CODEX ALIMENTARIUS COMMISSION E

Food and Agriculture Organization of the United Nations

World Health Organization

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Agenda Item 6 **CX/SCH 14/01/6**

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON SPICES AND CULINARY HERBS

First Session

Kochi (Cochin), India, 11-14 February 2014

PROPOSALS FOR NEW WORK FOR THE CODEX COMMITTEE ON SPICES AND CULINARY HERBS

Replies to CL 2013/22-SCH of Argentina, Egypt, India, Sudan, Thailand and United States of America

ARGENTINA

Argentina is grateful for the invitation to propose new work for the CCSCH on account of its recent creation.

GENERAL COMMENT

Argentina has examined document CL 2013/22-SCH on the terms of reference agreed at the 36th Session of the CAC for the new proposed Committee on Spices and Culinary Herbs. Argentina sees this Committee as highly viable for this production sector and especially for family farming, because the resulting harmonization will help enhance the quality, safety and wholesomeness of these products within the regional economies.

However, a number of comments need to be made concerning the scope of the above-noted Committee. With reference to point a) of the cited Council document, Argentina believes that a strict focus on culinary herbs would seriously limit the sphere for application of norms. In this connection, we the Member Nations, including India, involved in drafting and updating CX/FH 13/45/6, PROPOSED DRAFT CODE OF HYGIENIC PRACTICE FOR SPICES AND DRIED AROMATIC HERBS, believe that there should be a much broader scope than that suggested for this new committee (*see* document point 2.1, section II.).

While this Committee will concentrate essentially on elaborating worldwide standards for spices and herbs, the CCFH has decided that point 5.2.3, Microbiological and Other Specifications, should be revised by the Committee on Spices and Culinary Herbs once constituted, as the matter is considered to be more appropriate for a standard than for a code of practice. Because its current scope is limited to culinary herbs or herbs relating to cooking or the art of cooking, it would not have the authority to regulate the aspects mentioned (pathogenic microorganisms, mycotoxins, rodent and bird contamination, chemical residues) for all aromatic herbs traded between countries.

Argentina therefore considers that the scope proposed by India should be broadened to include Spices and Dried Aromatic Herbs.

In connection with the above, Argentina therefore suggests that that Committee's Terms of Reference include the drafting of codes of practice, at least those specifically applying to the products that are being regulated, which could then be submitted to the Committee on Food Hygiene for endorsement.

With regard to point b) of the Council document, Argentina proposes the elimination or limitation of the second part of the Terms of Reference, specifically concerning the avoidance of duplication of effort with other international organizations. This is because the existence of international organizations dealing specifically with a particular product should not inhibit Codex from establishing its own standards. We, therefore, suggest eliminating this paragraph, or replacing it with one stating that standards established or proposed by other international organizations may be taken into consideration. We need to point out that no reference is being made among commodity committees to other international organizations. The Statutes of the Codex Alimentarius also already envisage this, albeit in a more moderate fashion.

Request for proposals

Argentina would also like to put forward two proposals for new work: paprika and oregano, for which it attaches relevant project documents and proposed draft standards (see Appendix 1).

EGYPT

Egypt's Prioritizing Criteria

Referring to your E-mail concerning "Request for proposals for new work for the codex committee on spices and culinary herbs, (for consideration by the 1st CCSCH)". Please find Egypt's prioritizing criteria.

Egypt suggests the following prioritizing criteria for new work:

1- Developing international standards for spices and culinary herbs that are widely handled in the world trade i.e ***Cumin – black pepper - Fenugreek - turmeric- Cinnamon – ginger- Chillies - cardamom- Laurel – thyme- clove –mixture of spices***

2- ***Developing international standards for these products that have problems in the world trade (priority for the pr***oducts, which were annually rejected).

3- Developing new international standards for the products which with no international standards (either Codex or ISO)

4- Discuss the good agriculture, hygienic and manufacturing practices (GAP, GHP and GMP) for the different herbal products and spices.

5- Egypt proposes establishing electronic working groups according to the mechanism of Codex Commission.

INDIA

India would like to put forward four proposals for new work: thyme, cumin, rosemary and pepper, for which it attaches relevant project documents (see Appendix 1).

SUDAN

1. Introduction:

We recognize the need for establishing harmonized quality standards for spices and culinary herbs and hence very much support the establishment of committee to that effect. It is believed that the committee for spices and culinary herbs will set quality standards and thus resolve problems to exporters, importers and consumers created by the existing wide variability standards owing to the absence of such body.

2. The committee:

We propose the establishment of National Sub-committees for Spices and Culinary herbs inside the framework of the National Codex Committee in each country.

3. The Scope of Work of the Committee:

The purpose of the Committee is to target issues pertaining to the formulation and setting of internationally accepted quality standards. The background on the issue is the lack of Codex Standard Committee on spices and culinary herbs which led to placement of diversified standards causing impediment of trade of spices and culinary herbs.

The scope of work should include:

3.1. Identification of plant material of herbs and spices by valid taxonomical, analytical procedures and testing methods (botanical and common names, chemical constituents,

3.2. Specification of forms regarding single spices and multiple mixed forms.

3.3. Identifying methods of sampling

3.4. Setting inspection and certification procedures against:

- contaminants
- adulteration
- mislabelling

3.5. Setting physical parameters of the spices and culinary herbs (size, color, odor and flavor, moisture and ash content, cracked/broken parts, extraneous matter, volatile oil content etc.)

3.6. Setting safety requirements (irradiation treatment, fumigation if applied etc)

3.7. Packaging and storage conditions

4. Prioritization and strategies:

We propose the following list of spices and culinary herbs from Sudan as a priority product list in consideration of production and trade volume.

Priority List of Spices and Culinary Herbs:

1- HotPepper - *Capsicum annum* L., *Capsicum frutescence* L.

2- Cumin- *Cuminum cyminum* L.

3- Garlic- *Allium sativum* L.

4- Coriander- *Coriandrum sativum* L.

5- Fenugreek- *Trigoella foenum-graeum* L.

6- Dill – *Anethum graveolens* L.

7- Fennel- *Foeniculum vulgare* Mill.

8- Aniseed- *Pimpinella anisum* L.

9- Basil- *Ocimum basilicum* L.

10- Black mustard- *Brassica nigrum* L.

11- Lemongrass- *Cymbopogon citrates* Stapf.

12- Dry Lime fruit- *Citrus aurantifolia* Swingle.

13- Black cumin**-** *Nigella sativa* L .

14- Ginger- *Zingiber officinale* Rose.

15- Galangal-*Alpinia officinarum* L.

Sudan suggested the following proposals for new work on development of Codex standard.

1- **Hot pepper -** *Capsicum annum* L., *Capsicum frutescence* L..

2- **Cumin-** *Cuminum cyminum* L.

Proposals will be submitted upon request

5. Terms of reference:

Seek elaboration of world-wide harmonized quality standards through:

- WHO guidelines 1998
- ISO recommendations
- Codex guidelines
- Different Regional and National Standards &Specifications.

THAILAND

Thailand would like to express our appreciation for the effort of the government of India for hosting this new committee and preparing the new work proposal.

We would like to propose our comments as follows:

1. The consideration of new work proposal for spices and culinary herbs should be started by clarification of scope of this group commodities and priority based on economic importance in international trade.

2. We would like to propose list of spices and culinary herbs important to Thailand together with the supporting data of Thailand as follows;

List of commodity	Export		Import	
	Quantity (MT)	Value (Int Baht1000)	Quantity (MT)	Value (Int Baht1000)
1. Chillies, dry	1,982	160,847	50,654	1,117,976
2. Black and White pepper	238	70,455	1,447	407,190
3. Ginger, fresh and dry	27,655	676,124	6,833	103,478
4. Turmeric root and rhizome	103	7,372	326	17,818

UNITED STATES OF AMERICA

The United States of America welcomes the opportunity to work within the Codex Alimentarius to develop Codex standards for dried and dehydrated spices and culinary herbs. In this first session of the Codex Committee on Spices and Culinary Herbs, we think it is prudent that the committee decide how it should approach its work. In this regard, the United States, as its reply to CL 2013/22-SCH, makes the following points for consideration on the way forward:

1. The Committee should recognize and promote the standard structure of a Codex commodity standard to ensure that its work will focus on essential composition and not on food safety aspects. In this regard we suggest that the standard layout developed and used by the Codex Committee on Processed Fruits and Vegetables would be a useful model for the CCSCH to consider in it standards development. Using a pre-existing, pre-approved standard layout would save time and resources, and allow the CCSCH to progress its work on developing its standards in an expeditious manner.

2. The United States strongly encourages CCSCH to develop its standards based on clearly defined groups or categories based on the part of the plant used. As a starting point for discussion, we suggest spices and culinary herbs could be categorized or grouped as follows:

- Bark
- Flowers/Buds/Stigma
- Leaves
- Roots/Rhizomes/Tubers/Corms
- Seeds/Fruit,/Pods

The United States believes that, rather than developing separate standards for each and every spice and culinary herb, it would be more efficient for CCSCH to develop a general standard for each broad group comprising a General Provision section and, as needed, individual annexes for individual spices. The General Provision section would include the common requirements that apply to all spices within the group/category, while each individual annex would contain the special requirements for each specific spice based on its innate characteristics and trade requirements. This format is already in use by the Codex Committee on Processed Fruits and Vegetables, for example, Codex Standard for Certain Canned Vegetables (CODEX STAN 297-2009). Utilizing this method should expedite the standardization process and facilitate the standardization of more spices and culinary herbs.

3. The CCSCH should consider establishing individual working groups for each product group/category. Each working group would ensure that the broad category/group standard (and any annexes) being developed is technically correct before it advances to the plenary session.

Notwithstanding the above proposal for CCSCH to undertake its work by considering spices according to broad/groups or categories, we note that CL 2013/22-SCH requests proposals for new work by CCSCH. In this regard, and noting that the proposal by India to establish CCSCH (CX/CAC 13/36/10-Add.2) contained in Annexure II a proposal for new work for pepper, the United States is submitting a Revised Proposal for New Work on the Development of a Codex Standard for Black, White and Green Pepper (see Appendix 1) . Should the Committee agree to our proposal to undertake work on group/categories of spices rather than individual spices, this proposal would become part of the broad “seeds/fruit” category of spices.

The United States appreciates the consideration of CCSCH of our comments and we look forward to working with the Committee as it undertakes its important work.

Appendix 1

This Appendix compiles proposals (i.e. project documents and proposed draft standards) for new work submitted by:

- Argentina: oregano and paprika (project documents and proposed draft standards)
- India: cumin, pepper, rosemary and thyme (project documents)
- United States of America: black, white and green pepper (project document)

PROJECT DOCUMENT

PROPOSAL FOR NEW WORK ON CODEX STANDARD FOR OREGANO [*Origanum vulgare* L.]

(Proposal submitted by Argentina)

BACKGROUND

Importance

Oregano is one of the leading aromatic herbs grown in temperate environments because of its worldwide economic importance. Global output is estimated at 70 000 t year $^{-1}$ calculated over a surface area of 37 000 ha. This output refers only to dried leaves and excludes fresh produce used for frozen products and to extract oils and oleoresins.

Nomenclature

More than 50 species are named and marketed under the common nomenclature oregano. These are from different plant families and genera, whether cultivated or collected as wild flora. Commercially prominent are those from the genus *Origanum* L. (*Lamiaceae* family), such as Greek oregano (*O. vulgare* L. ssp. *hirtum* (Link) Ietswaart and ssp. *viride* (Boiss.) Hayek), Turkish oregano (*O. onites* L.), marjoram (*Origanum majorana* L.) and Spanish oregano *(Coridothymus capitatus* (L.) Hoffmanns y Link). These species are mainly used for culinary purposes and for the manufacture of cosmetics and pharmaceuticals because of the active compounds they contain, such as terpenoids and flavonoids.

Also worthy of mention is oregano known as ‘Mexican oregano’ [*Lippia graveolens* H.B.K. (Verbenaceae)] which belongs to a different botanical genus. This project document proposes to deal solely with species of the genus *Origanum*, because of the importance of its constituent taxa in the international market for aromatic herbs.

Taxonomy of the genus *Origanum* L.

The genus *Origanum* L. is noteworthy because of the broad morphological and chemical variability of the species it comprises.

The morphological diversity has led to the division of the 49 taxa (species, subspecies and varieties) of the genus *Origanum* L into 10 sections:

1. *Amaracus* (Gleditsch) Bentham
2. *Anatolicon* Bentham
3. *Brevifilamentum* Ietswaart
4. *Longitubus* Iestswaart
5. *Chilocalyx* (Briquet) Iestswaart
6. *Majorana* (Millar) Bentham
7. *Campanulaticalyx* Iestswaart
8. *Elongatispica* Iestswaart
9. *Origanum*
10. *Prolaticorolla* Iestswaart

Species belonging to 3 sections have so far been identified in Argentina:

a. *O. dictamnus* L of the section *Amaracus*, endemic species of Crete (Greece);

b. *O. majorana* L. of the section *Majorana*, native to southern Turkey and introduced into many regions of the world;

c. *O. vulgare* ssp. *viridulum* (Martrin-Donos) Nyman and

d. *O. vulgare* L: ssp. *vulgare* of the section *Origanum,* both indigenous to Italy (D' Antuono *et al.*, 2000) and other parts of Europe.

In addition to these taxa, 17 hybrids within this genus have been identified worldwide, resulting from the natural crossing of taxa. Examples include:

I. *Origanum x intercedens* Rechinger = *O. onites x O. vulgare* ssp. *hirtum* and

II. *Origanum x majoricum* Cambess = *O. vulgare* L. *x O. mejorana* L.

Chemical composition of the genus *Origanum* L.

With regard to the chemical composition of the genus *Origanum*, numerous secondary metabolites have been identified, for example flavonoids such as *apigenina* and *luteolina*, aglicons, aliphatic alcohols, phenylpropane derivatives and terpenes. The content and composition of these compounds vary between and within taxa and between hybrids.

By way of example, essential oil contents have frequently had values of 0.5 to 2% (ml 100 g^{-1} dry weight), and there have been cases of genotypes with more than 8% (ml 100 g^{-1} dry weight) of essence.

All these characteristics of oregano should be considered in the draft Codex standard.

1. Purpose and scope of the standard

This document advocates the development of a worldwide standard for dehydrated or dried, crushed or ground oregano [*Origanum spp.* L.] of the *Lamiaceae* family, to be supplied to consumers after appropriate preparation.

The purpose of the standard is to consider the identity and quality characteristics of oregano in the framework of international trade.

2. Relevance and timeliness

In view of the growing production and global trade of oregano, there is a need to determine standards that will regulate the identity and quality of this species in all aspects, including nutritional value, safety, wholesomeness, hygiene, components, moisture content, particle size, extractable colour, ash and foreign bodies, thereby providing a frame of reference agreed by worldwide consensus among countries that produce, market and consume this commodity. Moreover, the development of a Codex standard for oregano will help protect consumer health and promote fair trade practices in accordance with current international agreements.

The genus *Origanum* originates in Europe and Asia. Within its distribution area, the eastern region of the Mediterranean has the richest taxonomic diversity as it contains 75% of the species of the genus, while there are only a few taxa in the western region of the Mediterranean.

About 70% of the species are endemic, existing in clearly defined zones within the distribution area, as in the case of O. *amanum* Post. In contrast *O. vulgare* L. and its subspecies have a broader geographical distribution in area of origin of the genus, extending from the Azores to Taiwan.

Oregano is one of the leading aromatic herbs grown in temperate environments because of its worldwide economic importance (Olivier, 1997). Global output is estimated at 60 000 t $year^{-1}$ calculated over a surface area of 34 000 hectares (SAGPYA, 2005). This output refers only to dried leaves and excludes fresh produce used for frozen products and to extract oils and oleoresins.

The main producer countries are United States, Mexico, Turkey, Greece, Israel and Morocco. There is considerable potential for the export of fresh and frozen oregano, as Australia, USA and the European countries are significant consumers of this aromatic herb. The global production of oregano essential oil is concentrated in the countries of the Mediterranean basin, with USA featuring as the main recipient of exports.

Oregano production in Argentina is estimated at 600 t $year^{-1}$, over a surface area of 500 ha. The main production area is the province of Mendoza which accounts for 85% of production and processing, followed

by Córdoba and San Juan (about 10%). The remainder is divided between the provinces of Salta, Santa Fé, Chubut and Entre Ríos. Research carried out by institutions, such as INTA and universities, has resulted in the inclusion in the National Register of Cultivars of Argentina of a cultivar of *Origanum vulgare sp. vulgare* named "Don Bastías". This demonstrates the importance of this aromatic species for Argentina, which motivates research into a wide range of areas from production technology to aspects relating to quality.

3. Main aspects to be covered

The standard will cover characteristics relating to identity and quality in all aspects, nutritional value, safety, wholesomeness, hygiene, components, moisture content, particles size, extractable colour, pungency, ash, foreign bodies and labelling in order to provide a product with the proper characteristics and to protect consumer health. The standard will therefore:

(Translator's note: please check the relevance of 'pungency'. The above list is the same as for the paprika project document and might have been copied inadvertently)

- Establish the minimum requirements for dehydrated or dried, crushed or ground oregano, including quality parameters and other requirements, regardless of class.
- Define classes to classify oregano according to its characteristics.
- Establish quality tolerances.
- Include provisions concerning uniformity of the packaged produce and the containers used.
- Include provisions on the marking and labelling of the produce in accordance with the Codex *General Standard on the Labelling of Prepackaged Foods*.
- Include provisions on contaminants that refer to the Codex *General Standard for Contaminants and Toxins in Food and Feed*.
- Include provisions that refer to the *Recommended International Code of Practice – General Principles of Food Hygiene*.

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

General criterion

Consumer protection from the point of view of health and the prevention of fraudulent practices. The quality of the produce will need to meet consumer needs and the minimum requirements of quality and food safety. The drafting of a standard for oregano would benefit the developing countries as these are major producers, exporters and also consumers.

Criteria applicable to commodities

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

There is information which indicates that dehydrated or dried, crushed or ground oregano (*Origanum* L.) ranks first in importance in the worldwide production and trade of aromatic herbs for culinary use. There are as yet no exact figures but these will naturally become available as the project advances.

Existing statistical information also indicates that the global trade of oregano is trending upwards as consumer habits turn increasingly towards natural, functional and wholesome foods. The following tables indicate the main countries involved in the global trade of this produce:

Table 1: Main oregano importing countries - 2012 (Source: http://www.siicex.gob.pe citing COMTRADE)

	Importing country	USD million	% share
1	United States of America	272.48	16
2	Japan	198.51	10
3	Germany	224.55	10
4	Singapore	113.57	5
5	Hong Kong S.A.R	100.03	5
	China	62.91	4
7	France	81.80	4
8	Republic of Korea	78.09	4
9	Malaysia	66.92	4
10	Canada	71.38	4
-	Other countries	743.47	34

Table 2: Main oregano exporting countries - 2012 (Source: http://www.siicex.gob.pe citing COMTRADE)

	Exporting country	**USD million**	**% share**
1	China	652.81	36
2	India	165.03	10
3	Germany	143.26	7
4	Egypt	123.55	4
5	United States of America	87.79	4
6	Hong Kong S.A.R.	59.83	3
7	Poland	59.37	3
8	Singapore	61.74	3
9	France	51.69	3
10	Mexico	42.85	3
-	Other countries	546.16	25

In Argentina production exists in most of the country but the main production area is in the province of Mendoza which provides about 85% of total output and accounts for most of the exports.

There are between 1 300 and 1 600 hectares under this aromatic herb in the valleys of the province of Mendoza, with 90% in the districts of Pareditas, Chilecito and San Carlos. The remaining area is in the south of the province, with some 260 producers mostly operating small areas of less than 10 ha.

Currently available information indicates that in 2009 it was the third most exported aromatic commodity, after camomile and coriander. The markets are generally Brazil, Spain, France and Uruguay.

b) Diversification of national legislations and resultant or potential impediments to international trade

At the moment there are no known impediments to the trade of oregano in the world, although there are increasing requirements concerning quality and safety parameters for all foods. This work will however provide recognized specific regulations that will help boost international trade of this commodity.

The interest shown by countries in seminars and other events in procuring genuine products of good quality, in terms of smell, taste and other characteristics, and the resulting benefits to nutrition and health point to a strong future increase in their consumption and trade.

Importer country requirements include the application of Good Agricultural and Manufacturing Practices in all products of plant origin that are supplied to them from third countries. At the same time countries producing and importing aromatic herbs and spices have various mandatory or private rules on identity and quality that have characteristics in common. We believe that a Codex standard will integrate these criteria into a single internationally accepted standard. This would reduce possible barriers to trade and would provide a comprehensive legal framework setting out the minimum internationally acceptable requirements for oregano.

c) International or regional market potential

International demand for oregano has grown, both for the food industry and for other sectors. Although there is no information on volume and value, demand for oregano oleoresin is also growing in the food industry because of its advantages in terms of shipping, dosage, storage and longer lifespan.

d) Amenability of commodity to standardization

The characteristics of oregano from cultivation to harvest, the cultivar varieties, composition, quality and packing are conducive to the establishment of appropriate parameters for standardization of the commodity. Such a standard will include a definition of the produce in terms of classes, smell, taste, moisture, ash, ether extract, fibre, particle size, foreign matter, contaminants, packaging and presentation.

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

There is no general commodity standard specifically covering oregano. The new work will enhance consumer protection and will facilitate trade by establishing an internationally agreed and recognized quality standard.

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

A single standard for oregano of the genus *Origanum* L. will cover all the varieties traded worldwide. Oregano derivatives such as oleoresin or other value added products will be examined.

g) Work already undertaken by other international organizations in this field

National standards with similar criteria exist in the European Union, such as French Standard NFV 3- 170/85 which sets requisites for dry, whole, crushed or ground oregano, or British Standard BS 7087-16 which regulates dry, whole, bunched and crushed oregano for food use. There are also normative documents produced by other organizations such as International Standard ISO 7925 which defines identity and quality for dried oregano (*Origanum vulgare* L.): whole or ground leaves - specification.

5. Relevance to the Codex strategic objectives

The development of a Codex standard for oregano reflects the strategic objective of promoting the maximum application of Codex standards by countries in their national legislations, and facilitating international trade. This proposal is based on scientific considerations and helps stipulate minimum quality requirements for oregano (*Origanum* L.) destined for human consumption, with the intention of protecting consumer health and ensuring fair practices in the food trade. The proposal corresponds to activity 1.2 (Review and develop Codex Standards and related texts for food quality) of the Strategic Plan 2008 – 2013.

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

This proposal is for a new global standard and has no relation to any other existing Codex text on this item, except that this standard will make reference to relevant standards and related texts developed by general subject committees. In fact, there is no comparable standard for oregano developed by any global body.

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

The information generated by the research working group charged at national level with the characterization of oregano has been used as reference. Should additional information be required during the preparation of this standard, this group or other groups of experts could be consulted.

8. Identification of any need for technical input to the standard from external bodies, so that this can be planned for.

There is not expected to be any need for technical input from external bodies on this matter.

9. Proposed timeline

DATE	ADVANCE AND PROCEDURES
July 2013 to March 2104	Prepare draft agenda along with work proposals. The proposals will be prepared through electronic consultation with members to initiate the work of the Commission.
June/July 2014	Critical review of the new work proposals by the Executive Committee. Approval of the work proposals by the Commission.
First half of 2015	Committee to hold its first session and consider new work items at Step 3. Committee also to consider work priorities.
Second half of 2016	Consider draft standard at Step 5 with the possibility of recommending its adoption at Step 8.
CAC 2017	Adoption of the standard at Step 8.

PROPOSED DRAFT CODEX STANDARD FOR WHOLE AND CRUSHED OREGANO
[*Origanum vulgare* L.]

(Proposal submitted by Argentina)

1. DEFINITION OF PRODUCE

This standard applies to varieties and/or commercial types of whole-leaf and crushed oregano of *Origanum vulgare* L. from the *Lamiaceae* family and hybrids, to be supplied in dried or dehydrated form to the consumer after preparation and packaging.

Dried or dehydrated oregano is understood as comprising leaves and flowering tops that have been selected and dried or dehydrated, are whole, crushed, sound and clean, are of different varieties, cultivars and hybrids of *Origanum vulgare* L. that have been subject to natural or artificial processes to partially eliminate their water content. Their colour ranges from pale greyish green to olive green, depending on the cultivar in question.

2. PROVISIONS CONCERNING QUALITY

2.1 Minimum requirements

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

- natural and
- uniform in appearance and colour.

It must also be:

- in a good state; Produce affected by rot, mould or deterioration, is unfit for human consumption, must be excluded;
- clean and without any visible foreign matter;
- free or practically free of pests affecting the general appearance of the produce;
- free or practically free of damage from pests or other sources;
- free of additives or foreign substances;
- free of abnormal moisture levels;
- free of foreign smells and/or taste;
- characteristic smell and taste and have uniform moisture within each package to prevent clumping;
- prepared/packaged in such a way as to avoid loss of organoleptic qualities.

Moreover, it must not be damaged from humidity, frost or scalding.

2.1.1 The oregano must have reached an appropriate level of development, in keeping with the characteristics of the species, the variety and the area in which it is grown.

The condition of the oregano must be such that it can:

- withstand transportation and handling, and
- reach its destination in satisfactory condition.

2.2. Classification

Oregano is classified into three classes, as defined below.

2.2.1. “Extra” Class

Oregano in this class must be of superior quality and must be characteristic of the variety and/or commercial type. It must be free of defects, with the exception of very slight defects not affecting the general produce appearance, quality, shelf-life and packaging presentation.

2.2.2. Class “I”

Oregano in this class must be of good quality and characteristic of the variety and/or commercial type. Slight defects may, however, be allowed, provided they do not affect the general produce appearance, quality, shelf-life and packaging presentation.

The defects should in no way affect the wholesomeness or safety of the produce.

2.2.3. Class “II”

This class includes oregano which does not qualify for inclusion in the above classes, but which satisfies the minimum requirements specified in Section 2.1. Some defects may, however, be allowed, provided the oregano retains its essential characteristics regarding quality, shelf-life and packaging presentation.

The defects should in no way affect the wholesomeness or safety of the produce.

3. PROVISIONS CONCERNING QUALITY CLASS

CLASSIFICATION OF DIFFERENT CLASSES OF OREGANO QUALITY

3.1 Leaf, flowering top and crushed oregano

Crushed oregano is defined as particles of oregano leaf and flowering top that are retained by a 40 mesh.

Leaf, flowering top and crushed oregano are classified into THREE (3) quality classes on the basis of the following parameters:

PARAMETERS	CLASSES		
	EXTRA	CLASS I	CLASS II
Moisture content (m/m, dry basis) maximum	11	12	12
Total ash (m/m, dry basis) maximum	9	10	10
Acid insoluble ash (m/m, dry basis) maximum	1.2	2	2
Essential oil ml/100 g (dry basis) minimum	1.5	1.2	1.0
Blotchy/dark leaves (maximum in %)	20	30	40
Foreign parts (stems of the same plant)	3	3	3
Foreign parts of other non-toxic plants	2	2	2
Non-plant foreign parts	0.1	0.1	0.1
Percentage of oregano powder (maximum)	1	2	4

3.2 Oregano powder

Oregano powder is defined as particles of oregano leaf and flowering top that are not retained by a 40 mesh.

PARAMETERS	CLASSES		
	EXTRA	CLASS I	CLASS II
Moisture content (m/m, dry basis) maximum	11	12	12
Total ash (m/m, dry basis) maximum	9	10	10
Acid insoluble ash (m/m, dry basis) maximum	1.2	2	2
Essential oil ml/100 g (dry basis) minimum	1.2	1.1	1
Foreign matter (maximum percentage)	2	2	2

4. PROVISIONS CONCERNING TOLERANCES

4.1. Size tolerances

For all classes, the size of particles of the packaged produce must be uniform, with a tolerance level of 5% of larger or smaller particles.

For all classes, there will be a tolerance level of one percent (1%) of stems of more than seven millimetres (7 mm) in length and three millimetres (3 mm) in width, to be determined by gravimetry.

4.2. Quality tolerances

4.2.1. “Extra” Class

Three percent, to be determined by number of packages or weight, of oregano not satisfying the requirements of this class, but meeting those of Class I or, exceptionally, coming within the tolerance levels of that class.

4.2.2. Class I

Five percent, to be determined by number or weight, of oregano not satisfying the requirements of this class, but meeting those of Class II or, exceptionally, coming within the tolerance levels of that class.

4.2.3. Class II

Five percent, to be determined by number or weight, of oregano satisfying neither the requirements of this class nor the minimum requirements, with the exception of produce affected by rotting or any other form of deterioration rendering it unfit for human consumption.

5. PROVISIONS CONCERNING PRESENTATION

5.1. Uniformity

The contents of each package must be uniform, including particle size, and must only contain oregano of the same species, variety, cultivar and/or commercial type and quality. The visible part of the package must be representative of the entire contents.

5.2. Packaging

The oregano 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 that would inhibit damage to the produce.

5.2.1. Description of containers

The containers must meet the quality, hygiene, ventilation and resistance characteristics necessary to ensure appropriate handling, shipping and preservation of the oregano. The containers 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 shall apply:

6.1.1. Nature of produce

Each package must indicate the name of the produce, and may bear the name of the species, variety or cultivar.

6.2. Non-retail packages

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

6.2.1. Identification

Name and address of the exporter and/or dispatcher.

Identification code (optional).

6.2.2. Nature of produce

Name of the produce and name of the species, variety or cultivar (the last two are optional).

6.2.3. Origin of produce

Country of origin and, optionally, name of production place, district or region.

6.2.4. Commercial specifications

- Class.
- Net weight.

6.2.5. Official inspection mark

Optional.

7. CONTAMINANTS

7.1. The produce covered by the provisions of this standard must 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 the provisions of this standard must comply with the maximum residue limits (MRLs) established by the Codex Alimentarius Commission.

8. HYGIENE

8.1. The produce regulated by the provisions of this standard should 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), the *Code of Hygienic Practice for Spices and Dried Aromatic Plants* (CAC/RCP 42-1995 under Rev) and other relevant Codex texts, such as codes of practice and codes of hygienic practice.

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

PROJECT DOCUMENT

PROPOSAL FOR NEW WORK ON CODEX STANDARD FOR PAPRIKA [*Capsicum annuum* L.].

(Proposal submitted by Argentina)

1. Purpose and scope of the standard

This document advocates the development of a worldwide standard for paprika [*Capsicum annuum* L.] of the *Solanaceae* family to be supplied as ground paprika to consumers after appropriate preparation.

The purpose of the standard is to consider the identity and quality characteristics of paprika, to be consumed as ground paprika, in the framework of international trade.

2. Relevance and timeliness

In view of the growing production and global trade of paprika, there is a need to determine standards concerning its identity and quality in all aspects, including nutritional value, safety, wholesomeness, hygiene, components, moisture content, particle size, extractable colour, pungency, ash and foreign bodies, thereby providing a frame of reference agreed by worldwide consensus among countries that produce, market and consume this commodity. Moreover, the development of a Codex standard for paprika will help protect consumer health and promote fair trade practices in accordance with current international agreements.

Capsicum annuum L. comes from the American continent, more specifically Mexico, Bolivia and Peru, and is today grown in all five continents, although the main producers are India and China which account for approximately 50% of global output.

The countries with demand for paprika are mainly in the American and European continents, accounting for 66% of global imports, led by the United States, Germany, Malaysia, Spain, Japan, Mexico and Sri Lanka. As a bloc, the EU ranks first in terms of demand.

With regard to the international spice trade, first comes pepper, followed by mustard and third is the *Capsicum* complex which includes paprika and chilli peppers, with an annual rate of growth of 4%. (Global exchange of – 090420 – Fruits of the genus *Capsicum* or of the genus *Pimenta*, dried, crushed or ground in 2008: 860 million dollars/year and an annual evolution of imports of 4%. Source http://www.smartexport.com).

In Argentina, peppers for paprika have almost all been grown and processed for more than 70 years in the region of the Valles Calchaquíes, in the northeast of the country. These valleys run from North to South through the provinces of Salta, Tucumán and Catamarca. The northern limit of these spectacular valleys lies near the boundary of Salta with Jujuy, where they connect with the Quebrada de Humahuaca through the Valle de Lerma. This is a very important crop for regional economies and for the domestic economy of small farmers.

3. Main aspects to be covered

The standard will cover characteristics relating to identity and quality in all aspects, including nutritional value, safety, wholesomeness, hygiene, components, moisture content, particle size, extractable colour, pungency, ash, foreign bodies and labelling, in order to supply a product with the proper characteristics and to protect consumer health. The standard will therefore:

- Establish the minimum requirements for paprika, including quality parameters and other requirements, regardless of class.

- Define classes to classify paprika according to its characteristics.
- Establish quality tolerances.
- Include provisions concerning uniformity of the packaged produce and of the containers used.
- Include provisions on the marking and labelling of the produce in accordance with the Codex *General Standard on the Labelling of Prepackaged Foods*.
- Include provisions on contaminants that refer to the Codex *General Standard for Contaminants and Toxins in Food and Feed*.
- Include provisions that refer to the *Recommended International Code of Practice – General Principles of Food Hygiene*.

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

General criterion

Consumer protection from the point of view of health and the prevention of fraudulent practices. The quality of the produce will need to meet consumer needs and the minimum requirements of quality and food safety. The drafting of a standard for paprika would benefit the developing countries as these are the main producers, exporters and also consumers.

Criteria applicable to commodities

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

There are no exact figures for production and consumption volumes in individual countries, but there is sufficient evidence to show that the *Capsicum* complex (paprika and chili peppers) ranks third in importance in terms of world production and trade of aromatic spices, after pepper and mustard. Estimates on these points will obviously become available as the project advances.

Existing information does however indicate that global trade in paprika is trending upwards as consumer habits increasingly prioritize natural, functional and wholesome foods. This can be seen in the following tables:

Table 1: Main importing countries for fruits of the genus *Capsicum* or *Pimenta*, dried, crushed or ground. (Source http://www.smartexport.com)

	Importing country	**USD million**	**% change**
1°	United States of America	217	+ 17.6
2°	Mexico	97	+ 67.2
3°	Malaysia	81	- 30.1
4°	Germany	69	+ 12.9
5°	Japan	48	- 10.3

Table 2: Main exporting countries for fruits of the genus *Capsicum* or *Pimenta*, dried, crushed or ground. (Source http://www.smartexport.com)

	Exporting country	**USD million**	**% change**
1°	China	232	+ 13.5
2°	India	194	+ 11.1
3°	Peru	93	- 2.6

Table 3: Performance of exporting countries for fruits of the genus *Capsicum* or *Pimenta*, dried, crushed or ground. (Source http://www.smartexport.com)

	Exporting country	Weight in % of exports	% change in exports
1	China	2.3	+ 13.5
2	Spain	1.9	+ 28.4
3	India	1.4	+ 11.1

In Argentina, cultivation and processing occurs mainly in the favourable region of the Valles Calchaquíes, in the northeast of Argentina. The valleys run from North to South through the provinces of Salta, Tucumán and

Catamarca. Their northern limit lies close to the boundary between Salta and Jujuy where they connect with the Quebrada de Humahuaca through the Valle de Lerma.

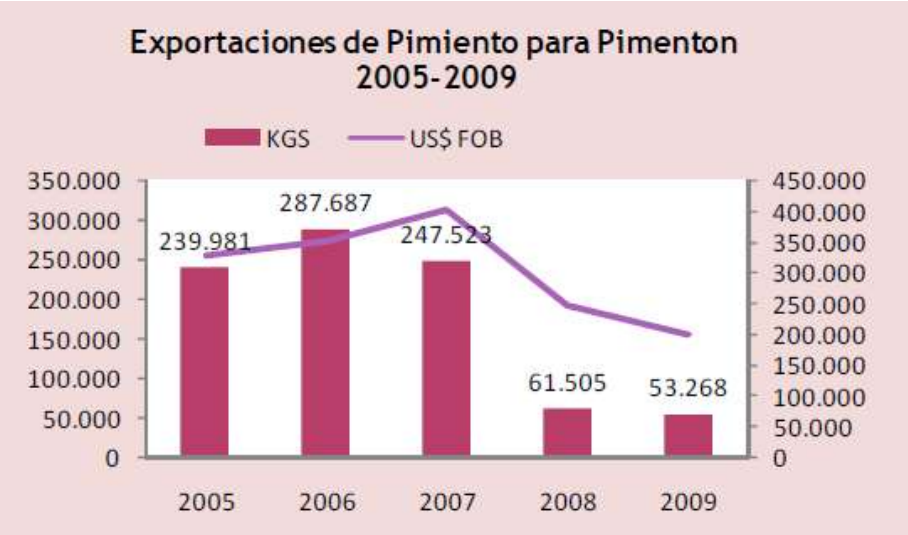
Within the valleys, cultivation and production of paprika occurs almost exclusively in the departments of Cachi, Molinos and San Carlos in Salta; Santa María and Belén in Catamarca; and Amaicha del Valle in Tucumán. There are virtually no paprika farms in other provinces. The country has some 1 500 producers mostly operating on small surface areas.

The cultivation zone offers excellent agro-ecological conditions for paprika production, including: appropriate difference between day and night temperatures to avoid flower drop, luminosity and ambient relative humidity favourable to natural drying, characteristic smell and sweet taste and intense red visual and extractable colour, prolonged frost-free period, high daily temperature range, low number of pests which permits wholesome healthy products, clearly differentiated areas with appropriate edaphological conditions and loose soil textures. Water for irrigation comes from melt-water rivers and streams, the subsoil or embankments and reservoirs. Paprika from the valleys is an ancestral crop with centuries of cultivation experience passed down the generations.

Exports of peppers for paprika and paprika correspond to subheading 09.04.2 “Fruits of the genus *Capsicum* dried, crushed or ground” of the Mercosur Common Nomenclature.

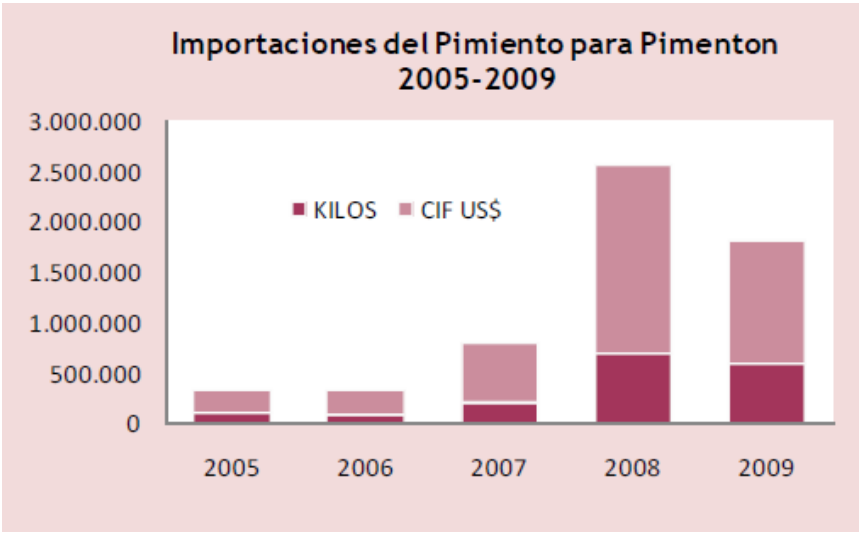
Data on exports of peppers for paprika and paprika in 2009 indicate a volume of 53.3 tonnes with an FOB value of USD 198,026.

The primary destinations for the Argentine market are the countries of MERCOSUR: Uruguay accounts for 69% of the exported volume, followed by Brazil with 14%. However, Argentine paprika is also exported to a further 16 countries, including Spain, United States, Cuba, France and Mexico.



Imports for the period 2005-2009 amounted to 1 089 tonnes with a CIF value of USD 2.9 million.

The main sources of peppers for paprika and paprika are Chile (48%), China (20%) and Spain (10%).



b) Diversification of national legislations and resultant or potential impediments to international trade.

At the moment there are no known impediments to the trade of paprika in the world, although there are increasing requirements concerning quality and safety parameters for all foods. This work will provide recognized specific regulations that will help boost the international trade of this commodity which originates in South America.

The interest shown by countries in seminars and other events in obtaining genuine products of good quality, in terms of smell, taste and other characteristics and the resulting benefits to nutrition and health point to a strong future increase in their consumption and trade.

Importing country requirements include the application of Good Practices for all products of plant origin that are supplied to them from third countries.

Given that there exists an international standard for chilli peppers as well as work undertaken by other organizations [International Standard ISO/FDIS 7540 Ground paprika (*Capsicum annuum* L.)], a Codex standard is considered necessary and timely in order to integrate the criteria into a single internationally acceptable standard.

This would reduce possible barriers to trade and would provide a comprehensive legal framework stipulating the minimum internationally acceptable requirements for paprika.

c) International or regional market potential

There has been a noticeable increase in trade on international markets in recent years, as illustrated in Tables 1, 2 and 3 above.

International demand for paprika has grown, both from the food industry and from non-food sectors. Paprika oleoresin will continue to grow for a wide range of foods and for the processed food industry, because of the advantages it offers in terms of shipping, storage and longer lifespan.

d) Amenability of commodity to standardization

The characteristics of paprika from cultivation to harvest, the characteristics of peppers for paprika (its raw material), the cultivar varieties, composition, quality and packing are conducive to the establishment of appropriate parameters for standardization of the commodity. The standard will include a definition of the product in terms of classes, smell, taste, extractable colour, moisture, ash, ether extract, fibre, particle size, foreign matter, contaminants, packaging and presentation.

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

There is no general standard specifically covering paprika. The new work will strengthen consumer protection and will facilitate trade in paprika by establishing an internationally agreed and recognized quality standard.

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

A single standard for paprika will cover all varieties traded worldwide. Paprika derivatives such as oleoresin or other value added paprika products will be examined.

g) Work already undertaken by other international organizations in this field

There are national standards for paprika and International Standard ISO/FDIS 7540 Ground paprika (*Capsicum annuum* L.).

5. Relevance to the Codex strategic objectives

The development of a Codex standard for paprika reflects the strategic objective of promoting the maximum application of Codex standards by countries in their national legislations, and of facilitating international trade. This proposal is based on scientific considerations and helps stipulate minimum quality requirements for paprika (*Capsicum annuum* L.) destined for human consumption, with the intention of protecting consumer health and ensuring fair practices in the food trade. The proposal corresponds to activity 1.2 (Review and develop Codex Standards and related texts for food quality) of the Strategic Plan 2008 – 2013.

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

This proposal is for a new global standard and has no relation to any other existing Codex text on this item, except that this standard will make reference to relevant standards and related texts developed by general subject committees. In fact, there is no comparable standard for paprika developed by any global body.

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

For the preparation of this project document, the information generated by the research working group charged at national level with the characterization of paprika has been used as reference. Should additional information be required during the course of drafting this standard, this group or other groups of experts could be consulted.

8. Identification of any need for technical input to the standard from external bodies so that this can be planned for.

There is not expected to be any need for technical input from external bodies on this matter.

9. Proposed timeline

DATE	ADVANCE AND PROCEDURES
July 2013 to March 2104	Prepare draft agenda along with work proposals. These proposals will be prepared through electronic consultation with members to initiate the work of the Commission.
June/July 2014	Critical review of the new work proposals by the Executive Committee. Approval of the work proposals by the Commission.
First half of 2015	Committee to hold its first session and consider new work items at Step 3. Committee also to consider work priorities.
Second half of 2016	Consider draft standard at Step 5 with the possibility of recommending its adoption at Step 8.
CAC 2017	Adoption of the standard at Step 8.

PROPOSED DRAFT CODEX STANDARD FOR PAPRIKA (*Capsicum annuum* L)

(Proposal submitted by Argentina)

1. DEFINITION OF PRODUCE

This standard applies to the ground powder obtained from different varieties and cultivars of fruits of *Capsicum annuum* L. of the *Solanaceae* family, after processing, preparation and packaging.

2. PROVISIONS CONCERNING QUALITY

2.1 Minimum requirements

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

- genuine and of characteristic appearance, taste and smell; and be:
- sound; produce affected by rotting, mould or deterioration such as to make it unfit for human consumption is excluded;
- clean and practically free of any visible foreign matter;
- free or practically free of pests that affect the general appearance of the produce;
- free of additives or foreign substances;
- free of added products/by-products from the *Capsicum annuum* L. extraction process;
- free of abnormal moisture;
- free of any foreign smell and/or taste;
- prepared/packaged in such a way as to avoid loss of organoleptic qualities.

1.1.1. Peppers for paprika, the raw material of paprika, that are to be used for the manufacture of paprika must have reached an appropriate level of physiological development, taking into account the characteristics of the variety and the area in which they are grown.

The development and condition of the paprika must be such that it can:

- withstand transport and handling, and
- arrive at the place of destination in satisfactory condition.

2.2. Classification

Paprika is classified into three classes, as defined below.

2.2.1. "Extra" Class

Paprika in this class must be of superior quality. It must be free of defects, with the exception of very slight defects provided these do not affect the general characteristics of the produce, its quality, keeping quality and presentation in the package.

2.2.2. Class "I"

Paprika in this class must be of good quality. Slight defects may however be allowed, provided these do not affect the general characteristics of the produce, its quality, keeping quality and presentation in the package.

On no account may the defects affect the genuineness or safety of the produce.

2.2.3. Class "II"

This class includes paprika which does not qualify for inclusion in the above classes, but which satisfies the minimum requirements specified in Section 2.1. Some defects may however be allowed, provided the paprika retains its essential characteristics as regards quality, keeping quality and presentation.

On no account may the defects affect the genuineness or safety of the produce.

3. PROVISIONS CONCERNING QUALITY CLASS

CLASSIFICATION OF DIFFERENT CLASSES OF PAPRIKA QUALITY

Paprika is classified into THREE (3) quality classes on the basis of the following parameters:

PARAMETERS	**CLASSES**			**OBSERVATIONS**
	EXTRA	CLASS I	CLASS II	
Moisture (maximum %)	12.0	12.0	12.0	At 50°C and in vacuum
Total ash (maximum %)	8	8.5	9	Ash at 500-550 Cº, in dry matter
Insoluble ash (maximum %)	1.0	1.0	1.0	In HCl at 10%
Ether extract (maximum %)	15	18	20	In dry matter
Crude fibre (maximum %)	23	26	31	In dry matter
ASTA colour (minimum)	120	90	70	ASTA scale
Extraneous matter (maximum %)	1.0	1.0	1.0	m/m
Foreign parts (maximum %)	0.1	0.1	0.1	m/m

CLASSIFICATION OF PAPPRIKA PUNGENCY LEVELS

Levels of pungency: Paprika is classified into FOUR (4) levels of pungency according to its capsaicin content (µg capsaicin/gram of paprika, dry weight)

PUNGENCY (1):	**CAPSAICIN (µg/g)**	**Scoville**
Mild	Under 20	Under 300
Medium	Between 20 and 40	Between 300 and 600
Hot	Between 40 and 67	Between 600 and 1400
Extra hot	Over 67	Over 1400

(1) Measurement of pungency can be in Scoville units whereby FIFTEEN (15) Scoville units are equivalent to ONE (1) microgram of capsaicin per gram of paprika.

4. PROVISIONS CONCERNING TOLERANCES

For all classes, the packaged produce must be uniform in particle size, with a tolerance of 5% larger or smaller particles.

4.1. Quality tolerances

4.1.1. "Extra" Class

Five percent, by number of packages or weight, of paprika not satisfying the requirements of this 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 paprika not satisfying the requirements of this 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 paprika satisfying neither the requirements of this class nor the minimum requirements, with the exception of produce affected by rotting or any other form of deterioration such that it is unfit for consumption.

5. PROVISIONS CONCERNING PRESENTATION

5.1. Uniformity

The contents of each package must be uniform in shape and only contain paprika of the same class of quality and pungency. The visible part of the package must be representative of the entire contents.

5.2. Packaging

The paprika must be packed in such a way that the produce is properly protected. 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, in particular paper or stamps bearing trade specifications, is allowed provided the printing or labelling is done with non-toxic ink or glue.

5.2.1. Description of containers

The containers must meet the quality, hygiene, ventilation and resistance characteristics needed to ensure the appropriate handling, shipping and preservation of the paprika. The containers 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 shall apply:

6.1.1. Nature of produce

Each package must indicate the name of the produce and may bear the name of the variety or cultivar.

6.2. Non-retail packages

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

6.2.1. Identification

Name and address of the exporter and/or dispatcher.

Identification code (optional).

6.2.2. Nature of produce

Name of produce and name of the variety or cultivar (this latter is optional).

6.2.3. Origin of produce

Country of origin and, optionally, name of place, district or region of production.

6.2.4. Commercial specifications

- Class.
- Pungency.
- Net weight.

6.2.5. Official inspection mark

Optional.

7. CONTAMINANTS

7.1. The produce covered by the provisions of this standard must 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 the provisions of this standard must comply with the maximum residue limits (MRLs) established by the Codex Alimentarius Commission.

8. HYGIENE

8.1. It is recommended that the produce regulated 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), the *Code of Hygienic Practice for Spices and Dried Aromatic Plants* (CAC/RCP 42-1995 under Rev.) and other relevant Codex texts, such as codes of practice and codes of hygienic practice.

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

PROJECT DOCUMENT

PROPOSAL FOR NEW WORK ON CODEX STANDARD FOR BROWN/ BLACK CUMIN (Whole and Ground)

(Proposal submitted by India)

Introduction

Cumin seeds are one of the world's most popular spices sought after in Asia, South America and North Africa. Indigenous to Egypt and India, cumin is also grown in China, Egypt, Iran, Mediterranean region and Syria. Cumin seeds come in two varieties: Cumin with a brownish colour tone (*Cuminum cyminum*) from the family of Apiaceae and black cumin (*Nigella sativa*) from Ranunculaceae family.

Cumin (brownish) is being produced in tropical regions and the world production is estimated to be around 300,000 tonnes. Being an earliest known minor seed spice used by mankind, the typical pleasant aroma of this seed is due to their volatile oil content, the principal constituent of which is Cuminaldehyde.

Black cumin is native to Southern Europe, West Asia, India and North Africa. The small triangular seeds are velvety black in colour. Its initial place of origin is most probably West Asia. Black cumin has been in use in the Orient since presumably more than 3,000 years. A whole black cumin seed can be characterized by a very dark colour and a thin, crescent shape with a pungent bitter taste and smell. The principal component in the volatile oil of black cumin is p-cymene.

Cumin seeds come from the fruits which are a lateral fusiform or ovoid achene four to five mm long, containing a single seed of oblong shape, longitudinally ridged and yellow brown in colour like other members of the Umbelliferae family. The seeds contain numerous phyto-chemicals that are known to have antioxidant, carminative and anti-flatulent properties. The seeds are an excellent source of dietary fiber and have anti-carcinogenic properties. The active principles in the cumin may increase the motility of the gastro-intestinal tract as well as increase the digestion power by increasing gastro-intestinal enzyme secretions. This spice is an excellent source of minerals like iron, copper, calcium, potassium, manganese, selenium, zinc and magnesium. It also contains very good amounts of B-complex vitamins such as thiamine, pyridoxine, niacin, riboflavin, and other vital anti-oxidant vitamins like vitamin E, vitamin A and vitamin C. The seeds have moisture 6.2 %, protein 17.7%, fat 23.8 %, fiber 9.1%, carbohydrates 35.5% and mineral matter 7.7% per 100 gms. The main component of cumin essential oil is 4-isopropylbenzaldehyde or cuminaldehyde (>30%), together with smaller amount of p-mentha-1, 3-diene-7-al, p-menth-3-ene-7-al angamma-terpinene-all compounds with the same carbon skeleton.

1. The Purpose and Scope of the Standard

The Scope of the work is to establish a worldwide standard for brown and black cumin obtained from varieties *Cuminum cyminum* of the Apiaceae family and *Nigella sativa* of the Ranunculaceae family respectively, which must be supplied whole or ground to the consumers after proper preparation and packaging. Cumin from different country sources are traded internationally and the prominent ones are from Egypt, India, Iran and Middle East (covering the regions of Pakistan, Syria and Turkey).

The objective of a world-wide standard is to consider quality characteristics like colour, size of the seeds, purity of the seeds, active ingredients like Cuminaldehyde and any other factors for whole or ground consumption of brown and black cumin to establish an international document.

2. Relevance and Timeliness

Cumin is produced and traded worldwide and the prominent ones are from Egypt, India, Iran and Middle East (covering the regions of Pakistan, Syria and Turkey).

It is presumed that the global trade in cumin will increase as a result of the growing awareness on the numerous applications for wellness and health benefits from the consumption of Cumin, both in brown and black forms. It is also likely that the demand base for cumin will get broadened increasing the market potential.

Almost all the cumin producing countries are developing nations and small and marginal farmers and not limited to any particular region. Hence, relevance of establishment of cumin standard is such that it is high time that a standard covering quality characteristics especially active ingredients, bulk density, physical size in the case of whole form through consensus between producing and trading countries. This will avoid discrepancies among the producing and trading countries.

3. Main aspects to be covered

The proposed standard for cumin will cover the following aspects:

i. Establish the minimum requirements for cumin in addition to the quality parameters like the cleanliness of the seed, extraneous matter etc.

ii. Define the categories to classify Cumin according to quality parameters based on characteristics of the seeds; taking into account the whole product.

iii. Include the provisions to be considered related to the uniformity of the packaged product and the packaging used.

iv. Include provisions for the labelling and marking of the product in accordance with the general standard for the labelling of pre-packaged foods.

v. Establish tolerances regarding quality and size permitted in packaged black and brown cumin both in whole and powder form.

vi. Include provisions for hygiene with reference to the recommended International Code of Practice for hygiene and general principles of food hygiene, contaminants, pesticide residues and method of analysis.

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

General criterion

The elaboration of the standard for the various varieties of cumin would be to the benefit of many countries in general and more particular in the case of developing countries, as the developing countries are the major producers, exporters and consumers of cumin.

Criteria applicable to commodities

Criteria applicable to commodities

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

Country	Production (in Metric Tonnes)
India	250000
Syria	10000
Turkey	8000
Iran	7000
China	5000
Afghanistan	4000

Source: Commodity Trade Statistics Database | United Nations Statistics Division and World Spices Congress 2012

Pattern of International Trade

Export	World (In Metric Tons)
2008-09	1,28,686
2009-10	99,492
2010-11	81,426
2011-12	97,261

Source: ITC, Geneva

Import	World (In Metric Tons)
2008-09	1,17,925
2009-10	1,03,186
2010-11	1,08,074
2011-12	1,01,087

Source: ITC, Geneva

The above data pertains to Afghanistan, China, Egypt, India, Israel, Lebanon, Pakistan, Saudi Arabia, Singapore, Spain, Syria, Turkey, United Kingdom etc.

The global consumption of cumin is estimated to be 187,000 tonnes and the major importers are Brazil, Canada, Colombia, EU, Ecuador, Japan, Malaysia, Mexico, South Africa and USA.

(b) Diversification of national legislations and apparent resultant or potential Impediments to international trade:

Being a commodity with lots of tradition in trade and commerce and in its use, cumin has its relevance in day to day life across the globe. There exist lots of differences in arriving at the quality of the product in terms of moisture levels, ash content, volatile oil, broken parts, extraneous matter etc. Each producing country has its own grades and specifications being followed over a period of time. Hence there are separately prevailing standards for instance for India, China, Egypt, Syria, Turkey etc. The levels prescribed for moisture content, extraneous matter, volatile oil etc has variations in different standards which poses an apparent trade distortion.

Import of cumin takes place for many applications. It goes for direct culinary use in whole form, for powdering and for extraction based on specific objectives. Hence the trade takes shape based on applications and customer requirement. Trade in cumin is based on producing country's and importing country's mutually agreed conditions in terms of grades and specifications. However, it would be preferred that this trade is carried under an International criteria based on Codex Standard. Therefore, the new work would provide internationally recognized specific standards in order to enhance international trade.

International organisations like the American Spice Trade Association, European Spice Association and ISO have dealt with the standards for cumin. Many conventions including the World Spice Congress have addressed the issue of harmonisation of grades and specifications for cumin. Cumin being produced in developing countries and traded globally not only by the exporters but also through re-exports by importers, is subject to various national legislations. To overcome the resultant or potential impediments to international

trade, it is essential to incorporate all existing diverse standards in a single comprehensive standard acceptable across board internationally.

However this is a spice of universal importance and has many positive benefits with regards to health of consumers. By eliminating the variable (sometimes conflicting) sets of rules and regulations, trade barriers will be reduced and would gain a comprehensive legal framework for the minimum acceptable standards for cumin internationally.

(c) International or regional market potential:

The world market for imported spices and culinary herbs is valued at more than $2.8 billion. Of the top varieties by value, cumin occupies a position with 2.8 percent. The main importing regions are East Asia, EU, Malaysia, Nepal, North America and the US. India alone accounts for more than 85% of the world production of cumin, followed by Syria (3.5%) and Turkey (2.8%).

Global demand for cumin is expected to increase in future, mainly on account of increased culinary applications that transcends borders and the increasing global awareness of the health benefits of this spice.

(d) Amenability of commodity to standardization:

The characteristics of cumin, from its cultivation through to harvest, fruit characteristics, cultivar varieties, composition, quality and packaging all lend to adequate parameters for the standardization of the product. This will include defining the seed according to its bulk density, size in its whole form, volatile oil content, and extraneous matter. There are existing standards in different counties as well as ISO, which indicates amenability to standardization through harmonization.

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

There is no general commodity standard covering cumin; the new work will facilitate cumin trade by establishing an internationally agreed quality standard.

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

The proposed standard will be for brown and black cumin. The different forms of cumin like whole, dried, and ground will be examined under this individually.

(g) Work already undertaken by other international organizations in this field:

i. Studies undertaken by various research organisations on the active ingredients in cumin, and Black cumin.

ii. ASTA's Cleanliness specification for spices, seeds and herbs.

iii. ISO

The need for setting up an international standard for cumin had discussed during International Organization of Spice Trade Associations (IOSTA) meeting, International Pepper Community (IPC), World Spice Congress (WSC) and World Spice Organization (WSO). Except for ISO, there is no other international organization that has undertaken international standard for cumin.

5. Relevance to the Codex Strategic Objectives

The proposal is in line with the Strategic Vision Statement of the **Strategic Plan 2014 - 2019**, in particular, **Objective 1.1, 1.3, 2.3 and 3.1**and aims at setting up internationally accepted minimum quality requirements of cumin for human consumption with the purpose of protecting the consumer's health and achieving fair practices in food trade. It also contributes to fair trade practices wherein the farmers will be able to assess their produce with reference to the quality standards thereby empowering them to realize more monetary values.

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

This proposal is for a new global standard and has no relation to any other existing Codex text on this item, except that this standard will make reference to relevant standards and related texts developed by General Subject Committees.

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

No expert scientific advice is foreseen at this stage. Published research documents by international bodies will be referred in the process of preparing the standard, if found necessary.

8. Identification of any need for technical input to the standard from external bodies so that this can be planned for.

The technical inputs from ISO, American Spice Trade Association and European Spice Association shall be welcomed as they have already done work related to the subject. Also ISO standards can be used as a step process to frame the Codex standard for Cumin.

9. Proposed Time Schedule

The following tentative timeline is proposed, subject to the decisions taken during the first Session of Codex Committee on Spices and Culinary Herbs:

DATE	ADVANCE AND PROCEDURES
February 2014	Consideration of new work by the 1st session of CCSCH
July 2014	Critical review of new work proposals by CCEXEC; Approval of new work proposal by the Commission
September 2015	Consideration at Step 3 by the 2nd session of CCSCH
July 2016	Adoption at Step 5 by CAC
February 2017	Consideration at Step 6 by the 3rd session of CCSCH
July 2017	Adoption at Step 8 by the CAC

PROJECT DOCUMENT

PROPOSAL FOR NEW WORK ON CODEX STANDARD FOR PEPPER

(Proposal submitted by India)

Introduction

Grown in many countries in Asia and Latin American region, pepper is bought across the world for its wide applications. Pepper is aromatic, pungent and contains essential oil (up to 3.5%) and 5 - 10% pungent acid- amides with pipeline as well as piper line, piperoleines and piperamine, while the oil contains sabinene, pinene, phellandrene, linalool and limonene. Piperine has good anticonvulsant and antimicrobial properties, hence has lots of medicinal properties and finds applications in food, non-food and pharmaceutical industries. The pungency is strong in white pepper while black and green peppercorns are more aromatic than the white ones. Green pepper corn has an immature, herbaceous fragrance.

1. The Purpose and Scope of the Standard

The scope of the standard is for pepper - *Piper nigrum* of the Piperaceae family. Pepper corns are the berries that are obtained from stalks of a creeper with woody stems and oval heart shaped leaves. Pepper is cultivated in Asia and Latin American regions, and is traded in three types: Green pepper (in brine, frozen and dehydrated forms), white pepper (the fully matured fruit after removal of pericarp before drying) and black pepper (the mature dried berry). Value added products in crushed, cracked and ground forms are also included in the scope of the standard. The pepper producing and importing countries have their own standards and grades specifications fixed over a period of time and the multiplicity warrants arriving at harmonization of a Codex standard for green, black and white pepper.

The objective is to develop a world-wide standard based on quality characteristics like colour, size of the berries, active ingredients like piperine and any other factors that need to be considered for bringing in a transparent system of harmonization to protect the health of the consumers and ensure fair practices in food trade.

2. Relevance and Timeliness

Pepper is one of the oldest commodities traded world-wide and traded in a tight supply situation. It is produced in countries like Brazil, Cambodia, China P.R, Ecuador, India, Indonesia, Madagascar, Malaysia, Sri Lanka, Thailand and Vietnam in an area of approximately 4,76,500 hectares as of 2010. Almost all the pepper producing countries are developing nations and small and marginal farmers are engaged in farming and hence it is important that fair practices in trade are ensured. Pepper being a universal commodity consumed by millions of people and scores of industry segments, it is important that production and post-harvest operation are subject to hygienic and quality standard. The intrinsic properties in pepper have many things to do with health of the consumers.

The relevance of pepper is such that it is high time that a globally accepted standard based on its properties especially active ingredients, bulk density, physical size etc. are arrived through harmonization. This will avoid discrepancies in the standards when it comes to marketing not only from producing countries but from re-exporting centres also. The process of harmonization will act as a reference that is internationally agreed through consensus between the major producing and trading countries, besides protecting consumers' health and promoting fair trade in accordance with the different international agreements.

Pepper is called as the 'King of spices' on account of its varied usage round the world more than any of the spices present. Dried black pepper berries are by monetary value, the most widely traded spice in the world, accounting for nearly 30 percent of all spice imports in the world. The production of pepper is dependent upon the hot and moist weather conditions and the pepper crop needs these sorts of conditions to prosper.

Pepper is in great demand and any further addition in production from any part of the world could be absorbed by the global market. This is true in the case of any form of pepper whether it be whole, crushed, cracked, powdered, dehydrated, in brine or in the form of oils and oleoresins. Besides its culinary and industrial applications, pepper has many medicinal properties. Its applications in aroma therapy, in the preparations of modern and ancient medicinal formulations etc. points to the richness of the active ingredient Piperine which matters food and health of the people.

3. Main aspects to be covered

The standard applies to the quality aspects of commercial varieties of pepper grown from *Piper nigrum* of the Piperaceae family, that are traded in different types like green, black and white and forms like whole, ground, cracked, dehydrated, in brine and frozen forms. To supply high quality safe products, the objective of the standards are to:

- Establish the minimum quality requirements, cleanliness specifications and defect action levels as per the products.
- Define the categories to classify pepper in accordance with the physical characteristics of the berries like size, bulk density; also taking into account the different traded forms of pepper.
- Establish the intrinsic quality parameters like Piperine, volatile oil and other values.
- Include provisions concerning tolerances with respect to quality and size allowed in each package for pepper not satisfying the requirements of that class.
- Include provisions concerning presentation - the uniformity of the packaged product with respect to same origin, quality, size etc.
- Include provisions for the marking or labelling of the product in accordance with the Codex general standard for the labelling of pre-packed pepper and pepper products.
- Include provision for the maximum levels of the Codex general standard for contaminants and toxins in pepper and pepper products and comply with the maximum residue limits for pesticides established by CAC.
- Include provision for hygiene with reference to the *Recommended International Code of Practice for Hygiene and General Principles of Food Hygiene*.
- Include Methods of Analysis for various parameters for pepper and pepper products.

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

General criterion

- Consumer protection from the point of view of health and the prevention of fraudulent practices.
- Quality of the produce to meet consumer needs and the minimum requirements of food safety.
- Arriving at levels of standardization based on the properties of different varieties to meet industrial and consumer needs with exactness and credibility.
- The elaboration of the standard for the forms of pepper would be to the benefit of many countries in general and more particular in the case of developing countries, because they are the major producers, exporters and consumers of pepper.

Criteria applicable to commodities

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

The world's total production was recorded at 338,380 MT in 2010, of which black pepper constitutes 264,980MT and white pepper 73,400 MT and is produced in countries like Brazil, Cambodia, China P.R, Ecuador, India, Indonesia, Madagascar, Malaysia, Sri Lanka, Thailand and Vietnam. The major producers form part of the International Pepper Community Countries (IPC) covering about 85% of the world pepper trade.

While the pepper producing countries do export of pepper, they also are importing sizeable quantities for value addition and re-exports. It has been estimated that a quantity of 46,309 MT of pepper was imported by the producing countries during 2010. The trend in imports by producing countries is on the upswing since the imports was 18,421 MT only during 2001. Pepper export by producing countries is estimated to be 265,254 MT during 2010 which is lower than 273,677 MT of 2009 but much higher than 201,285 MT of 2001.

Total import of pepper by consuming countries across the world in almost all continents is estimated to be 281,282 MT in 2010 higher than quantities of the earlier years. It is peculiar of pepper that many importing countries re-export sizeable quantities to friendly zones and other markets after value addition in one or the other form. Nearly one hundred countries do re-export and a figure for 2010 is estimated to be 75,274 MT.

Being an oldest traded commodity, pepper had made its impact in every producing and importing country. There exist lots of complexities in terms of grades and specification of pepper from different origins. Each producing country has its own grades and specifications being followed over a period of time. Hence there are separately prevailing standards for instance for Brazil, India, Indonesia, Malaysia, Vietnam etc. The levels prescribed for moisture content, extraneous matter, piperine, etc. has variations in different standards. There exist further more standards prescribed by the American Spice Trade Association, European Spice Association and the International Pepper Community.

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

Import of pepper take place for many applications. It goes for grinding, cracking, powdering and for extraction based on specific objectives. Hence the trade in pepper takes shape based on applications and customer requirement. However trade in pepper is based on producing country's and importing country's mutually agreed conditions in terms of grade and specifications. However it would be preferred that the trade in pepper and pepper products is carried under an International criteria based on Codex Standard. Therefore, the new work would provide internationally recognized specific standards in order to enhance international trade and to accommodate the importers requirements.

Forecasts show that the overall consumption and trade in pepper is on the rise. Any increase in production could be well absorbed by the global market on account of the market potential round the world.

International organizations like the American Spice Trade Association, European Spice Association and ISO have dealt with the standards for pepper. Many conventions including that of the World Spice Congress has addressed the issue of harmonization of grades and specifications for pepper. Pepper being produced in developing countries and traded globally not only by the exporters but also through re-exports by importers, is subject to various national legislations. To overcome the resultant or potential impediments to international trade, it is essential to incorporate all existing different standards in a single improved comprehensive standard acceptable across board internationally. This warrants the establishment of a Codex standard as per the Procedural Manual.

However this is a spice of universal importance and has many things to do with health and safety of consumers. By eliminating the variable (sometimes conflicting) sets of rules and regulations, trade barriers will be reduced and would gain a comprehensive legal framework for the minimum acceptable standards for pepper internationally.

(c) International or regional market potential:

Total imports of pepper by consuming countries across the world are estimated to be 281,282 MT in 2010, with more than 30% growth in a decade span and it is on the increase. Nearly one hundred countries do re-export and a figure for 2010 is estimated to be 75,274 MT.

Demand for pepper is bound to go up in different markets. Other than bulk imports for wholesale application in food and non-food sector, quantities are bought and sold in retail outlets for household applications irrespective of cuisines. The oils and oleoresins from pepper will be in use for a wide range of food

manufacturing and processing industries on account of its advantages of transport, storage and long shelf life. Among the producing countries, except Vietnam there is a strong domestic market for pepper.

(d) Amenability of commodity to standardization:

The characteristics of pepper, from its cultivation through to harvest, fruit characteristics, cultivar varieties, composition, quality and packaging all lend to adequate parameters for the standardization of the product. This will include defining the berries according to its bulk density, size in its whole form, colour of the berries, extraneous matter and other related forms from pepper and its products like crushed, cracked, ground etc.

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

There is no general commodity standard coverage for pepper, the new work will enhance consumer protection and facilitate pepper trade by establishing an internationally agreed quality standard.

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

The standard will be for pepper. The varieties of pepper like green pepper, white pepper, black pepper, and its products will be examined under this individually.

(g) Work already undertaken by other international organization in this field.

i. International Pepper Community - Grades of whole pepper, black and white (November - 2001)

ii. ASTA's Cleanliness Specification for spices, seeds and herbs -USA (2007)

iii. Quality Minima Document of ESA (Rev.4) - December 2011

iv. ISO specification for pepper (ISO 959-1;959-2(1998))

v. Regional/National standards like IS 1798:2010/Food Safety and Standards Act, 2006 of FSSAI India, ISO 105(Sri Lankan Standard for pepper, Bureau of Ceylon (SLS)

Different quality standards of Black pepper whole

Parameter	ISO 959-1;1998	IPC 2002 (Grade BP-I)	ASTA 2007	ESA 2004	Food Safety and Standards Rules, 2006 of FSSAI India	Srilankan (SLS) (ISO 105) Grade I
Moisture (%/wt)	14	12	N/A	12	13	12

The need for setting up an international standard for pepper had come up for discussion in International Organization of Spice Trade Associations (IOSTA), International Pepper Community, World Spice Congress and World Spice Organization.

5. Relevance to the Codex Strategic Objectives.

The proposal is in line with the Strategic Vision Statement of the **Strategic Plan 2014 - 2019**, in particular, **Objective 1.1, 1.3, 2.3 and 3.1**and aims at setting up international accepted minimum quality requirements of pepper for human consumption. It also contributes to fair trade practices wherein the farmers will be able to assess their produce with reference to the quality standards thereby empowering them to realize more monetary values.

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

This proposal is for a new global standard and has no relation to any other existing Codex text on this item, except that this standard will make reference to relevant standards and related texts developed by general subject Committees.

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

No need for expert scientific advice is foreseen at this stage. Published research documents by international bodies will be referred in the process of preparing the standard, if found necessary.

8. Identification of any need for technical input to the standard from external bodies so that this can be planned for.

The technical inputs from ISO, International Pepper Community, American Spice Trade Association and European Spice Association as well as from pepper producing countries shall be welcomed as they have already done work related to the subject. Also ISO standards can be used as a step process to frame the codex standards for pepper.

9. Proposed Time Schedule

The following tentative timeline is proposed, subject to the decisions taken during the first Session of Codex Committee on Spices and Culinary Herbs:

DATE	ADVANCE AND PROCEDURES
February 2014	Consideration of new work by the 1st session of CCSCH
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PROJECT DOCUMENT

PROPOSAL FOR NEW WORK ON CODEX STANDARD FOR ROSEMARY

(Proposal submitted by India)

Introduction

Rosemary (*Rosmarinus officinalis)* is an aromatic evergreen shrub that has leaves resembling pine needles. Widely used in food, pharmaceutical and cosmetic industries, Rosemary is an important culinary herb and is native to Mediterranean region. It is cultivated predominantly in Europe and Africa. Fresh and dried rosemary leaves, whole or ground, are used as seasonings for soups, stews, sausages, meat, fish and poultry in traditional Mediterranean cuisine. They have a bitter, astringent taste and are highly aromatic, which complements a wide variety of foods. When burnt, they give off a mustard-like smell and a smell similar to burning wood, which can be used to flavor foods while barbecuing.

Rosemary is high in iron, calcium and vitamin B_6, 317 mg, 6.65 mg and 0.336 mg per 100 g, respectively. Rosemary extract has been shown to improve the shelf life and heat stability of omega 3-rich oils, which are prone to rancidity. Rosemary has antioxidant and antimicrobial properties. It contains antioxidants like carnosic acid and rosmarinic acid, and other bioactive compounds including camphor, caffeic acid, ursolic acid, betulinic acid, rosmaridiphenol and rosmanol. The active ingredient in Rosemary has pharmaceutical properties. Some of these are found useful in preventing or treating cancers, strokes, and Alzheimer's disease. All these aspects make this herb a very vital plant from the point of human health.

Rosemary oil when distilled from the flowering tops has a clear, powerful refreshing minty-herbal smell with a woody, balsamic undertone. The oil is colourless to slightly yellow with a watery viscosity. Most producers in South Africa cut and distil the entire plant, this oil will have higher camphor content and will be inferior in quality to the above. Rosemary oil is used in meat and fish products, confectioneries, bakery products and beverages.

Rosemary oil has many general applications as it blends well with other extracts like basil, black pepper, cinnamon, citronella, sage, eucalyptus, geranium, grapefruit, lavender, lemon, litsea cubeba, mandarin, marjoram, niaouli, oregano, peppermint, petitgrain, pine, ravensara, tea tree, thyme, etc.

1. The Purpose and Scope of the Standard

The objective is to develop a world-wide standard based on basic characteristics. The need to have a harmonized standard for Rosemary stems from the fact that the crop is grown in developing countries in

fragmented areas by marginal farmers. The marginal farmers do not have the capability to collectively organize to manage the factors which influence their output and therefore the whole food chain will be put to risk by these external factors if these risks are not recognized or mitigated by an international Committee under the aegis of Codex.

The scope of the standard is for Rosemary - *Rosmarinus officinalis* of *Rosmarinus* genus. The worldwide standard for Rosemary and their products will be elaborated to determine the specifications of the products and processes in order to ensure food safety, essential quality, hygiene and labelling requirements for the purposes of protecting the health of the consumers and ensuring fair practices in food trade. Proposed standard applies to dried rosemary herb and its products.

2. Relevance and Timeliness

With lots of applications in the sustenance of human life, Rosemary as a herb, has lots of significance. The crop is grown commercially in Tunisia, Morocco, France, Italy, Spain, Greece, Brazil, Hungary, Turkey and Yugoslavia. Some regions in Asia, The US, Mexico and South Africa also grow this crop. Reliable production figures of this crop are not officially available. Even though the herb like Rosemary form a small portion in different segments of food, pharmaceutical and cosmetics industry, the absence of it can alter the identity of the ultimate product. The impediments on account of non-availability of vital statistics on production, export, import and value addition needs to be overcome.

International Standard (ISO 11164:1995), prescribes quality requirements for dried Rosemary and (ISO 1342:2000) prescribes quality requirements for Rosemary oil. European Spice Association has prescribed specifications for Quality Minima for Rosemary and American Spice Trade Association has prescribed cleanliness specifications for Rosemary Leaves. As per ISO standard, whole rosemary leaves should contain a minimum of one to two percent volatile oil, maximum of 10 % foreign matter, maximum of two percent woody stems and a maximum of seven percent ash. The essential oil content of the dried herb is an important factor contributing to the flavour intensity. A total harmonization of standard is required since buying entities undertake different standards while effecting purchases which is detrimental to the interest of the marginal farmers and developing nations.

3. Main aspects to be covered

The standard entails aspects related to the properties of Rosemary in dehydrated and extract form incorporating physical parameters, presence of extraneous matters, oil content, safety and labelling in order to provide adequate product characteristics and to protect consumer's health. The main aspects to be covered by the proposed standards are to:

- Compile production, export and import figures for Rosemary and its products to overcome the current impediment in sourcing data for standardization and harmonization.
- Establish the minimum requirements for Rosemary in its dehydrated and extract from including and in additions to the quality parameters like the physical appearance, uniformity of the product, free from pest and other extraneous matter etc.
- Define the categories to classify Rosemary in accordance with the characteristics of the herb; such as cut herbs, essential oil, fixed oil, extracts etc.
- Monitor and strengthen the cross border phytosanitary regulations so that the pests/microbes do not travel to other countries and cross contaminate the delicate ecosystem of marginal growers of spices and herbs.
- Include the provisions to be considered related to the uniformity of the packaged product and the packaging used.
- Include provisions for the labelling and marking of the product in accordance with the general standard for the labelling of pre-packed foods.
- Establish tolerances regarding quality and size permitted in packaged Rosemary.
- Include provisions for hygiene with reference to the recommended international Code of Practice for hygiene and general principles of food hygiene
- Include safety data / points for use

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

4.1 General criterion

- Consumer protection from the point of view of health and ensuring fair practices in food trade.
- Quality of the produce to meet consumer needs and the minimum requirements of food safety.
- Arriving at levels of standardisation based on the properties of different varieties to meet industrial and consumer needs with exactness and credibility.
- The elaboration of the standard for the forms of Rosemary would be to the benefit of many countries in general and more particular in the case of developing countries who export so that their competency could be raised.

4.2 Criteria applicable to commodities

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

The world's total production of Rosemary is not officially available as the trade figures get clubbed with total figures for herbs and spices. According to 'A Guide to medicinal plants in North Africa', "the total area covered by the stretches of Rosemary in Tunisia is thought by Forestry Commission to be 3, 46, 000 ha. In 1990, only 59,516 ha was made available to farmers to extract essential oil. This figure rose to 90,657 ha in 2000 i.e. only 40 % of the available area. It should be noticed that the production is between 0.3 and 0.8 tons per ha of plant matter an average 1.2 kg of essential oil of Rosemary. According to Cepex (2000) Statistics, exports of essential oil of rosemary are about 70.45 tonnes at a price of 20 TD the kilo. The countries concerned by these exports are France, Belgium, Germany, Italy, Spain etc."

However figures available with the CBI Netherlands point to the fact that Rosemary is cultivated in European Union in an area of 158 hectares of which 99 hectares grow organic Rosemary. These figures are relating to cultivation of Rosemary in countries like Austria, Belgium, Bulgaria, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Italy, the Netherlands, Portugal, Romania, Spain, Sweden and the UK. More areas under Rosemary cultivation lie in countries like South Africa, Mexico, Morocco, India etc. for which precise data is not available.

Separate figures consumption of Rosemary is not available since again the figures get clubbed with spices and herbs. The largest market for herbs is Europe (Germany 19 percent, Romania 14 percent, Hungary 12 percent, the UK 16 percent followed by North America and Asia, according to the Trade Information Brief of the Southern African Development Community, 2007. The EU market for herbs and spices increased from 265 thousand tonnes in 2003 to 321 thousand tonnes in 2007, representing an annual growth of five percent. The demand from the pharmaceutical industry, catering industry, food industry all contribute to the off take of herbs.

Rosemary though a herb of importance, is not discernible as a commodity. There is no fixed standard as such except the basic indication by the ISO. There exist lots of complexities in terms of grades and specification of dehydrated Rosemary and its oil and the standards are dictated by the buyer.

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

Imports of Rosemary take place for many applications. It goes for dehydration and distillation in the producing countries. In some cases dehydrated material is imported by processing companies. The consignments are traded based on applications and customer requirement. However it would be preferred that the trade in dehydrated Rosemary and Rosemary extracts is carried under an International criteria based on Codex Standard. Therefore, the new work would provide internationally recognized specific standards in order to enhance international trade and to accommodate the importers requirements.

Forecasts show that the overall consumption ~~of~~ and trade in Rosemary will rise with more application. Any extra addition in production could be well absorbed by the global market on account of the continued demand by processing industries.

International organisations like the European Spice Association, American Spice Trade Association and ISO have been dealt with the standards for Rosemary. Many conventions including that of the World Spice Congress and the World Spice Organisation have addressed the issue of harmonisation of grades and specifications for herbs. Rosemary is a herb produced in developing and developed countries. Since the ultimate products in which Rosemary oil is an active ingredient addresses health related matters, the

importance of hygienic practices come to the fore.

Due to absence of a global harmonised standard for Rosemary oil and dehydrated Rosemary, and work already undertaken by many other international organizations like European Union, incorporation of these aspects under this point is necessary as per the Procedural Manual. Hence, to incorporate all existing disparate standards in a single improved comprehensive standard acceptable across the board internationally, the establishment of a Codex standard is seen as a necessity.

As a result, by eliminating the variable (sometimes conflicting) sets of rules and regulations, trade barriers will be reduced and we would gain a comprehensive legal framework for the minimum acceptable standards for Rosemary internationally.

(c) International or regional market potential:

Global trade figures for Rosemary is not available and the volumes get classified with the total figures of trade in herbs and spices and the exporters of medicinal and aromatic plants from East European countries like Albania, Belarus, Croatia, Cyprus etc..

There is considerable demand for Rosemary extracts in the international markets. Value addition is happening in many of the producing countries like France, Spain and India.

There is no available data that indicates total world import and export of Rosemary oil. The only available information is USA's import statistics. Accordingly annual import of Rosemary oil by US is shown below.

IMPORT OF ROSEMARY OIL BY USA /Year	Import in MT
2000	89.56
2001	76.58
2002	124.57
2003	98.21
2004	148.72
2005	109.04

Source: *US Department of Commerce, Horticulture and Tropical products division, FAS/USDA.*

As can be seen for the above import of Rosemary oil by the USA, it has shown a general growth. During the period 2000 – 2005, US import of Rosemary oil averaged at 107.78 MT, with an annual average growth rate of 10%. Assuming that USA accounts for one third of global demand of Rosemary oil, the total global demand is estimated at 323 MT per annum.

The following are the major products from this herb:

i. Oil-soluble Rosemary extracts: Carnosic acid 5%-90% powder, Rosemary oleoresin- Carnosic acid liquid 5%-25%. This is widely used in edible oil, fish oil, oil-rich food, meat, baked food & fried food as natural high effect antioxidant.

ii. Water-soluble Rosemary extracts: Rosmarinic acid 2.5%-20%. This is widely used in beverage, health food and make up as water soluble natural antioxidant.

iii. Rosemary essential oil 100%: Used for skin care and anti-aging essential oil.

iv. Rosemary Leaf Powder.

v. Rosemary as fresh herb

vi. Rosemary dried leaves

According to a new ITC market study, some possibilities exist for exporters of herbs in developing countries to increase their sales to Europe. Imports of dried herbs into four of Europe's largest markets total approximately 12,000 MT to 13,000 MT annually. Although traditional suppliers hold a strong position in this trade, exporters who can offer herbs of consistently high quality that have properties distinguishing them from those of their competitors in terms of flavour, colour and essential oil content should be able to obtain a firm foothold and possibly even command higher prices than current sources of supply.

Imports of dried herbs into the four markets (France, Germany, the Netherlands and the United Kingdom) are estimated to average almost 12,600 MT yearly, of which 37% goes to France; 30% to Germany; 21% to the United Kingdom; and 12% to the Netherlands. Over 77% of the imports of herbs into the four markets are of

six types: rosemary, sage, oregano, marjoram, mint, and thyme. According to trade estimates, overall demand for herbs in these markets is increasing by 1 to 2% annually in volume. Growth rates differ for the various types. Sales are expected to go up much faster in the industrial food and institutional catering sectors than in the retail trade.

(d) Amenability of commodity to standardization:

The characteristics of Rosemary, from its cultivation to harvest, leaf characteristics, cultivar varieties, composition, quality and packaging all lead to adequate parameters for the standardization of the product. This will include defining the herb according to its size, colour and extraneous matters in dehydrated form and colour and density in its extract form.

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

There is no general commodity standard coverage for Rosemary. The new work will enhance consumer protection and facilitate trade by establishing an international agreed quality standard.

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

The standard will be for one commodity i.e. Rosemary which will include dried Rosemary leaves and its extracts. Products to be considered are:

i. Oil-soluble Rosemary extracts: Carnosic acid 5%-90% powder, Rosemary oleoresin- Carnosic acid liquid 5%-25%.

ii. Water-soluble rosemary extracts: Rosmarinic acid 2.5%-20%.

iii. Rosemary essential oil 100%.

iv. Rosemary Leaf Powder

v. Rosemary as fresh herb.

vi. Rosemary dried leaves

(g) Work already undertaken by other international organization in this field.

i. European Commission directives.

ii. CFR – Code of Federal Regulation Title 21 of USFDA.

The need for setting up an international standard for Rosemary had come up for discussion in International Organization of Spice Trade Associations (IOSTA), World Spice Congress and World Spice Organization. The new work does not duplicate any current or proposed work undertaken by international institutions.

5. Relevance to the CODEX Strategic Objectives.

The proposal is in line with the Strategic Vision Statement of the **Strategic Plan 2014 - 2019**, in particular, **Objective 1.1, 1.3, 2.3 and 3.1 aims** at setting up international accepted minimum quality requirements of Rosemary for human consumption. It also contributes to fair trade practices wherein the farmers will be able to assess their produce with reference to the quality standards thereby empowering them to realize more monetary values.

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

This proposal is for a new global standard and has no relation to any other existing Codex text on this item, except that this standard will make reference to relevant standards and related texts developed by General Subject Committees.

The proposed standard will take into account existing applicable Codex guideline documents such as Code of Practice, *General Principles of Food Hygiene* [CAC/RCP 1-1969], *General Standard for Labelling of Pre Packaged Foods* [Codex Stan 1-1985], *Code of Hygienic Practice for Spices and Dried Aromatic plants* [CAC/RCP 42-1995 1], *Recommended Methods of Analysis and Sampling* [Codex Stan 234-1999]

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

There is no need foreseen for expert scientific advice at this point of time. Published research documents by international bodies will be referred in the process of preparing the standard, if found necessary.

8. Identification of any need for technical input to the standard from external bodies so that this can be planned for.

The technical inputs from ISO, EU, American Spice Trade Association, European Spice Association and World Spice Organization as well as from Rosemary producing countries shall be welcomed as they have already done work related to the subject. Also ISO standards can be used as a step process to frame the codex standards for Rosemary.

9. Proposed Time Schedule.

The following tentative timeline is proposed, subject to the decisions taken during the first Session of Codex Committee on Spices and Culinary Herbs:

DATE	ADVANCE AND PROCEDURES
February 2014	Consideration of new work by the 1st session of CCSCH
July 2014	Critical review of new work proposals by CCEXEC; Approval of new work proposal by the Commission
September 2015	Consideration at Step 3 by the 2nd session of CCSCH
July 2016	Adoption at Step 5 by CAC
February 2017	Consideration at Step 6 by the 3rd session of CCSCH
July 2017	Adoption at Step 8 by the CAC

PROJECT DOCUMENT

PROPOSAL FOR NEW WORK ON CODEX STANDARD FOR THYME

(Proposal submitted by India)

Introduction

Thyme, botanically-known as *Thymus vulgaris*, gets its name from the Greek word '*thymon'*, a herb used as incense or as a fumigator. Thyme is the general name for the herb varieties of the species *Thymus* which are native to Europe and Asia. There are over one hundred varieties of thyme. Thyme is native to western Mediterranean region, extending to South Eastern Italy. A member of the mint family, thyme is a perennial evergreen shrub, whose sometimes woody stems are covered with small, gray-green to green leaves. Thyme is a variable shrub with its small, two-lipped flowers range in colour from pale pink to purple and bear quadruplet nutlet fruits. The entire plant is aromatic. Some plants have variegated leaves and grow to about 25 cm in height. The leaves, flowering tops and essential oil are used.

The major constituents /essential oils in thyme are thymol, terpene, carvacrol, methylchavicol, cineole, borneolo, cymene, camphene, pinene, myrcene, tannins, bitter compounds, saponins, and organic acids. There is an international requirement for the quality standard of thyme.

Aerial parts of the plants are used for essential oil production, mostly by steam distillation. Fresh and dried herb materials are uses for culinary purposes. Thyme is often used to flavour meats, soups and stews. It is used in French cuisine, where it is an important element in a bouquet garni, as well as in Herbes de Provence. It is also widely used in Caribbean cuisine. In some Middle Eastern countries, the condiment za'atar contains thyme as vital ingredient. Thyme should be added early in cooking so that its oils have time to be released. Medicinal utilities of Thyme include antispasmodic, carminative, emmenagogue, authelmintic, spasmodic, laxative, stomachic, tonic, vemiguge properties.

1. The Purpose and Scope of the Standard

The scope of the work is to establish a worldwide standard for Thyme - *Thymus vulgaris*. Thyme is the general name for many of the herb varieties of the *Thymus* species, all of which are native to Europe and Asia.

The objective is to develop a world-wide quality standards based on basic characteristics like moisture, total ash content, acid insoluble ash, volatile oil content, extraneous matter etc. for protecting the health of consumers and ensuring fair practices in food trade.

2. Relevance and Timeliness

The need to have an international standard for thyme stems from the fact the crop is grown in developing countries in fragmented areas by marginal farmers. Thyme is grown in many areas of the world. It is globally traded and is not limited to any particular region. Therefore, it is necessary to establish standard covering quality characteristic of thyme.

3. Main aspects to be covered

The standard entails aspects related to the properties of Thyme incorporating quality parameters. To supply high quality products, the objective of the standard is to:

- Establish the minimum requirements for Thyme in its dehydrated form including and in additions to the quality parameters like the physical appearance, uniformity of the product and other extraneous matter etc.
- Define the categories to classify Thyme in accordance with the characteristics of the herb.
- Include the provisions to be considered related to the grading and packaging of product and the packaging used.
- Include provisions for the labelling and marking of the product in accordance with the general standard for the labelling of pre-packaged foods.
- Establish tolerances regarding quality and size permitted in packaged Thyme.
- Assess quality deterioration aspects and introduce process control.
- Include provisions for hygiene with reference to the recommended international Code of Practice for hygiene and general principles of food hygiene, contaminants, pesticides residues and methods of analysis.
- Include safety data / points for use

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

4.1 General criterion

The elaboration of the standard for the forms of Thyme would be to the benefit of many countries in general and more particular in the case of developing countries that emerge as producer and exporter so that their competency could be raised. Arriving at levels of standardisation based on the properties of different varieties to meet industrial and consumer needs with exactness and credibility.

Criteria applicable to commodities

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

Thyme is produced from cultivated and wild harvested plants in most European countries, including France, Spain, Italy, Germany, U.K., Bulgaria, Portugal and Greece as well as South and North Africa, Canada and USA. Some of the Asian countries like India, Thailand and Singapore are also producers. Australia is also a major producer. Yield and quality of essential oil varies according to the genetic make-up of plant material, crop maturity at harvest, environment and distillation practice. Southern European herb growers benefit from the longer growing season owing to climate advantages. Therefore, most of the thyme produced in Europe comes from France, Spain and Portugal. 90 % of the thyme oil of world trade is from Spain.

It is noted from the Eurostat (2009) that the production of herbs/aromatic plants and plants for seasoning are produced in several European countries. The production in 2008 is of the order of 130 thousand tonnes approximately. These include Thyme.

Most of the thyme produced is for the fresh and dried market. Yields of *T. Vulgaris* for fresh herb production can be five to six t /ha and for dry herb production can be two t/ha. Under irrigation, thyme will yield about 15 tonnes of plant material per hectare per annum, at an oil recovery rate of 0.5 to one percent or 75 to 150 kg/ha per annum. Under dry land conditions the yields will vary considerably. Few producers in South Africa are distilling thyme for essential oil production.

Cultivation of the traded herb is primarily in Spain, France, Italy and Bulgaria. An essential oil yield of 1.0 % (10 ml oil/kg fresh thyme) is expected from wild thyme in hot summer conditions. Yields may decrease to 0.10 % in winter. Yields from cultivated material range from 0.05 to 0.50 %, depending on variety. However, herbage yields under cultivation far exceed production in the wild, so more oil would be produced per

hectare in cultivated crops. In Switzerland, selected cultivars are yielding 3 % essential oil from fresh herbage of more than 15 t/ha.

Exact figures of production of the crop are not available. Spain, Jamaica and Morocco are the main suppliers of dried leaf to the US market while Spain and France contributes to the oil market. However International Trade Centre Geneva had compiled figures for exports and imports of thyme clubbed with bay leaf statistics as listed below:

Year	Export (Quantity in MT)	Import (Quantity in MT)
2006	3717.708	9328.591
2007	1713.462	975.564
2008	389.489	-

Source: Commodity Trade Statistics Database | United Nations Statistics Division

The above data pertains to Albania, Argentina, Austria, Australia, Azerbaijan, Brazil, Bulgaria, France, Greece, India, Italy, Mexico, Portugal, Singapore, Spain, Switzerland, Thailand, United Kingdom, USA etc.

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

Imports of Thyme take place for many applications. It goes for dehydration and distillation in the producing countries. The consignments are traded based on applications and consumer requirement. However it would be preferred that the trade in Thyme is carried under an International criteria based on 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.

Forecasts show that the overall consumption and trade in Thyme will rise with more application. Any extra addition in production could be well absorbed by the global market on account of the continued demand by processing industries.

International Standard (ISO 6754:1996), prescribes quality requirements for Dried Thyme. American Spice Trade Association [ASTA] has prescribed cleanliness specifications for Thyme. European Spice Association [ESA] has prescribed Quality Minima for Thyme. But an international standard is required since buying entities insists different standards while effecting purchases which is detrimental to the interest of the marginal farmers and developing nations. The essential oil content of the dried herb is an important factor contributing to the flavour intensity.

Due to lack of international standard for thyme, international trade has been widely affected. Importers prefer to import based on internationally accepted standard. Therefore, new work would provide international recognized specific standard in order to enhance international trade.

As a result, by eliminating the variable (sometimes conflicting) sets of rules and regulations, trade barriers will be reduced and each member country would gain a comprehensive legal framework for the minimum acceptable standard for Thyme internationally.

(c) International or regional market potential:

Thyme is one of the most important European culinary herbs. Because the leaves are leathery and contain little water, they dry without excessive loss of flavour and are most often used in this form. Traditionally hot air dried, freeze dried thyme are traded in the market.

Global export for Thyme from 2008-2012 averages to be around 3000 MT and the import figures from 2009-2012 is around 1600 MT.

(d) Amenability of commodity to standardization:

The characteristics of Thyme, from its cultivation to harvest, fruit characteristics, cultivar varieties, composition, quality and packaging all lend to adequate parameters for the standardization of the product. There are existing standards in different countries as well as ISO which indicates amenability to standardization though harmonization.

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

There is no general commodity standard covering thyme. The new work will facilitate trade by establishing an international agreed quality standard.

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

The standard will be for one commodity Thyme.

(g) Work already undertaken by other international organization in this field.

There is no other international organization that has undertaken international standard for thyme**.** International organizations like the European Spice Association, American Spice Trade Association and ISO have dealt with the standards for Thyme. Many conventions including that of the World Spice Congress and the World Spice Organisation have addressed the issue of harmonization of grades and specifications for herbs. Thyme is a herb produced in developing and developed countries. Moreover, significant concerns were raised in the International Organization of Spice Trade Associations (IOSTA), World Spice Congress and World Spice Organization meetings to standardise the quality parameters.

5. Relevance to the Codex strategic objectives.

The proposal is in line with the Strategic Vision Statement of the **Strategic Plan 2014 - 2019**, in particular, **Objective 1.1, 1.3, 2.3 and 3.1** and aims at setting up internationally accepted minimum quality requirements of Thyme for human consumption. It also contributes to fair practices in trade wherein the farmers will be able to assess their produce with reference to the quality standards thereby empowering them to realize more monetary values. The reference made to Codex food safety standards in the World Trade Organizations' SPS Agreement means that Codex has far reaching implications for resolving trade disputes.

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

This proposal is for a new global standard and has no relation to any other existing Codex text on this item, except that this standard will make reference to relevant standards and related texts developed by general subject committees.

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

There is no need foreseen for expert scientific advice. Published research documents by international bodies will be referred in the process of preparing the standard, if found necessary.

8. Identification of any need for technical input to the standard from external bodies so that this can be planned for.

The technical inputs from ISO, EU, American Spice Trade Association, European Spice Association and World Spice Organization shall be welcomed as they have already done work related to the subject. Also ISO standards can be used as a step process to frame the Codex standards for Thyme.

9. Proposed Time Schedule.

The following tentative timeline is proposed, subject to the decisions taken during the first Session of Codex Committee on Spices and Culinary Herbs:

DATE	**ADVANCE AND PROCEDURES**
February 2014	Consideration of new work by the 1st session of CCSCH
July 2014	Critical review of new work proposals by CCEXEC; Approval of new work proposal by the Commission
September 2015	Consideration at Step 3 by the 2nd session of CCSCH
July 2016	Adoption at Step 5 by CAC
February 2017	Consideration at Step 6 by the 3rd session of CCSCH
July 2017	Adoption at Step 8 by the CAC

PROJECT DOCUMENT

REVISED[1] PROPOSAL FOR NEW WORK ON THE DEVELOPMENT OF A CODEX STANDARD FOR BLACK, WHITE AND GREEN PEPPER

(Submitted by the United States of America)

Introduction

Black Pepper and White Pepper (*Piper nigrum* L. of the Piperaceae family) are among the oldest commodities traded internationally irrespective of geographical region. Recently, that trade has expanded to include green dehydrated pepper berries of the same family. Black, white and green pepper berries in this proposal will be referred to by BWG, to differentiate the common name pepper of *Piper nigrum* from pepper of *Capsicum annuum.* BWG pepper is either whole or ground pepper berries not pods as capsicum species. BWG Pepper is called the 'King of Spices' on account of its high global usage, more than any of the other spices. Dried black pepper berries are by monetary value, the most widely traded spice, accounting for almost 30 percent of all spice imports in the world. As one of the oldest traded commodities, BWG pepper berries have an impact on the economy and gastronomy of every producing and importing country.

Since there is no international standard concerning the quality of BWG pepper berries, trade is conducted using a range of national and private standards from both producing and/or importing countries. This collage of standards with different definitions and understandings of grades/specifications can complicate imports and exports. For instance, Brazil, India, Indonesia, Malaysia, and Vietnam each have a national standard; additionally, the European Spice Association has established quality minima standards, the Canadian Spice Association members must conform to government standards set in Division 7 of the Food and Drug Regulations, and the International Pepper Community has its own standards. Both the national standards and those of the industry groups have differences in some of the most important quality requirements such as moisture content, extraneous matter, and piperine.

1. The Purpose and Scope of the Standard

The purpose of this standard is to develop harmonized international quality criteria for styles of BWG pepper products obtained from *Piper nigrum* to facilitate international trade and consumer protection.

The scope of the standard is for dry and /or dehydrated pepper - *Piper nigrum*, i.e., Pepper berries whole or ground to be offered for industrial food production and for direct consumption, including for catering purposes or for repacking, as required. The objective is to develop a Codex Alimentarius standard based on measurable characteristics and any other factors to increase transparency in the trade.

2. Relevance and Timeliness

BWG Pepper is one of the oldest commodities traded internationally. It is produced in many countries including Brazil, Cambodia, China, Ecuador, India, Indonesia, Madagascar, Malaysia, Sri Lanka, Thailand, and Vietnam. Small and marginal farmers in developing countries are engaged in pepper production, and establishment of a standard is important to enhance transparency and fair trade practices. In 2011, the production of BWG pepper among the top 20 producing countries was estimated at 460,865 metric tonnes valued at almost $960 million with an average value per metric tonne of $2,084.28; while international trade by the top 20 trading countries amounted to 223,966 metric tonnes valued at $1.3 billion, thus yielding an average value per tonne of $5,835.60.

The current and historical significance of BWG pepper to producers, traders and consumers warrants the development of a Codex standard based on its organoleptic characteristics. This will remove discrepancies among the various national standards and different trade association standards and instill transparency in marketing from producing countries and re-exporting centers. As always, the Codex standard will be developed with the interests of all relevant parties taken into consideration. The proposed standard will be based on the principles of fairness in trade and consumer protection.

[1] Revised from the proposal appearing Annexure II of CX/CAC 13/36/10-Add.2

3. Main aspects to be covered

The main aspects of the product to be covered in the standard are the minimum quality and safety requirements to protect consumer's health and to facilitate fair trade:

- Product Definition - Defining the product as “dry and/or dehydrated BWG peppers including a reference to the genus and the species and/or varietal types if necessary.
- Composition - Including provisions for basic ingredients and other permitted ingredients. Establish moisture content for whole peppercorns and other styles Piperine**,** essential oil content and other values.
- Styles - Listing/describing the different forms of presentation including sizes of whole peppercorns, pieces and/or powder and tolerances allowed.
- Classes/ Quality Criteria - Including provisions for colour, odour, taste, and texture. classification of “defectives” vis-à-vis “lot acceptance based on the defects allowed.”
- Quality tolerances.
- Provisions for the labeling and marking of the product in accordance with the general standard for the labeling of pre-packaged foods.
- Provisions for hygiene, labeling, packaging with reference to pre-existing Codex documents.
- References to Methods of Analysis and Sampling.

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

(21st edition Codex Procedural Manual Section II: Elaboration of Codex Texts, pp. 40-43))

General criterion

Consumer protection from the point of view of health, food safety, ensuring fair practices in the food trade and taking into account the identified needs of developing countries.

The proposed new standard will meet this criterion by:

- Promoting consumer protection and the prevention of fraudulent practices.
- Providing greater assurance of the quality of the product to meet consumer needs and the minimum requirements for food safety.
- Arriving at levels of standardization based on the properties of different varieties to meet industrial and consumer needs with exactness and credibility.

In addition, the elaboration of the standard would be to the benefit of many countries in general and more particular in the case of developing countries, for the developing countries are the major producers, exporters, and consumers of pepper.

Criteria applicable to commodities

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

The world’s total BWG pepper production was recorded at 338,380 MT in 2010, of which black pepper constitutes 264,980 MT and white pepper 73,400 MT. BWG pepper is produced in a number of countries including Brazil, Cambodia, China, Ecuador, India, Indonesia, Madagascar, Malaysia, Sri Lanka, Thailand and Vietnam. The major producing countries, representing about 85% of the world pepper trade, participate in a regional intergovernmental organization called the International Pepper Community(IPC). The IPC was established in 1972 under the auspices of the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP).

Some BWG pepper producing and exporting countries also import for value added and re-export purposes. It is estimated that 46,309 MT of pepper was imported by major producing countries in 2010, increasing from 18,421 MT in 2001, and approximately one hundred countries re-exported 75,274 MT BWG pepper in 2010. Though exports of BWG pepper by producing countries fluctuates annually, the volume traded remains high, 265,254 MT in 2010 and 273,677 MT in 2009. An estimated 281,282 MT of BWG pepper was imported by net consuming countries in 2010, an increase over the previous years.

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

Though the BWG pepper trade continues to expand in the absence a harmonized international standard, one is needed to increase trading efficiency. BWG pepper trade is carried out using different national or industry standards. Each either reflects (i) domestic product characteristics resulting from geo-climatic conditions, variety grown, production or trade practices, or (ii) the desires of the trade group based on their interpretation of consumer demand. Other BWG pepper standards are mainly based on the type of final product, i.e. whole, for grinding, cracking, and powdering.

In the absence of a common trading language, producers and traders find it tedious and/or difficult to communicate with new clients. In some cases, the trade in BWG pepper is one- sided, based on either the buyer's or seller's requirements. Thus, the mutual settlement of quality disputes arising from trade is overly difficult and often results in a party being unsatisfied with the outcome. In this regard, would be helpful if the international BWG pepper trade could be carried out using a single harmonized Codex standard. The development of a Codex standard will allow the different stakeholders to harmonize their different requirements to facilitate international trade.

(c) International or regional market potential:

Total imports of pepper by consuming countries were estimated at 281,282 MT in 2010, an increase of more than 30% in a decade. In the same year, almost one hundred countries re-exported approximately 75,274 MT. The demand for BWG pepper in all forms and in all markets is increasing.

(d) Amenability of commodity to standardization:

The characteristics of BWG pepper as traded, as whole peppercorns, desiccated or powder forms, color requirements, volatile oil, ash, maximum moisture content, and defects allowed are adequate parameters for the standardization of the product. Furthermore, the existence of several private and public standards with the same parameters and nomenclature enhance the potential for successful development of a Codex standard for this product.

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

Currently there is no international standard for BWG peppers with global public sector ownership. The public sector sets the rules, creates an amicable environment for trade, and is responsible for consumer protection. The proposed new standard will heighten consumer protection and facilitate pepper trade by establishing an internationally agreed quality standard.

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

The standard will be for dry and dehydrated black, white, and green (BWG) pepper whole desiccated and ground forms.

(g) Work already undertaken by other international organization in this field.

(i) International Pepper Community grades of treated whole pepper, black and white.

(ii) European Spice Association Quality Minima

The International Organization of Spice Trade Associations (IOSTA), International Pepper Community, World Spice Congress, and World Spice Organization previously discussed the necessity of an international standard for BWG pepper.

5. Relevance to Codex Strategic Objectives.

The proposal is consistent with the Strategic Plan of the Codex Alimentarius Commission 2014- 2019, in particular, Strategic Goal 1 (Establish international food standards that address current and emerging food issues) and seeks to establish internationally accepted minimum quality requirements for BWG pepper for human consumption. This proposal is in accordance with Article 1 (a) of the Statutes of the Codex Alimentarius "*protecting the health of the consumer and ensuring fair practices in the food trade.*"

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

This proposal is for a new Codex standard and is not related to or based on any pre-existing Codex document. However, when completed, the standard will include references to relevant pre-existing Codex texts developed by general subject committees.

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

There is no need for Codex Alimentarius to provide expert scientific advice at this stage and such advice is not expected to be required during the development of the standard. Published research documents by international bodies, the trade organizations and academia will be used and / or provide direct input in the development of the standard.

8. Identification of any need for technical input to the standard from external bodies so that this can be planned for.

Technical inputs from external bodies such as the International Standards Organization (ISO), International Pepper Community (IPC), American Spice Trade Association (ASTA), European Spice Association (ESA) and from pepper producing countries as well as pre-existing standards will be sought and used in development of the standard.

9. Proposed Time Schedule

The following is the proposed timetable for the completion of the standard.

DATE	**ADVANCE AND PROCEDURES**
February 2014	Prepare and submit project document to CCSCH.
June/July 2014	Step 1. Critical review of proposal by CCEXEC; Approval of new work proposals by the Commission.
First half of 2015	Step 2. Proposed Draft Standard is circulated for the 2nd CCSCH Session. Approval at step 3.
Second half of 2016	Step 5 with the possibility to recommend adoption at Step 8
CAC 2017	Adoption of the standard at Step 8