codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

FAO/WHO COORDINATING COMMITTEE FOR LATIN AMERICA AND THE CARIBBEAN

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PROPOSAL FOR THE DEVELOPMENT OF A REGIONAL STANDARD FOR CULANTRO COYOTE

BACKGROUND

1. The 15th Session of CCLAC (November 2008) considered a request from the Delegation of Costa Rica to develop a standard for culantro coyote. The Delegation noted that major trade problems associated with this product related to phytosanitary and safety issues. The Committee noted that the botanical classification of the product was needed in order to determine the appropriateness of its standardization within Codex. In this regard, it agreed to set up an electronic Working Group led by Costa Rica with the assistance of Guatemala, Bolivia, Mexico and Nicaragua to review relevant Codex documentation in order to determine the opportunity to develop a Standard for this product for consideration by the next session of the Committee.[1]

2. The project document containing the justification for the development of a Regional Standard for Culantro Coyote and other relevant information related to this commodity is attached to this document. The Committee is invited to consider the opportunity to develop a regional standard for such product.

[1] ALINORM 07/30/36 para 133.

PROJECT DOCUMENT

PROPOSED FORMULATION OF A CODEX REGIONAL STANDARD FOR CULANTRO COYOTE (*Eryngium foetidum*)

1. Purposes and scope of the standard

The aim is to have a Codex regional standard with specifications for *Eryngium foetidum* to provide consumers with a wholesome, quality product.

The standard applies to commercial varieties and/or types of *Eryngium foetidum* of the Apiaceae family, supplied fresh to consumers after treatment and packaging.

2. Relevance and timeliness

Culantro coyote (*Eryngium foetidum*) is an aromatic herb of ethnic consumption. It is mainly marketed fresh because it is very vulnerable to physical damage and contamination, given that it is a cut-leaf product. Because of these characteristics, it has encountered numerous problems in international trade, principally the detection of *Salmonella* spp., pesticide residues (no set limits) and phytosanitary problems (fungi, insects).

The situation led several Codex members to note the health concerns and to express an interest in determining requirements to eliminate trade and safety problems concerning the product. A regional standard for culantro coyote (*Eryngium foetidum*) would enhance consumer protection and facilitate international trade, especially for exporting and basically developing countries.

Eryngium foetidum has a many international names: Culantro, culantrón, culantro coyote, culantro extranjero, culantro real, alcapate, escorzonera, samat, xamat, cilantro cimarrón, recao, culantro culebra, cilantro ancho, jia yuan gian, koulant, chadwon, spiritweed, false coriander, long coriander, stinkweed, fitweed.

3. Main aspects to be covered

This work proposal applies to leaves of commercial varieties or types of *Eryngium foetidum*, supplied fresh to consumers fresh after treatment and packaging. The work will entail:

- Establishing minimum quality requirements
- Specifying size classifications
- Defining provisions for quality and size tolerance
- Establishing provisions for presentation
- Determining marking or labelling in accordance with Codex Alimentarius guidelines
- Including Codex Alimentarius guidelines on contaminants affecting the product
- Referring to Codex Alimentarius guidelines on hygiene requirements.

4. Assessment against the *Criteria for the establishment of work priorities*

The following criteria for the formulation of a regional standard for *Eryngium foetidum* are intended to protect consumer health, enhance food safety and ensure fair practices in the food trade.

In Costa Rica, there is no specific tariff for *Eryngium foetidum* which is included under item 0709.90.90.90 of Tariff Schedule Chapter Seven “Other fresh or refrigerated vegetables”.

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

Eryngium foetidum is traded in crates of 40 bundles of varying weight. The international price for a bundle stands at around US$ 0.62.

Costa Rica produces 40 000 bundles per hectare, making an approximate total output of four million bundles of *Eryngium foetidum* per year (one thousand crates per hectare). About 75% is for export while the remaining 25% is sold through the National Centre for Food Supply and Distribution (CENADA), agricultural fairs and informal markets.

With data from Mexico’s Ministry of Economy, Table 1 reports *Eryngium foetidum* production in each state of the country (for reporting purposes only annual totals are given).

Table 1. Mexico: Annual production of *Eryngium foetidum* (kilograms)

Year	2000	2001	2002	2003	2004	2005	2006
Qty in Kg	33,855.57	39,278.08	36,004.6	38,705.81	37,941.15	51,582.77	51,651.04

Source: SIM/CNP with data from the Ministry of Economy of Mexico

Eryngium foetidum production in Guatemala is estimated at 800 crates per "manzana" (0.7 ha) for consumption by the national population of approximately 1,673,202 inhabitants. The following table reports consumption in 2007.

Table 2. Guatemala:

Volume of annual consumption of *Eryngium foetidum*

(40-bundle crates)

Department	Number of persons	Consumption/year
Alta Verapaz	776,245	na
Baja Verapaz	215,915	na
El Petén	366,735	na
Izabal	314,306	na
Total	1,673,202	53,526.04 *

*Estimated number of crates consumed in 2007.

na: data not available

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

Formulation of this regional standard reflects the formal objectives of the World Trade Organization and the statutes of the Codex Alimentarius Commission, including protection of consumer health, protection against phytosanitary hazards and fair practices in the food trade.

c. International or regional market potential

The table below reports Costa Rica's exports of 40-bundle crates of *Eryngium foetidum*.

Table 3. Costa Rica: Exports of *Eryngium foetidum*

(40-bundle crates)

Year / Qty	2006	2007	2008
January	26,334	26,818	28,994
February	22,415	23,220	27,897
March	23,054	26,306	24,565
April	22,305	22,116	25,088
May	24,490	26,087	29,037
June	22,678	26,578	25,160
July	25,480	24,733	29,457
August	26,182	29,280	
September	24,938	25,900	
October	26,071	27,829	
November	25,944	25,780	
December	23,908	28,019	
Total	**293,849**	**312,666**	**190,198**

Source: State Phytosanitary Service, Ministry of Agriculture and Livestock of Costa Rica

d. Amenability of the commodity to standardization

The standard basically covers aspects relating to the quality, size, safety and labelling of *Eryngium foetidum* in order to assure consumers of product characteristics.

Because of the specific nature of the product, parameters relating to the commercial varieties or types will also need to be established to distinguish the product from others with similar names.

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

No existing or pipeline Codex Alimentarius standard covers fresh cut-leaf products, which is the case for the marketing of *Eryngium foetidum*. Hence the need for a specific regional Codex standard for the benefit of consumers.

International trade in fresh cut-leaf products has grown substantially as Tables 4 and 5 indicate. They report the export values of item 070990 of the Central American Tariff Schedule of the Secretariat of Central American Economic Integration (SIECA) which covers "Other vegetables" and includes *Eryngium foetidum*, which has no specific entry. Comparison and estimation of trade of this product in selected countries of the region is therefore based on this item.

Table 4. Global exports of tariff item 070990
(including *Eryngium foetidum*)

US$ thousands

Country	Export value					Average growth rate
	2003	2004	2005	2006	2007	
Costa Rica	13,218.0	15,086.0	16,036.0	17,631.0	na	33.4%
Nicaragua	414.0	1,809.0	1,767.0	3,099.0	na	648.6%
Mexico	307,443.0	333,894.0	324,675.0	387,671.0	428,714.0	39.4%
Guatemala	2,473.0	2,732.0	10,966.0	3,660.0	11,303.0	357.1%
Bolivia	0.0	0.0	0.0	0.0	0.0	0%

Source: Procomer with database of the United Nations Statistics Division – Commodity Trade Statistics Database (COMTRADE).
Central American Tariff Schedule of the Secretariat of Central American Economic Integration (SIECA)
na: data not available

Table 5. Global imports of tariff item 070990

(Including *Eryngium foetidum*)

US$ thousands

Country	Import value					Growth rate for the period
	2003	2004	2005	2006	2007	
Costa Rica	59.0	54.0	52.0	66.0	na	11.9%
Nicaragua	99.0	132.0	159.0	171.0	na	72.7%
Mexico	4,090.0	3,900.0	4,007.0	4,449.0	5,858.0	43.2%
Guatemala	1.0	16.0	88.0	3.0	12.0	1100.0%
Bolivia	2.0	2.0	2.0	7.0	14.0	600.0%

Source: Procomer with database of United Nations Statistics Division – Commodity Trade Statistics Database (COMTRADE).
Central American Tariff Schedule of the Secretariat of Central American Economic Integration (SIECA)
na: data not available

The above justifies the formulation of a standard to avoid misleading practices for consumers and to provide a new regulatory text for international trade with specific information on this product.

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

As mentioned above, there is no Codex standard for cut-leaf products. As *Eryngium foetidum* is supplied fresh to consumers, it is an unprocessed product, the only actions being its treatment and packaging in post-harvest management.

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

There is no knowledge of any international regulatory document on this product.

5. Relevance to the Codex strategic objectives

Formulation of the proposed standard is based on the following strategic objectives:

- To promote an effective regulatory framework. The application of effective food control and regulation systems at national level, as in the case for *Eryngium foetidum*, is essential to protect the health and safety of domestic consumers and to ensure the safety and quality of food that is internationally traded.
- To promote the inclusion and participation of as many members as possible. Promoting linkages between Codex and other multilateral regulatory instruments and agreements will also be essential in creating a stronger scientific evaluation structure specialized in the product and able to deal with chemical and microbiological hazards and emerging pathogens.
- To promote maximum application of Codex standards. International harmonization based on Codex standards, guidelines and recommendations is fundamental for shaping a global approach to consumer protection (including systems to reduce food-borne hazards) and minimizing negative impacts of technical regulations on international trade.

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

Costa Rica suggested this standard at the 15th Session of the CCLAC in Mar de Plata, Argentina, in 2006. It received the consent of various countries to proceed with its formulation, resulting in the formation of an electronic working group led by Costa Rica as stated in para. 133 of the Report of the 15th Session of the CCLAC (Alinorm 07/30/36).

7. Identification of availability of expert scientific advice in the case of need

Reference information for the formulation of the draft Codex standard will be provided by each of the national experts in the CCLAC working group (Alinorm 07/30/36). Other experts from the rest of the region will also be consulted.

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

Technical support will be sought from external organizations during formulation of the standard, for parameters such as maximum residue limits for pesticides.

9. Proposed time-line for completion of the new work

CCLAC (2008)	CCLAC considers the proposal for the development of a regional standard for culantro coyote and recommends the Commission the approval of this proposal as new work for the Committee.
CCEXEC/CAC (2009)	CCEXEC recommends the Commission to approve the development of a regional standard for culantro coyote. The Commission endorses this recommendation.
CCLAC (2010)	CCLAC considers the proposed draft standard at Step 4 y recommends the Commission to adopt the document at Step 5*.
CCEXEC/CAC (2011)	CCEXEC considers the proposed draft and recommends the Commission to adopt the document at Step 5. The Commission endorses this recommendation.
CCLAC (2012)	CCLAC considers the draft standard at Step 7 and recommends the Commission to adopt the document Step 8.
CCEXEC/CAC (2013)	CCEXEC considers the draft standard and recommends the Commission to adopt the document at Step 8. The Commission endorses this recommendation: Adoption of the Codex Regional Standard for Culantro Coyote**.

* The CCLAC may consider, depending on the degree of consensus, to recommend adoption of the proposed draft at Step 5/8, with omission of Steps 6/7, in order to finalize the work in 2011.

** The CCLAC may recommend to the Commission the conversion of the regional standard into a worldwide standard by the relevant auxiliary body.

General information on *Eryngium foetidum*

Origin and geographic distribution

- Area of origin: Tropical America.
- Secondary distribution: found naturally in Africa and Asia.
- Long distance migration assisted by human beings. Cultivated in home gardens as seasoning. Also exists wild.

Identification and description

- Characteristic and form of life: perennial, highly aromatic herb.
- Size: up to 60 cm in height.
- Stem: single or multiple, simple or branched, with or without leaves.
- Leaves: generally all basal (sometimes some grow on the stem), oblanceolate, up to 30 cm in length and up to 5 cm in breadth (generally smaller) tapering towards the base. The leaf margins are serrated (each tooth with a small yellow spine at the apex).
- Inflorescence: terminal, generally multibranched, numerous cylindrical flower heads approximately 1 cm in length and up to 5 mm in breadth, yellowy green in colour, with at their base 5 to 6 lanceolote bracts (involucre) of up to 4 cm in length, spiked and entire or spiny-serrated margins. Each head has numerous sessile flowers each with a bracteole at its base (involucel), linear or lanceolate, up to 3 mm in length; bracteoles found towards the apex of the head are usually longer and shaped in the form of a plume called a coma.
- Flowers: small, white to blue or purple; the calyx is a tube (covered with large scales) divides towards the apex into 5 lanceolate to triangular lobes of up to 1 mm in length; corola of 5 free, drooping, elliptical-oblong petals of less than 1 mm in length, with a long apex curved towards the centre of the flower; 5 stamens; inferior ovary.
- Fruits and seeds: the fruit is spherical, laterally compressed, up to 2 mm in diameter and covered with abundant yellowy spherical vesicles; at maturity the fruit separates into two fruitlets (mericarps), each containing a seed.
- Root: fleshy.

Habitat

Moist areas, but spread naturally in almost all areas with characteristics needed for its growth and propagation. Its distribution is altitudinal and the climate tropical. It grows better in heavy moist soil rich in organic matter.

Uses

It is commonly used in the tropics, generally within households, as a substitute for coriander (*Coriandrum sativum* L.), which does not grow well in the tropics. It can be used fresh in salads or else cooked, for example in West Indian and Brazilian cuisine and in various regional dishes of South Asia (India, Thailand and Vietnam – it is frequently traded in these countries). It is also used as seasoning in countries such as Costa Rica.

Eryngium foetidum is also widely used for medicinal purposes, especially for respiratory infection and fever. It is considered to stimulate appetite.

Nutritional value

The leaves contain significant quantities of vitamins A, B1, B2 and C, riboflavin, carotene, calcium and iron.