

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



Food and Agriculture
Organization of
the United Nations



World Health
Organization

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Agenda Item 9

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FATS AND OILS

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OTHER BUSINESS AND FUTURE WORK

REVIEW OF THE CODEX STAN 210 STANDARD FOR VEGETABLE OILS, FOR THE ADDITION TO PALM OIL HIGH OLEIC OXG

(Prepared by Colombia)

The Colombian National Codex Alimentarius Committee thanks the Codex Alimentarius Commission, its Executive Committee and the Codex Committee on Fats and Oils for their attention, and is pleased to submit the following document, to considered the revision of the standard Codex Stan 210 for Vegetable Oils by the addition of Palm Oil High Oleic OxG, in benefit of consumer health and international trade.

1. OBJECTIVE AND SCOPE OF THE STANDARD

The objective is to include High Oleic Palm Oil OxG (*Elaeis oleifera* x *Elaeis guineensis*), which is to be marketed in edible form both to industries and consumers following a refining, bleaching and deodorizing process. The inclusion of the food safety and quality requirements of this oil in Codex Stan 210 on Vegetable Oils will enable the establishment of standards to monitor the food safety of this product, facilitate conditions for its commercialization and serve as a frame of reference for the establishment of technical standards on edible fats and oils of this type.

2. RELEVANCE AND TOPICALITY

Over the past 20 years, global consumption of vegetable oils has grown substantially in terms of production, trading and industrial use. However, this growth has implied adapting to changing consumer trends, which have increasingly turned in the direction of healthy nutrition.

These changes have led both consumers and the food industry to seek out high oleic acid oils as a means for improving product features and quality and to improving nutrition, with a subsequent increase in demand for healthy foods and increased competition between industries to position their products.

Based on the above, and considering that world consumption trends show a preference for natural and nutritious foods, the oil obtained from *E. oleifera* and the O x G hybrid materials represents a healthy alternative to cover daily requirements of fats and fat-soluble vitamins. Similarly, the high concentration of minor components in these oils represents a commercial alternative to obtain carotene, vitamin E and sterols of high bio-availability with numerous applications in the food products industry.

These comparative advantages of the oils extracted from the different oil palm varieties should facilitate their acceptance in the food products industry and end consumers, and for this reason it is necessary to establish both general and specific requirements to characterize High Oleic Palm Oil (OxG).

3. MAIN ASPECTS THAT SHOULD BE COVERED

The proposal to add High Oleic Palm Oil (OxG) would include the following aspects:

- Establishment of general requirements for High Oleic Palm Oil (OxG).
- Establishment of specific requirements for High Oleic Palm Oil (OxG).
- Establishment of the information that must be included in package labels and markings based on Codex Alimentarius guidelines.

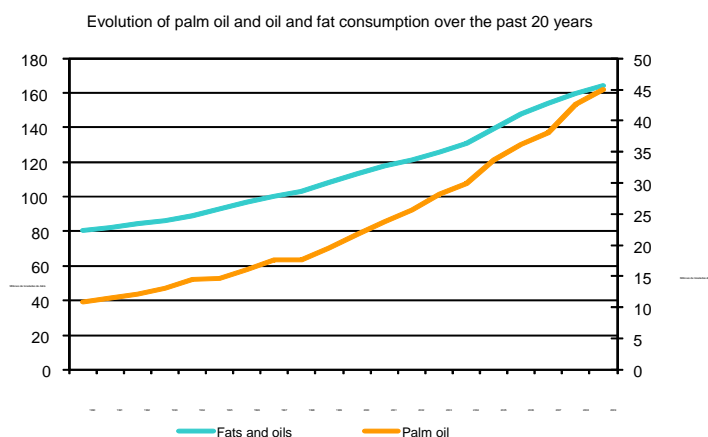
4. Evaluation of existing criteria for the establishment of work priorities

The following are the criteria defined in the Codex Alimentarius Commission's Procedures Manual, 19th edition (2010), page 33, on the establishment of work priorities.

- a) Volume of production and consumption in individual countries and trade relations between countries

Oils and Fats Market

Global oil and fat consumption has grown at an average pace of 3.8% per year in the last 20 years. Its primary use has been in the food industry, and in the last decade bio-fuels consumption has come in second place.



World production of the 17 main fats and oils¹ totaled 164.8 million tons in 2010, equivalent to a 1.2% increase compared to 2009. Palm and palm kernel, soybean, sunflower seed and rapeseed are the most produced types, with market shares of 31, 22, 13 and 8%, respectively².

In the above context, global production of palm oil has a prominent role, with production of 45.3 million tons in 2009, which represents growth of 4.6% compared to the previous year. The main producing countries are Indonesia, with a 46% share, Malaysia with 39% and Colombia, with production of 802,000 tons, making it the fifth producer worldwide and the first in the Americas³.

Information on the species

There are two species of the *Elaeis* genus of importance in the global oil palm industry: *Elaeis guineensis*, which originated in central and western Africa, and *Elaeis oleifera*, which is originally from South and Central America.

Since the 1970s, several countries have developed hybrids between the American oil palm *Elaeis oleifera* and the African oil palm *Elaeis guineensis*. The result of the crossing is an interspecific hybrid called OxG. There are germplasm banks of this material available in different regions of the planet. For over 40 years, seeds from these materials have been produced in Colombia and Ecuador, and commercial plantations of these OxG hybrids have

¹ Fats and oils: Palm, soybean, rapeseed, sunflower seed, fat and lard, cottonseed, palm kernel, peanut, coconut, olive, maize and other oils.

² Source: Oil World 2010.

³ Source: Fedepalma Statistical Yearbook 2010

been in place for over 10 years.

The characteristics of this new material include:

- High resistance to diseases and pests that commonly affect *E. guineensis* of African origin, such as the bud rot disease (BRD) in Colombia and yellowing disease in Brazil.
- The oil extracted from the fruit features a high content of unsaturated fatty acids: oleic values above 50%, linoleic values above 12%, and iodine content above 60%, which increases the fluidity of the oil and facilitates its use in the food processing industry and home cooking.
- The oil has high carotene content, greater than 1600 ppm, as well as over 1700 ppm of tocopherols and tocotrienols.

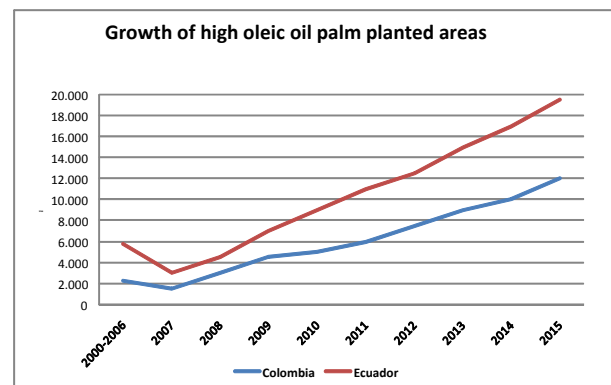
Even though several countries have other interspecific hybrid materials, in 2009 Ecuador and Colombia agreed to denominate the oil extracted from the fruits of the interespecific OxG hybrid as “, High Oleic Palm Oil”.

Currently, this OXG hybrid material is an excellent alternative compared to *Elaeis guineensis* for oil palm growers affected by a disease called Bud Rot Disease (BRD), given that it has mitigated the impact of BRD in oil palm plantations in Colombia and Ecuador.

b) Perspectives of the production and market international or regional

Currently there are approximately 15,000 ha of the OxG hybrid material planted in Colombia and, 9000 in Ecuador, and over the next four years an additional 25,000 ha of OxG hybrid material are expected to be planted in the area of Tumaco and Puerto Wilches, both in Colombia. Another 15,000 hectares are in the process of being planted in San Lorenzo-Ecuador. This increase in planted area is part of the defined action steps to recover this part of the impact of bud rot disease. There are also reports of some small trial areas that have already

been planted with the OxG material in Malaysia.



This growth in planted areas represents greater availability of High Oleic Palm Oil in the world market. By 2015 in Latin America alone production is expected to reach 210,000 tons/year, of which 170,000 tons/year will be available for export.

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

Today for these products there are two standards:

Andean Standard NA 0073:2009, High oleic palm oil (OxG). Requirements. This standard establishes the requirements that high oleic edible oil palm (OxG) made from hybrid palms (*Elaeis oleifera* x *Elaeis guineensis*) must meet. This Andean standard applies to high oleic edible palm oil (OxG) RDB: red and de-colored. It does not apply to crude palm oil or to the olein and stearin derived from the oil of this hybrid palm (*Elaeis oleifera* x *Elaeis guineensis*).

Colombian Technical Standard NTC 5713:2009, High Oleic Palm Oil OxG (*Elaeis guineensis* x *Elaeis oleifera*). Requirements. This standard establishes the requirements that high oleic edible oil palm (OxG) made from hybrid palms (*Elaeis oleifera* x *Elaeis guineensis*) must meet. It applies to high oleic edible palm oil, red or de-colored. It does not apply to crude high oleic palm oil OxG (*Elaeis oleifera* x *Elaeis guineensis*), or to the olein and stearin derived from this oil.

d) Amenability to product standardization.

High Oleic Palm Oil is a product amenable to standardization by the CCFO.

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

The addition of High Oleic Palm Oil to Codex Stan 210 – on Vegetable Oils to include essential factors related to composition, health and quality would enable the standardization of oils of this type and contribute to consumer protection.

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

None known to date

5. RELEVANCE REGARDING THE STRATEGIC OBJECTIVES OF THE CODEX

The addition of the standard is in response to the strategic objective of the Codex aimed at promoting the maximum application of standards with the intention of strengthening the internal rules of countries and thereby facilitating international trade. The inclusion of this product in the current standard will also help reduce risks associated with the transmission of agents that may have a negative impact on consumer health and the environment.

6. Availability of expert international scientific advisors if required

The proposal of an addition to Codex Stan 210 uses as reference the information developed by the research group working at the national level in Colombia-Cenipalma on the characterization of edible oils and fats. The Standardization Institute of Ecuador (INEN) also participated in the characterization of this type of oil. Therefore, in the event additional information is required on this project, it is possible to contact this group of experts.

7. Identification of any need for technical contributions to the standard from outside organizations, so these contributions may be programmed

None

8. Proposed timetable for the development of new projects, including the starting date, the proposed date of adoption in step 5 and the proposed date for adoption by the Commission

PROCEDURE	DATE
Distribution of a proposed developed by a working group in step 3	2011
Proposed date for adoption in step 5	2013
Commission approval	2014

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