY

2.1 MINIMUM REQUIREMENTS

In all classes, subject to the special provisions for each class and the tolerances allowed, the okra must be:

- whole with peduncle and intact tip;
- sufficiently developed (should be plucked before fiber formation);
- sound, fresh in appearance, firm and tender. Produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- clean, practically free of any visible foreign matter;
- practically free of pests and damage caused by them affecting the general appearance of the produce;
- free of abnormal external moisture, excluding condensation following removal from cold storage;
- free of any foreign smell and/or taste;
- free of hard seeds.
- free of bruising;
- free of damage caused by low or high temperature.

2.1.1 The development and condition of the okra must be such as to enable them:

- to withstand transport and handling; and
- to arrive in satisfactory condition at place of destination.

2.1.2 Maturity Requirements

The okra must be sufficiently developed and display satisfactory ripeness. The development and state of maturity of the okra must be such as to enable them to continue their ripening process and to reach the appropriate degree of ripeness.

2.2 CLASSIFICATION

Okra are classified in three classes defined below:

2.2.1 "Extra" Class

Okra in this class must be of superior quality. They must have firm flesh and must be characteristic of the variety as regards shape, appearance and development.

Their colouring, according to their state of ripeness, must be such as to satisfy the requirements set out in Section 2.1.1 above.

They must be free of defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

2.2.2 Class I

Okra in this class must be of good quality. They must have reasonably firm flesh and must be characteristic of the variety as regards shape, appearance and development. They must be free of cracks.

The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- a slight defect in shape and development;
- a slight defect in colouring;
- slight skin defects such as scars, blemishes, scratches, bruises, scraps not exceeding 2% of the total surface area.

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2.2.3 Class II

This class includes okra which does not qualify for inclusion in the higher classes but satisfies the minimum requirements specified in Section 2.1 above.

The following defects, however, may be allowed, provided the okra retains its essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape, development and colouring;
- skin defects such as scars, blemishes, scratches, bruises, scraps not exceeding 5 % of the total surface area.

3. PROVISIONS CONCERNING SIZING

Size is determined by the length of the okra (in mm. without peduncle) in accordance with the following table:

Size Code	Length in mm
A	40.1 – 65.0
B	65.1 – 90.0
C	90.1 – 115.0
D	115.1 and above

4. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each package for produce not satisfying the requirements of the class indicated.

4.1 QUALITY TOLERANCES**4.1.1 "Extra" Class**

Five percent by number or weight of okra not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

4.1.2 Class I

Ten percent by number or weight of okra not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

4.1.3 Class II

Ten percent by number or weight of okra satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting, marked bruising or any other deterioration rendering it unfit for consumption.

4.2 SIZE TOLERANCES

For all classes, 10% by number or weight of okra corresponding to the size immediately above or below that indicated on the package.

5. PROVISIONS CONCERNING PRESENTATION**5.1 UNIFORMITY**

The contents of each package must be uniform and contain okra of the same origin, variety or commercial type, quality and size (if sized).

The visible part of the contents of the package must be representative of the entire contents.

5.2 PACKAGING

Okra must be packed in such a way as to protect the produce properly. The materials used inside the package must be new, clean, and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications is allowed, provided the printing or labelling has been done with non-toxic ink or glue.

It is recommended that the okra covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice for Packaging and Transport of Fresh Fruit and Vegetables (CAC/RCP 44-1995).

Part I

5.2.1 Description of Containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the okra. Packages must be free of all foreign matter and smell.

6. MARKING OR LABELLING**6.1 CONSUMER PACKAGES**

In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply:

6.1.1 Nature of Produce

If the produce is not visible from the outside, each package shall be labeled as to the name of the produce and may be labeled as to the name of the variety and/or commercial type.

6.2 NON-RETAIL CONTAINERS

Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside, or in the documents accompanying the shipment.

6.2.1 Identification

Name and address of exporter, packer and/or dispatcher.

6.2.2 Nature of Produce

- Name of the produce "okra" if the contents are not visible from the outside. Name of the variety and/or commercial type (optional).

6.2.3 Origin of Produce

Country of origin and, optionally, district where grown or national, regional or local place name.

6.2.4 Commercial Identification

- Class;
- Size (size code or minimum and maximum length in mm)

6.2.5 Official Inspection Mark (optional)**7. CONTAMINANTS**

7.1 The produce covered by this Standard shall comply with the maximum levels of the Codex General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995).

7.2 The produce covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

8. HYGIENE

8.1 It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969), Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003), and other relevant Codex texts.

8.2 The produce should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

PART II: PROJECT DOCUMENT FOR CODEX STANDARD FOR FRESH WARE POTATO

Background

The Ware potato (*Solanum tuberosum*) is a starchy, tuberous crop from the Solanaceae family. Ware potato is a native of the Andes region in South America and said to have been introduced in Europe in the 16th century. Ware potato is a short duration crop capable of producing high yield per unit area per unit time. They bear white, pink, red, blue, or purple flowers with yellow stamens. In general, the tubers of varieties with white flowers have white skins, while those of varieties with colored flowers tend to have pinkish skins. The major species grown worldwide is *Solanum tuberosum* commonly known as potato..

1. The purpose and the scope of the Standard

The purpose of this work is to establish a world-wide standard with the aim of protecting the consumer's health and facilitating international trade.

The Scope of the standard is ware potato obtained from commercial varieties of *Solanum tuberosum*, which must be supplied fresh to the consumers after preparation and packaging. Ware Potatoes for industrial processing are excluded.

2. Relevance and timeliness

Ware potato is grown in many areas of the world. It is globally traded and is not limited to any particular region and hence justifies the elaboration of an international standard. Therefore, it is necessary to establish standards covering the safety, quality, hygiene and labeling in order to have a reference that has been internationally agreed by consensus between the main trading countries.

3. Main aspects to be covered

The most relevant items which may be considered are related to:

- Establish the minimum requirements of ware potato, which shall be complied with, independently from the quality class.
- Define the categories to classify ware potato in accordance with its characteristics.
- Consider the sizing classes to commercialize ware potato depending on its size.
- Establish the tolerance limits as regards quality and size that may be permitted in ware potato contained in a package.
- Include the provisions to be considered relating to the uniformity of the packaged product and the package used.
- Include provisions for the labeling and marking of the product in accordance with the General Standard for the Labelling of Prepackaged Foods.
- Include provisions for contaminants with reference to the General Standard for Contaminants and Toxins in Foods.
- Include provisions for hygiene and handling with reference to the Recommended International Code of Practice for Hygiene - General Principles of Food Hygiene.

4. Assessment against the Criteria for the Establishment of Work Priorities

General criterion

The elaboration of the standard for ware potato would be beneficial for developing countries in particular, because developing countries are the major producers, exporters and consumers of ware potato. It is necessary that the quality of produce meets consumer needs and minimum requirements of food safety.

Criteria applicable to commodities

(a) Volume of production and consumption in individual countries and volume and pattern of trade between countries

According to FAO data, the production and trade at a world-wide level has been variable. For 2010, China was the country with the largest cultivated area and production (74.8 million MT), followed by India, Russian Federation, Ukraine, United States of America, Germany and Poland. The production and trade data for last three years is in Annex I and II respectively. It may be seen from the data that ware potato is produced and traded across the world.

(b) Diversification of national legislation and apparent resultant or potential impediments to international trade:

International Standard Organization (ISO) 2165:1974 has developed a basic general guideline standard for storage of ware potato. Work has also been undertaken by other international organizations, such as UNECE. Therefore, these aspects can be taken into consideration while developing Codex standard for ware potato.

Due to lack of international standard for ware potato, international trade has been widely affected. Importers prefer to import vegetables based on a Codex standard. Therefore, the new work would provide internationally recognized specific standards in order to enhance international trade and to accommodate the importer's requirements.

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(c) International or regional market potential

The import of ware potato by most countries is increasing. Ware potato comes in different varieties, sizes and colour. Generally, size is the only criteria taken into consideration. Therefore, development of quality/grading standards for ware potato will help to enhance trade.

(d) Amenability of commodity to standardization

The characteristics of ware potato, from its cultivation to harvest, cultivar varieties, composition, quality and packaging all lead to adequate parameters for the standardization of the product.

(e) Coverage of the main consumer protection and trade issues by existing or proposed general standards

There is no general commodity standard covering ware potato. The proposed standard will address issues relating to minimum requirements, classes, size, colour, uniformity, packaging etc.

(f) Number of commodities which would need separate standards including whether raw, semi-processed or processed

A single standard for ware potato will cover all varieties of ware potato traded worldwide.

(g) Work already undertaken by other international organizations in this field and/or suggested by the relevant international intergovernmental body(ies)

There is no other international organization that has undertaken international standard for ware potato. However, the national standards have been developed by Philippines and India. The existing international standards which may be considered while developing standard for ware potatoes are:

- a. UNECE Standard concerning the marketing and commercial quality control of early and ware potatoes, 2011(FFV-52: Early and Ware Potatoes-2011).
- b. OECD International Standards for fresh Fruits and Vegetables: Early and Ware Potatoes.
- c. ISO 2165:1974 ware potatoes-Guide to storage.

5. Relevance to the Codex strategic objectives

The elaboration of a codex standard for ware potato is in line with the strategic objective to promote the maximum application of codex standards by countries in their national legislation and to facilitate international trade. This proposal is relevant to Activity 1.2 "Review and develop Codex standards and related texts for food quality" of the Strategic Plan 2008-2013. The proposal is based on scientific considerations and contributes to state the minimum quality requirements for fresh ware potato for human consumption, with the purpose of protecting the consumer's health and achieving fair practices in the food trade.

6. Information on the relation between the proposal and other existing Codex documents

The proposal for elaboration of a Codex Standard for ware potato is part of the terms of reference of the Codex Committee on Fresh Fruits and Vegetables.

7. Identification of any requirement for and availability of expert scientific advice

There is no need foreseen for expert scientific advice.

8. Identification of any need for technical input to the standard from external bodies

The existing UNECE and ISO standards would be considered while developing the standard for ware potatoes.

9. Proposed timeline for completion of the new work

DATE	PROCEDURES
Sep, 2012 CCFFV	India-Presentation of the proposal CCFFV- Agreement to start new work on a proposed draft Codex Standard for ware potato
June/July 2013 CCEXEC/CAC	CCEXEC- Critical Review Process: Recommendation to start new work on a proposed draft Standard for ware potato CAC- Approval of New work. Circulation of draft standard for comments at Step 3
May, 2014	CCFFV – Consideration of the proposed draft Standard at Step 4.
June/July 2014 CCEXEC/CAC	CCEXEC –Critical Review Process: Recommendation for adoption at Step 5. CAC – Adoption at Step 5. Circulation for comments at Step 6. <u>Effort will be made for adoption of the standard at Step 5/8 in June/July 2014 depending upon relevant inputs from members.</u>

Part II

DATE	PROCEDURES
September, 2015 CCFFV	CCFFV – Consideration of the draft Standard at Step 7.
June/July 2016 CCEXEC/CAC	CCEXEC – Critical Review Process: Recommendation for adoption at Step 8. CAC – Adoption at Step 8 (Codex Standard for ware potato)

A draft of Codex standard for fresh ware potato has also been prepared and is at Annex III.

Production of Ware Potato

Qty. (in MT)

Country	2008	2009	2010
Afghanistan	280,000.00	302,400.00	333,600.00
Albania	165,000.00	200,000.00	208,000.00
Algeria	1,800,000.00	2,636,060.00	3,290,000.00
Angola	615,000.00	823,266.00	827,000.00
Argentina	1,950,000.00	1,950,000.00	2,001,400.00
Armenia	648,562.00	593,551.00	481,956.00
Australia	1,211,988.00	1,178,530.00	1,278,120.00
Austria	756,945.00	722,098.00	671,722.00
Azerbaijan	1,077,110.00	982,979.00	953,710.00
Bahrain	23	40	110
Bangladesh	6,648,000.00	5,268,000.00	7,930,000.00
Belarus	8,748,630.00	7,124,980.00	7,831,110.00
Belgium	2,803,600.00	3,296,080.00	3,455,800.00
Belize	865	1,065.00	1,100.00
Benin	30	40	40
Bermuda	1,000.00	1,055.00	1,000.00
Bhutan	61,133.00	48,513.00	53,500.00
Bolivia, Plurinational State of	735,254.00	762,719.00	782,800.00
Bosnia and Herzegovina	424,860.00	413,658.00	378,707.00
Brazil	3,676,046.00	3,443,710.00	3,595,330.00
Bulgaria	353,060.00	231,745.00	251,100.00
Burkina Faso	1,700.00	1,656.00	2,100.00
Burundi	26,693.00	10,615.00	9,320.00
Cameroon	142,000.00	145,000.00	150,900.00
Canada	4,724,460.00	4,581,120.00	4,421,770.00
Cape Verde	3,800.00	3,701.00	4,700.00
Central African Republic	1,000.00	1,146.00	1,200.00
Chad	42,200.00	50,000.00	50,200.00

Country	2008	2009	2010
Chile	965,940.00	924,555.00	1,081,350.00
China	57,059,652.00	73,281,890.00	74,785,300.00
Colombia	2,372,862.00	2,272,770.00	2,121,880.00
Comoros	500	626	800
Congo, Democratic Republic of	93,980.00	95,000.00	94,826.00
Congo, Republic of	4,300.00	5,776.00	5,130.00
Costa Rica	66,126.00	73,606.00	55,711.00
Croatia	255,600.00	270,251.00	178,611.00
Cuba	189,000.00	278,600.00	191,500.00
Cyprus	131,695.00	131,800.00	82,000.00
Czech Republic	769,561.00	752,539.00	665,200.00
Denmark	1,705,403.00	1,617,700.00	1,357,800.00
Dominica	120	137	130
Dominican Republic	33,035.00	43,480.00	51,379.00
Ecuador	266,722.00	286,790.00	386,798.00
Egypt	3,567,050.00	4,000,000.00	3,643,220.00
El Salvador	5,748.00	5,326.00	5,326.00
Eritrea	16,000.00	102	140
Estonia	125,200.00	139,050.00	163,373.00
Ethiopia	402,508.00	572,333.00	785,800.00
Faroe Islands	1,400.00	1,500.00	1,400.00
Fiji	80	70	70
Finland	684,400.00	755,300.00	659,100.00
France	6,808,210.00	7,226,310.00	6,582,190.00
French Polynesia	600	583	630
Georgia	139,200.00	216,800.00	228,800.00
Germany	11,369,000.00	11,617,500.00	10,201,900.00
Greece	848,000.00	848,000.00	791,500.00
Guatemala	451,673.00	460,429.00	472,600.00
Guinea	12,167.00	10,717.00	10,800.00

Country	2008	2009	2010
Haiti	15,000.00	17,444.00	15,000.00
Honduras	22,500.00	31,379.00	23,802.00
Hungary	658,000.00	560,615.00	439,897.00
Iceland	12,500.00	9,500.00	12,500.00
Iraq	598,000.00	223,147.00	204,697.00
India	34,462,500.00	34,391,000.00	36,577,300.00
Indonesia	1,044,492.00	1,174,670.00	1,060,580.00
Iran, Islamic Republic of	5,500,000.00	4,107,630.00	4,054,490.00
Ireland	371,900.00	361,300.00	330,500.00
Israel	557,917.00	608,832.00	548,650.00
Italy	1,603,828.00	1,753,200.00	1,558,030.00
Jamaica	4,929.00	8,708.00	11,222.00
Japan	2,800,000.00	2,398,000.00	2,069,800.00
Jordan	139,787.00	118,705.00	174,931.00
Kazakhstan	2,354,408.00	2,755,600.00	2,554,600.00
Kenya	850,000.00	400,000.00	450,000.00
Korea, Democratic People's Republic of	1,520,280.00	1,560,000.00	1,708,000.00
Korea, Republic of	604,592.00	640,000.00	616,707.00
Kuwait	23,500.00	25,229.00	26,500.00
Kyrgyzstan	1,334,900.00	1,393,140.00	1,339,400.00
Lao People's Democratic Republic	36,000.00	42,115.00	40,000.00
Latvia	673,400.00	525,400.00	484,000.00
Lebanon	514,600.00	515,000.00	574,100.00
Lesotho	96,500.00	83,871.00	98,200.00
Libya	290,000.00	311,332.00	290,000.00
Lithuania	716,400.00	662,500.00	474,700.00
Luxembourg	21,756.00	20,044.00	19,531.00
Macedonia, The former Yugoslav Republic of	191,106.00	207,152.00	200,125.00
Madagascar	225,000.00	219,703.00	224,787.00

Country	2008	2009	2010
Malawi	2,993,818.00	347,507.00	4,706,400.00
Mali	120,000.00	105,694.00	14,020.00
Malta	19,000.00	10,069.00	9,500.00
Mauritania	2,200.00	2,015.00	2,200.00
Mauritius	14,868.00	19,828.00	17,000.00
Mexico	1,670,480.00	1,501,230.00	1,536,620.00
Mongolia	134,773.00	151,211.00	167,956.00
Montenegro	110,000.00	156,380.00	149,252.00
Montserrat	150	210	210
Morocco	1,536,560.00	1,500,000.00	1,604,620.00
Mozambique	80,000.00	97,646.00	110,500.00
Myanmar	470,700.00	548,000.00	508,000.00
Namibia	-	12,136.00	12,500.00
Nepal	2,054,817.00	2,424,050.00	2,517,700.00
Netherlands	6,922,700.00	7,181,000.00	6,843,530.00
New Caledonia	1,803.00	1,488.00	868
New Zealand	505,000.00	490,000.00	531,100.00
Nicaragua	33,000.00	34,000.00	24,600.00
Niger	22,620.00	33,966.00	35,000.00
Nigeria	1,105,000.00	914,778.00	900,300.00
Norway	400,400.00	332,700.00	321,100.00
Oman	9,067.00	11,350.00	7,200.00
Pakistan	2,539,000.00	2,941,300.00	3,141,500.00
Panama	22,314.00	25,764.00	26,400.00
Papua New Guinea	900	875	900
Paraguay	1,250.00	1,300.00	1,300.00
Peru	3,383,020.00	3,716,700.00	3,814,370.00
Philippines	121,311.00	119,159.00	124,671.00
Poland	10,462,100.00	9,702,800.00	8,765,960.00
Portugal	566,600.00	519,300.00	384,000.00

Country	2008	2009	2010
Qatar	44	45	50
Republic of Moldova	271,039.00	261,000.00	279,650.00
Réunion	7,000.00	5,400.00	7,400.00
Romania	3,649,020.00	4,003,980.00	3,283,870.00
Russian Federation	28,874,230.00	31,134,000.00	21,140,500.00
Rwanda	1,300,000.00	1,287,400.00	1,789,400.00
Saint Kitts and Nevis	239	250	73
Saudi Arabia	468,500.00	479,881.00	495,100.00
Senegal	10,000.00	3,000.00	15,000.00
Serbia	843,545.00	898,282.00	887,363.00
Slovak Republic	245,277.00	216,123.00	125,900.00
Slovenia	100,319.00	103,425.00	101,208.00
South Africa	2,098,581.00	1,819,250.00	2,071,930.00
Spain	2,365,400.00	2,459,800.00	2,277,900.00
Sri Lanka	74,820.00	61,700.00	51,930.00
Sudan	273,000.00	284,000.00	315,000.00
Swaziland	6,000.00	5,873.00	7,200.00
Sweden	853,200.00	854,300.00	815,600.00
Switzerland	408,000.00	517,000.00	421,100.00
Syrian Arab Republic	570,128.00	709,601.00	791,000.00
Tajikistan	679,774.00	690,900.00	760,139.00
Tanzania, United Republic of	650,000.00	727,369.00	750,000.00
Thailand	114,499.00	126,386.00	132,818.00
Timor-Leste	1,000.00	950	1,800.00
Tunisia	370,000.00	343,000.00	380,000.00
Turkey	4,225,168.00	4,397,710.00	4,548,090.00
Turkmenistan	240,200.00	246,700.00	245,000.00
Uganda	670,000.00	689,000.00	695,000.00
Ukraine	19,545,400.00	19,666,100.00	18,705,000.00
United Arab Emirates	7,900.00	7,100.00	7,900.00

Country	2008	2009	2010
United Kingdom	5,999,000.00	6,423,000.00	6,045,000.00
United States of America	18,721,660.00	19,569,100.00	18,016,200.00
Uruguay	106,557.00	102,287.00	105,000.00
Uzbekistan	1,398,700.00	1,524,500.00	1,629,900.00
Venezuela, Bolivarian Republic of	456,661.00	420,000.00	431,100.00
Viet Nam	370,000.00	442,791.00	446,200.00
West Bank and Gaza	62,840.00	74,269.00	78,100.00
Yemen	263,945.00	278,022.00	303,380.00
Zambia	10,524.00	9,831.00	22,939.00
Zimbabwe	36,000.00	47,043.00	58,000.00

Source: Food and Agricultural Organization (FAO)

Pattern of International Trade in Ware potato

Qty. (in MT)

Exporting Country	2008	2009	2010
Afghanistan	22076.70	11386.99	1826.89
Albania	76.86	102.77	71.33
Antigua and Barbuda	-	-	10.00
Algeria	14.48	2.81	16.53
Andorra	-	1.91	90.40
Angola	18.00	-	-
Argentina	26430.94	31103.20	28611.12
Armenia	2694.21	5357.70	1246.73
Aruba	0.99	-	-
Australia	13500.13	25280.07	29718.63
Austria	31559.47	34067.88	40827.51
Azerbaijan	88001.45	85606.50	62815.55
Bahrain	43.28	-	-
Bangladesh	5267.46	960.85	16975.14
Belarus	5024.11	5040.51	4772.59
Belgium	695442.51	228163.65	550610.12
Bosnia Herzegovina	3919.86	2338.70	5807.76
Brazil	3901.21	5165.63	154.64
Bulgaria	1057.31	782.96	591.74
Burkina Faso	40.80	7.14	28.39
Cameroon	309.38	288.46	-
Canada	408269.63	399563.17	386131.79
Chile	259.62	335.22	806.02
China	185053.83	219852.09	150589.65
Colombia	24584.60	19076.45	75.73
Congo, Democratic Republic of	-	50.04	-

Exporting Country	2008	2009	2010
Costa Rica	2413.01	760.87	458.76
Côte d'Ivoire	351.56	634.10	831.65
Croatia	576.83	617.27	919.76
Cyprus	77951.93	73515.88	56505.42
Czech Republic	25135.39	30764.98	39779.15
Denmark	97145.84	71004.46	83366.11
Dominican Republic	51.60	84.20	7.51
Ecuador	9.70	2.34	4728.55
Egypt	494074.25	390215.17	351120.44
Estonia	667.02	546.23	4766.67
Ethiopia	4.40	2.22	537.30
Finland	10905.87	13182.96	52983.82
France	2217715.56	2056428.80	2608804.26
Gabon	100.93	-	-
Georgia	-	819.70	7956.45
Germany	1203169.95	734134.38	1267603.81
Ghana	116.48	6.45	44.81
Greece	33949.81	14268.20	23008.23
Guatemala	58366.50	59849.95	52647.79
Guinea	134.00	40.82	125.00
Haiti	6.85	1.37	104.05
Honduras	32.95	45.59	10.79
Hong Kong, Special Administrative Region	376.03	1643.45	374.55
Hungary	5199.23	9479.77	4716.49
Iceland	22.86	6.98	393.74
India	153461.84	82323.05	154315.88
Indonesia	11080.99	11847.30	7316.15
Iran, Islamic Republic of	105823.88	21702.67	21593.83

Exporting Country	2008	2009	2010
Ireland	18054.50	13113.01	40641.75
Israel	266987.36	271690.65	226037.43
Japan	222.30	132.04	303.16
Kazakhstan	460.89	244.55	797.00
Kenya	2.72	739.41	267.60
Korea, Republic of	104.16	178.08	28.18
Kuwait	34.16	-	44.88
Kyrgyzstan	1119.04	595.39	12189.69
Italy	125059.15	68666.45	79561.62
Jordan	6239.70	257.30	191.66
Lao People's Democratic Republic	0.01	-	25.77
Latvia	1893.69	614.78	4631.63
Lebanon	129951.41	18868.23	42791.65
Lithuania	1306.17	6479.33	12190.12
Libya	5996.41	-	3202.96
Luxembourg	879.49	599.41	166.48
Macao Special Administrative Region	11.60	0.00	-
Macedonia, The former Yugoslav Republic of	1889.98	1258.89	2706.28
Madagascar	11.64	131.37	0.85
Malawi	510.55	985.90	903.30
Malaysia	2713.85	3048.57	2919.82
Maldives	25.00	-	-
Malta	3272.42	2042.40	3833.35
Mauritania	-	4.80	427.50
Mexico	3349.08	1281.64	1343.74
Montenegro	36.54	101.34	50.66
Morocco	74591.33	13077.50	31369.52

Exporting Country	2008	2009	2010
Myanmar	47.63	24.90	-
Netherlands	880469.86	966216.56	1066566.32
Netherlands Antilles	665.82	272.75	105.96
New Zealand	22287.71	27784.56	8229.26
Nicaragua	125.91	49.99	0.20
Niger	27.63	0.56	-
Nigeria	700.77	833.16	483.01
Norway	82.59	24.44	14.70
Oman	134.20	-	50.66
Pakistan	89448.89	109699.36	95426.29
Panama	27.00	0.37	-
Paraguay	56.00	-	9.00
Peru	27551.86	10231.80	15489.77
Philippines	0.30	0.20	56.00
Poland	27778.70	34287.89	36385.86
Portugal	30687.02	37107.01	28572.55
Republic of Moldova	20.92	-	15915.27
Romania	7371.89	4866.42	16813.35
Russian Federation	41248.38	67230.47	30363.01
Rwanda	6.00	-	1081.92
Saudi Arabia	150928.22	60161.17	115184.02
Senegal	707.22	0.02	4686.83
Serbia	15313.95	17067.57	11784.33
Sierra Leone	-	17.60	-
Singapore	186.74	123.46	335.92
Slovak Republic	10472.05	16520.35	10180.73
Slovenia	2197.66	1338.27	997.46
South Africa	36307.91	29096.00	28210.69
Spain	268037.58	243517.22	209872.85

Exporting Country	2008	2009	2010
Sri Lanka	49.58	35.15	132.21
Swaziland	70.40	5.71	-
Sweden	6814.78	11836.68	12234.63
Switzerland	569.62	262.05	362.50
Syrian Arab Republic	19788.29	8600.64	19917.23
Tajikistan	0.00	203.26	62.40
Tanzania, United Republic of	1442.95	5323.36	800.00
Thailand	117.62	567.77	1192.03
Togo	60.00	27.25	7.50
Tonga	43.00	28.02	-
Trinidad and Tobago	-	23.52	19.32
Tunisia	11037.38	4527.36	10073.99
Turkey	35588.73	21000.71	6402.01
Uganda	0.11	1510.80	62.50
Ukraine	1592.93	3212.56	7806.08
United Arab Emirates	5777.95	7138.86	5154.76
United Kingdom	134970.04	135301.56	211767.03
United States of America	272111.37	320053.65	372922.98
Uruguay	-	27.00	55.80
Uzbekistan	33.50	-	-
Venezuela, Bolivarian Republic of	3.27	11.90	9.81
Viet Nam	32.34	61.51	252.73
West Bank and Gaza	37.00	123.20	-
Yemen	-	341.15	-
Zambia	47.95	52.29	78.52
Zimbabwe	202.00	28.14	44.00

Source: Food and Agricultural Organization (FAO)

PROPOSED DRAFT CODEX STANDARD FOR WARE POTATO

1. DEFINITION OF PRODUCE

This Standard applies to commercial varieties of ware potato grown from *Solanum tuberosum* of the *Solanaece* family, to be supplied fresh to the consumer, after preparation and packaging. Ware potato for industrial processing is excluded.

2. PROVISIONS CONCERNING QUALITY

2.1 MINIMUM REQUIREMENTS

In all classes, subject to the special provisions for each class and the tolerances allowed, the ware potato must be:

- whole, firm and fresh in appearance;
- sound, produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- clean, free of dirt and mud, and practically free of any visible foreign matter;
- practically free of pests, insects and worms, and damage caused by them affecting the general appearance of the produce;
- free of abnormal external moisture, excluding condensation following removal from cold storage;
- free of any foreign smell and/or taste;
- free from internal blackening
- free of bruising;
- free from damage caused by low or high temperature;
- free from slug holes penetrating into the flesh
- free from sprouting
- free from scab, soft rot and wet breakdown.

The ware potato shall not be very soft, shrivelled or water soaked.

2.1.1 The development and condition of the ware potato must be such as to enable them:

- to withstand transport and handling; and
- to arrive in satisfactory condition at place of destination.

2.2 CLASSIFICATION

Ware potato are classified in three classes defined below:

2.2.1 "Extra" Class

Ware potato in this class must be of superior quality. They must be well developed and must be characteristics of the variety as regards shape, appearance and development.

They must be free of defects including bruises, cuts, russet scab, rhizoctonia, green colorations and practically free from soil, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

2.2.2 Class I

Ware potato in this class must be of good quality. They must be characteristic of the variety as regards shape, appearance and development.

The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- slight defects in shape and colour;
- slight skin defects such as scratches, scars, scrapes and blemishes not exceeding 5% of the total surface area.
- the soil and extraneous matter should not exceed 0.25%.
- greening shall not be on more than 1% by number and should not cover more than 10 % of the surface area.

The defects shall not affect the pulp of ware potato.

Part II

2.2.3 Class II

This class includes ware potato which does not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1 above.

The following defects, however, may be allowed, provided the ware potato retains their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape and colour;
- skin defects such as scratches, scars, scrapes, bruises and blemishes not exceeding 10% of the total surface area.
- the soil and extraneous matter shall not exceed 0.5%.
- greening should not be on more than 1% by number and should not cover more than 12.5 % of the surface area.

The defects shall not affect the pulp of ware potato.

3. PROVISIONS CONCERNING SIZING

Size is determined by the equatorial diameter (means the greatest dimension at right angle to the longitudinal axis with regards to the position of the stem end) of the ware potato (in mm.) in accordance with the following table:

Size Code	Equatorial Diameter in mm
A (Baby Potato)	18.1-28.0
B	28.1-45.0
C	45.1-65.0
D	65.1-80.0
E	More than 80

4. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each package for produce not satisfying the requirements of the class indicated.

4.1 QUALITY TOLERANCES**4.1.1 "Extra" Class**

Five percent by number or weight of ware potato not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

4.1.2 Class I

Ten percent by number or weight of ware potato not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

4.1.3 Class II

Ten percent by number or weight of ware potato satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting, marked bruising or any other deterioration rendering it unfit for consumption.

4.2 SIZE TOLERANCES

For all classes, 10% by number or weight of ware potato corresponding to the size immediately above or below that indicated on the package.

5. PROVISIONS CONCERNING PRESENTATION**5.1 UNIFORMITY**

The contents of each package must be uniform and contain ware potato of the same origin, variety or commercial type, quality and size (if sized).

The visible part of the contents of the package must be representative of the entire contents.

Part II

5.2 PACKAGING

Ware potato must be packed in such a way as to protect the produce properly. The materials used inside the package must be new, clean, and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications is allowed, provided the printing or labelling has been done with non-toxic ink or glue.

It is recommended that the ware potato covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice for Packaging and Transport of Fresh Fruit and Vegetables (CAC/RCP 44-1995).

5.2.1 Description of Containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the ware potato. Packages must be free of all foreign matter and smell.

6. MARKING OR LABELLING**6.1 CONSUMER PACKAGES**

In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply:

6.1.1 Nature of Produce

If the produce is not visible from the outside, each package shall be labelled as to the name of the produce and may be labelled as to the name of the variety and/or commercial type.

6.2 NON-RETAIL CONTAINERS

Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside, or in the documents accompanying the shipment.

6.2.1 Identification

Name and address of exporter, packer and/or dispatcher.

6.2.2 Nature of Produce

- Name of the produce "Ware Potato" if the contents are not visible from the outside. Name of the variety and/or commercial type (optional). The shape of the ware potato may be marked on the label such as oval, round and long.

6.2.3 Origin of Produce

Country of origin and, optionally, district where grown or national, regional or local place name.

6.2.4 Commercial Identification

- Class.

6.2.5 Official Inspection Mark (optional)**7. CONTAMINANTS**

7.1 The produce covered by this Standard shall comply with the maximum levels of the Codex General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995).

7.2 The produce covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

8. HYGIENE

8.1 It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969), Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003), and other relevant Codex texts.

8.2 The produce should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).