CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - Fax: (+39) 06 5705 4593 - E-mail: codex@fao.org - www.codexalimentarius.org

Agenda Item 8 **CX/FO 13/23/8**

JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON FATS AND OILS
Twenty-third Session
Langkawi, Malaysia, 25 February – 1 March 2013

DISCUSSION PAPER ON THE AMENDMENT OF THE STANDARD FOR NAMED VEGETABLE OILS FOR THE ADDITION OF PALM OIL WITH HIGH OLEIC ACID OXG

PROJECT DOCUMENT
REVIEW OF THE CODEX STAN 210 STANDARD FOR VEGETABLE OILS, FOR THE ADDITION TO PALM OIL HIGH OLEIC ACID (OXG)
(Prepared by Colombia)

This document has been prepared according to the Codex Alimentarius commission Procedural Manual 19th Edition 2010 Section II, Procedures for the elaboration of codex standard an relates texts, part 2 "Critical review, proposal to undertake new work or to revise a standard.

1. Purpose and scope of the standard

The objective of this application is to include Palm Oil High Oleic Acid (OXG) (*Elaeis oleifera x Elaeis quineensis*) to be marketed in edible form, to industries and consumers in 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 to the establishment of standards and to the monitoring of 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 timeliness

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 improve 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 OxG 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 Palm Oil High Oleic Acid (OXG).

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 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 "Palm Oil High Oleic Acid".

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.

Genebanks Elaeis Oleifera and production of hybrids OxG in the world

There are important collections of E.oleífera and improvement programs at obtaining and commercial production of hybrid seeds for Guineensis Oleifera, mainly in Colombia

- Cenipalma: over 120 accessions of various origins and development of hybrid experimental OxG, is located in the Experimental Palmar of The Biscayne, in Barrancabermeja, Santander
- Indupalma: with Garden a material Coari based; Jenaro Herrera and Sinu with commercial production of hybrids OxG
- Hacienda La Cabaña: with a Garden based on material Coari and other sources who produce commercial hybrid OxG
- Unipalma: Germplasm with Oleifera hybrids OxG in trials.
- ICA - Corpoica has a Germplasm Bank oleifera, collected in the 70's and experimental production of hybrids OxG.

Other Countries

- Brazil (EMBRAPA- Urubu River Experimental Station) with 223 accessions or genetic material, collected in five regions of the Brazilian Amazon (Barcelos, 1986) and more than 140 crosses OxG.
- ASD de Costa Rica with oleifera germplasm banks and commercial production of compacts clones with based to OxG hybrid crossed to guineensis.

- MPOB Malaysia, with 167 accessions in a gene bank of E. Oleifera collected in Central and South America (Rajanaidu, 1994) and United Plantation in genebanks and experimental production of inter-specific hybrids OxG.
- French agency CIRAD research developed inter-specific hybrids OxG in their stations in Africa.
- Ecuador: no information available

Characterization of Elaeis oleifera and Elaeis oleifera interspecific hybrid by Elaeis guineensis.

Metabolites and fatty acid composition in oil

In the contents of carotenoids, tocotrienols, tocopherols and iodine values, we found a significant variation contained very high, indicating that it is an important source for the improvement of these characteristics in the production of interspecific hybrids. The contents of carotenoids for some accessions of the samples were exceptionally high with content 4 times more than most commercial and doubling the carotene content of the E. oleifera. Table 1.

Table 1. Characteristics variation of seven populations of the collection of E. oleifera in the Amazonian Trapezium regarding the interspecific hybrids and hybrid Tenera Shack commercial. Cenipalma 2002

Characteristics	**E. oleífera**	**Híbrido *OxG* La Cabaña**	***E. guineensis* (Tenera)**
Total carotenoids, (ppm)	1880 - 6527	3398	721 - 160
Total Vitamin E (ppm)	519 - 1140	1338	479 – 1003
Iodine value (calculate)	76.4 – 84.5	71.3	53.3 – 58.4
Unsaturated fatty acids, (%)	68 – 74	64	49 - 53
Refractive Index 40 °C	1.4614 – 1.4669	1.4620	1.4595 – 1.4597
Melting point, °C	-	14.9	33.5 – 38.2

The fatty acid profile shows highly significant differences between genetic material oleiferas pure, OxG inter-specific hybrids and African materials, mainly in the percentages of oleic, palmitic, of saturated fats, monounsaturated and polyunsaturated fats, in the value Iodine and the content of carotenes.

Table 2. Overviews of the characterization of oils in oil-bearing inter-specific hybrids

	Oleífera pure		OxG		Retrocruzamiento (OxG)G	
Fatty acids	**Medium**	**Rank**	**Medium**	**Rank**	**Medium**	**Rank**
C12:0	0,07	0,05 – 1			0,09	0 - 0,10
C14:0	0,2	0,05 – 1	0,54	0,31 - 0,78	0,71	0,4 - 1,1
C16:0	21	0,1 - 34,2	32,5	27,3 - 35,1	32,2	27,7 - 36,9
C16:1	1,1	0,1 – 3,8			0,22	0,2 - 0,3
C18:0	1,8	0,25 - 4,2	2,52	2 - 3,3	5,61	3,3 - 9,9
C18:1	62	46,5 - 78,8	49,6	44,4 - 56,6	44,9	38,7 - 54,9
C18:2	15	1,4 – 34	13,15	10,5 - 15,1	15,3	10,6 - 22,1
C18:3	0,75	0,05 – 6,65			0,4	0,3 - 0,5
C20:0	0,25	0,04 – 2,33			0,3	0,2 - 0,4
Iodine value	80	59,2 – 103,6	65,33	57,8 - 70,7	66,5	55,7 - 72,6
Carotenes (ppm)	2200	312 - 3377		1250-1450	859	324 – 1989

3. Main aspects that should be covered

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

- Establishment of general requirements for Palm Oil High Oleic Acid (OXG).
- Establishment of specific requirements for Palm Oil High Oleic Acid (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

Table 3 Supply and global apparent consumption of palm oil (thousands of tons)

País / Country	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Var. 09/10 % *Growth rate***
I. Producción / *Production*	28.256	30.983	33.836	37.415	39.103	43.572	45.269	45.873	*1,3*
Indonesia	10.600	12.380	14.100	16.050	17.420	19.400	21.000	22.200	*5,7*
Malasia / Malaysia	13.354	13.974	14.961	15.881	15.823	17.735	17.566	16.993	*-3,3*
Tailandia /	690	735	700	860	1.050	1.300	1.310	1.340	*2,3*

Thailand									
Nigeria	785	790	800	815	825	840	870	885	*1,7*
Colombia*	525	630	660	714	733	778	802	753	*-6,1*
Ecuador	262	279	319	352	396	410	429	360	*-16,1*
Otros / *Others*	2.040	2.195	2.295	2.743	2.856	3.109	3.292	3.342	*1,5*
II. Importaciones / *Imports*	21.893	23.972	26.623	29.342	29.267	33.916	36.335	37.137	*2,2*
India	3.979	3.453	3.315	3.198	3.688	5.753	6.828	6.649	*-2,6*
Unión Europea / European Union	3.629	4.018	4.489	4.621	4.647	5.289	5.854	5.857	*0,1*
China	3.353	3.851	4.320	5.462	5.499	5.593	6.558	5.804	*-11,5*
Paquistán / Pakistan	1.487	1.432	1.646	1.768	1.731	1.847	1.925	2.010	*4,4*
Estados Unidos / United States	200	271	420	630	788	997	979	948	*-3,2*
Egipto	678	702	774	770	590	630	710	800	*12,7*
Irán	286	329	451	367	440	665	561	615	*9,6*
Japón / Japan	428	466	479	499	532	546	551	569	*3,3*
Otros / *Others*	7.853	9.451	10.729	12.027	11.352	12.596	12.369	13.885	*12,3*
III. Exportaciones / ***Exports***	21.849	24.240	26.492	29.941	29.782	33.695	36.206	36.508	*0,8*
Malasia / Malaysia	12.216	12.582	13.439	14.423	13.747	15.413	15.881	16.664	*4,9*
Indonesia	7.370	8.996	10.436	12.540	12.650	14.612	13.938	16.450	*18*
Papúa Nueva Guinea	327	339	295	362	368	446	470	500	*6,4*
Emiratos arabes	0	0	0	315	358	361	250	350	*40*
Colombia**	100	200	210	184	275	237	181	59	*-67,2*
Otros / *Others*	1.836	2.123	2.112	2.117	2.384	2.626	5.486	2.485	*-54,7*
IV. Oferta disponible (I+II-III) / *Available Supply*	28.300	30.715	33.967	36.816	38.588	43.793	45.398	46.502	*2,4*
V. Cambio en inventarios / *Change in stocks*	114	747	559	691	705	1.308	2.760	3.718	
VI. Consumo aparente (IV-V) / *Disappearance*	28.186	29.969	33.408	36.125	37.882	42.485	42.638	42.784	*0,3*
India	4.151	3.396	3.309	3.075	3.839	5.378	6.789	6.714	*-1,1*
China	3.283	3.681	4.340	5.450	5.488	5.661	6.227	5.903	*-5,2*
Unión Europea / European Union	3.570	3.893	4.385	4.447	4.477	5.059	5.661	5.734	*1,3*

Indonesia	3.170	3.347	3.546	3.711	4.065	4.462	4.831	5.459	*13*
Malasia / Malaysia	1.568	1.782	1.965	2.157	2.168	2.571	2.364	2.065	*-12,6*
Paquistán / Pakistan	1.349	1.342	1.546	1.602	1.643	1.866	1.673	1.895	*13,3*
Nigeria	985	995	1.010	1.026	1.360	1.495	1.570	1.665	*6,1*
C.E.I./ C.I.S.	0	0	0	775	833	984	786	823	*4,7*
Otros / *Others*	10.111	11.534	13.308	13.883	14.009	15.009	12.737	12.526	*-1,7*
Participación del aceite de palma en la oferta disponible de los 17 principales aceites y grasas / *Palm Oil Share to World Supply of the 17 Main Oils and Fats*	22,5	23,3	24,1	24,7	25,1	27,2	27,5	27,0	

Fuentes / *Sources:* Oil World Annual 2011, *Fedepalma

Table 4. Area in oil palm production in the world (in thousands of hectares)

País / *Country*	2003	2004	2005	2006	2007	2008	2009	2010	Part. 2010 (%)
Indonesia	3.030	3.320	3.690	4.110	4.540	4.980	5.370	5.740	*44,8*
Malasia / Malaysia	3.260	3.402	3.552	3.678	3.741	3.900	4.010	4.130	*32,2*
Tailandia / Thailand	276	298	316	340	410	470	545	590	*4,6*
Nigeria	364	367	370	378	390	405	418	430	*3,4*
Colombia*	147	153	164	178	200	221	236	251	*2,0*
Costa de Marfil / Ivory Coast	140	152	197	219	203	215	220	225	*1,8*
Ecuador	154	176	190	198	203	207	214	225	*1,8*
Papúa Nueva Guinea	83	85	88	96	100	117	121	135	*1,1*
Brasil / Brazil	0	0	57	61	66	73	82	74	*0,6*
Costa Rica	0	0	41	43	48	50	53	50	*0,4*
Otros	628	667	724	765	786	807	911	974	*7,6*
Total	8.081	8.620	9.389	10.066	10.687	11.445	12.180	12.824	*100*
Variación / *Growth Rate %*		*6,7*	*8,9*	*7,2*	*6,2*	*7,1*	*6,4*	*5,3*	

Fuente / *Source :* Oil World Annual 2011, *Fedepalma

Table 5. Production of agro oil palm 2006-2010 (thousands of tons)

Productos / *Products*	**Zonas / *Zones***	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Part. 2010 (%)**

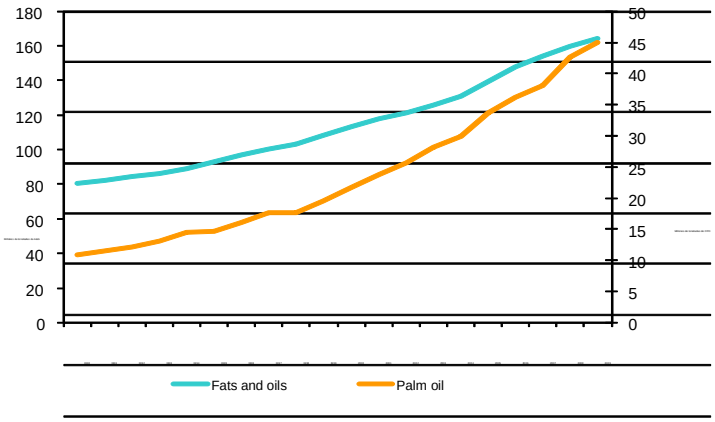
Fruto de palma de aceite 2/ *FFB of oil palm*	Oriental / *East*	928.850	889.820	801.135	1.012.617	973.437	1.057.820	1.056.170	1.106.582	1.229.938	1.167.752	*30,9*
	Norte / *North*	742.150	693.499	766.983	888.440	913.431	986.464	1.071.892	1.161.926	1.249.521	1.323.241	*35*
	Central / *Central*	625.072	627.294	631.083	781.207	871.428	982.262	1.118.123	1.296.197	1.272.310	1.229.634	*32,5*
	Sur-Occidental / *South-West*	321.187	329.090	348.247	387.213	406.020	453.366	410.106	236.212	106.913	64.159	*1,7*
	Total	2.617.259	2.539.703	2.547.449	3.069.477	3.164.317	3.479.912	3.656.290	3.800.916	3.858.681	3.784.787	*100*
Aceite de palma crudo 1/ *Crude palm oil*	Oriental / *East*	196.582	185.469	167.233	206.691	199.640	218.832	215.762	226.553	261.220	245.724	*32,6*
	Norte / *North*	150.646	139.795	158.508	183.015	193.866	203.999	221.531	243.969	252.866	249.925	*33,2*
	Central / *Central*	122.052	123.759	122.915	156.434	177.458	203.254	223.372	266.690	271.988	246.359	*32,7*
	Sur-Occidental / *South-West*	74.397	75.848	76.814	83.876	89.163	88.222	72.576	40.297	18.764	11.068	*1,5*
	Total	543.676	524.872	525.470	630.016	660.126	714.308	733.241	777.509	804.838	753.075	*100*
Almendra de palma 1/ *Palm kernel*	Oriental / *East*	41.673	39.392	35.552	46.246	46.738	51.251	49.430	52.759	56.150	52.204	*30,2*
	Norte / *North*	33.272	31.221	36.453	42.915	46.107	47.654	51.986	55.523	56.724	57.751	*33,4*
	Central / *Central*	30.349	32.058	31.709	39.132	41.223	44.354	53.087	61.387	62.471	60.376	*34,9*
	Sur-Occidental / *South-West*	13.510	13.637	15.168	17.191	18.431	18.127	15.226	9.139	3.834	2.555	*1,5*
	Total	118.805	116.308	118.883	145.484	152.499	161.386	169.729	178.808	179.179	172.886	*100*
Aceite de palmiste crudo 3/ *Crude palm*	Oriental / *East*	17.126	16.545	14.896	19.176	19.645	21.375	19.892	21.369	21.831	19.828	*30,2*
	Norte / *North*	13.674	13.113	15.274	17.794	19.380	19.875	20.921	22.488	22.054	21.935	*33,4*
	Central / *Central*	12.473	13.464	13.286	16.226	17.327	18.499	21.364	24.863	24.289	22.932	*34,9*

kernel oil	Sur-Occidental / *South-West*	5.552	5.727	6.355	7.128	7.747	7.560	6.127	3.701	1.491	971	*1,5*
	Total	48.825	48.849	49.812	60.323	64.100	67.309	68.304	72.421	69.665	65.667	*100*
Torta de palmiste 4/ *Palm kernel meal*	Oriental / *East*	23.375	20.327	19.589	25.656	26.695	28.464	26.989	28.731	31.129	30.069	*30,2*
	Norte / *North*	18.663	16.110	20.086	23.808	26.334	26.467	28.385	30.237	31.447	33.264	*33,4*
	Central / *Central*	17.023	16.542	17.472	21.709	23.545	24.634	28.986	33.430	34.634	34.776	*34,9*
	Sur-Occidental / *South-West*	7.578	7.036	8.358	9.537	10.527	10.067	8.314	4.977	2.126	1.472	*1,5*
	Total	66.638	60.015	65.504	80.710	87.101	89.633	92.674	97.375	99.335	99.580	*100*

Fuente / *Source:* Oil World Annual 2011, Fedepalma

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.

Figure 1 Trends in the consumption of oils and fats and palm oil (percentaje) in the last 20 years



Fuente:, Fedepalma 2012

World production of the 17 main fats and oils[1] 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%, respectively[2].

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 Americas[3].

Colombia is ranked 5, both in world production of palm oil as the area under this crop, in both cases involved less than 2%. The major producers are Indonesia, Malaysia and Thailand, which account for 81.7% of world production. Similarly, the area planted with oil palm in Malaysia and Indonesia represents almost 80% of the world.

Table 6. Area in Palm Oil Production in the World (Thousands of hectares)

País / *Country*	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Part. 2010 (%)**
Indonesia	3.030	3.320	3.690	4.110	4.540	4.980	5.370	5.740	*44,8*
Malasia / Malaysia	3.260	3.402	3.552	3.678	3.741	3.900	4.010	4.130	*32,2*
Tailandia / Thailand	276	298	316	340	410	470	545	590	*4,6*
Nigeria	364	367	370	378	390	405	418	430	*3,4*
Colombia*	147	153	164	178	200	221	236	251	*2*
Costa de Marfil / Ivory Coast	140	152	197	219	203	215	220	225	*1,8*
Ecuador	154	176	190	198	203	207	214	225	*1,8*
Papúa Nueva Guinea	83	85	88	96	100	117	121	135	*1,1*
Brasil / Brazil	0	0	57	61	66	73	82	74	*0,6*
Costa Rica	0	0	41	43	48	50	53	50	*0,4*
Otros	628	667	724	765	786	807	911	974	*7,6*
Total	8.081	8.620	9.389	10.066	10.687	11.445	12.180	12.824	*100*
Variación / *Growth Rate %*		*6,7*	*8,9*	*7,2*	*6,2*	*7,1*	*6,4*	*5,3*	

Fuente / Source: Oil World Annual 2011, *Fedepalma

[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

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

Today for these products there are two standards:

Norma técnica Andina 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*).**

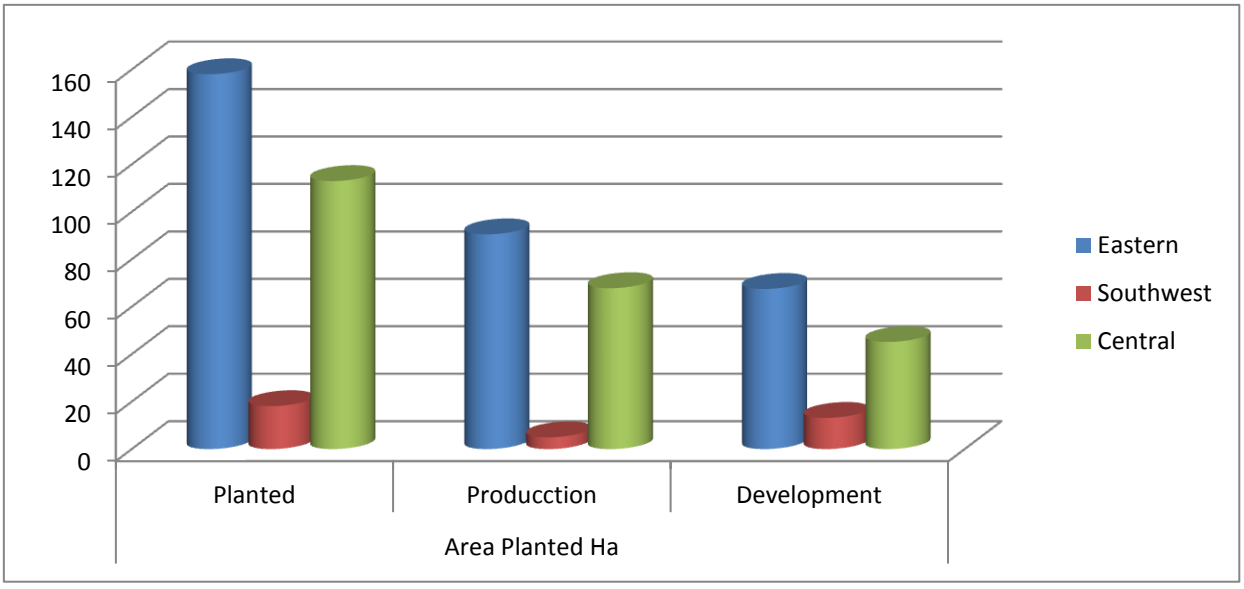
Norma Técnica Colombiana NTC 5713:2009, High Oleic Palm Oil OxG (*Elaeis guinensis x Elaeis oleifera*). Requirements. This standard establishes the requirements that high oleic edible oil palm (OxG) made from hybrid palms (*Elaeis oleifera x Elaeis guineensis*) must meet. It applies to high oleic edible 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.

Resolución 5124 de 2012 de Ministerio de Salud y Protección Social which establishes the technical regulations on the requirements for oils and fats of vegetable or animal that is processed, packaged, stored, including export, import and / or marketing in the country, for human consumption

c) International or regional market potential

Currently there are approximately 13.300 ha of the OxG hybrid material planted in Colombia, an over the next four years an additional 15.000 ha of OxG hybrid material are expected to be planted in the area of Tumaco - 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

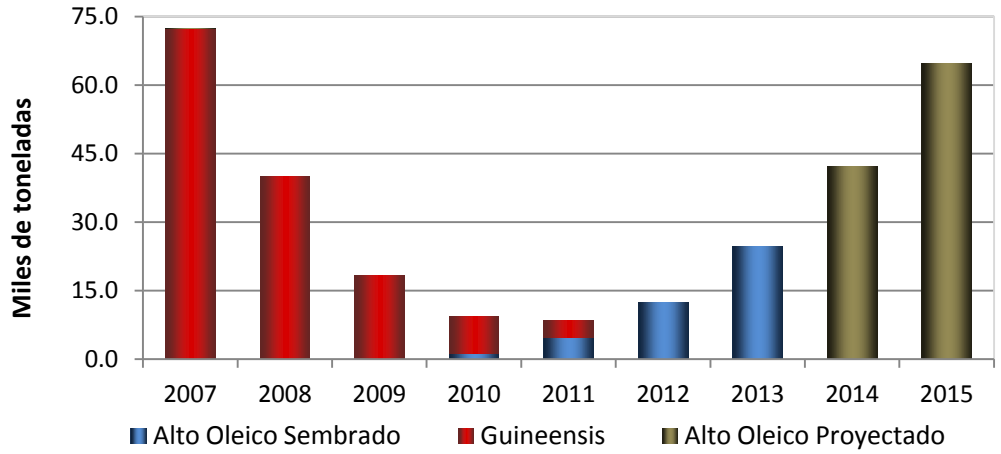
Figure 2. Distribution of area planted in oil palm areas (hectares)- Colombia



Annual renewals with high oleic material (ha) in Colombia						
2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
1.092	2.775	3.283	4.515	5.820	5.820	2.000
Age yields (ton FFB * / ha) in Colombia						
Edad	**3**	**4**	**5**	**6**	**7**	**8**
Ton/ha	4,5	12,0	18,0	22,0	25,0	28,0

*** RFF: fresh fruit bunches**

Grafica 3. Proyección de la producción de aceite de las áreas cultivadas con palma OXG en Colombia



This growth in planted areas represents greater availability of palm oil high oleic acid 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.

ZONE	**PLANTED AREA Ha 2011**	**Area in Production Ton/Ha/año 2012**	**PROJECTED AREA IN RENEWAL 2014**
CENTRAL	**3214**		**2400**
NORTH	**35**	**52**	
WEST	**12714**		**8673**
EAST	**8911**		

Fuente / Source: Fedepalma

d) Feasibility to product standardization.

Palm Oil High Oleic Acid 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 Palm Oil High Oleic Acid 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) Number of commodities which would need separate standards indicating whether raw, semi processed or processed.

Just as in the Codex standard Stand 210 have been including a variety of oils such as sunflower oil high, medium and low oleic acid content, is proposing to amend the rule, this time for the case of oils from the palm, so that in the future, they have technological advances in the field of vegetable oils is feasible to update the standard, provided they comply with Codex requirements for new work.

g) 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. Information on the relation between the proposal and other existing codex documents

The Codex has been included in the framework standard oils low erucic rapeseed oil, high oleic safflower and sunflower oil, high, medium and low oleic.

7. 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.

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

None

9. 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

Calendar	MEETING	PROGRESS
February 2013	23 committee meeting of the Codex	Agrees to the purpose and scope, and seeks the approval of new work to the Codex Alimentarius Commission in its normal period of sessions
July 2013	Session of the Codex Alimentarius Commission	Approval of new work
From August 2013 to October 2014	Electronic Working Group between meetings	Review of proposed amendment to the Standard and its distribution by the Codex Secretariat at Step 3 to comments overlooking the Codex committee meeting
February 2015	Meeting of the Codex Committee on Fats and Oils	STEP project progress step by step 4 to 5 / 8
July 2015	Session of the Codex Alimentarius	Final approval of the proposed addition of high oleic palm oils at

		Step 5 / 8 or to STEP 5
February 2016	Codex Committee meeting of fats and oils	Consideration of the proposed additions and presentation of the document to the Codex Alimentarius Commission for adoption at Step 8
July 2016	Session of the Codex Alimentarius	Final approval of the proposed addition

10. Bibliography

Barcélos, E. 1.986. Características genético-ecológicas de poblaciones naturales de Caiaué (Elaeis oleifera (H.B.K.) Cortes) en la amazonia Brasilera. 108p. Tesis de Maestría. Instituto Nacional de Investigación de la Amazonía.

Meunier, J. 1.991. Una posible solución genética para el control de la pudrición de cogollo en la Palma Aceitera: Híbrido interespecífico Elaeis oleífera x Elaeis guineensis. Revista Palmas, Vol. 12 N°2.

Mohd Din A and Rajanaidu, N. Evaluation of *E. oleifera*, Interspecific Hybrids and Backcrosses. 2.000. Proceedings of the International Symposium on Oil Palm Genetic Resources and Their Utilization. MPOB. P 114- 141.

Rajanaidu, N. 1.994. PORIM Oil Palm Genebank. Collection, Evaluation, Utilization and Conservation of oil palm genetic resources. Malaysia. 19p.

Rajanaidu, N; Kusahiri,A; Rafii,MY; Moh Din A;Maizura,I; Isa, ZA and Jalani, BS. Oil Palm Genetic Resources and Utilization A Review. 2.000. Proceedings of the International Symposium on Oil Palm Genetic Resources and their Utilization. MPOB. P 33-80.

Rey, L.; Ayala I.; Delgado, W.; Rocha, P.; 2.003. Colecta de material genètico de Palma Amèricana Noli Elaeis oleifera (H.B.K.) Cortez en el Trapecio Amazonico. Ceniavance Nº 101.4p.

Rey, L.; Gómez, P.L; Ayala, I.; Delgado, W.; Rocha, P. 2004. Colecciones geneticas de palma de aceite *Elaeis guineensis* (Jacq) y *Elaeis oleifera* (H.B.K.) de Cenipalma:características de importancia para el sector palmicultor.Revista Palmas Vol 25-2 p 39-48.

Rey L.; Ayala I.; Ruiz,R: Gómez,P.l (2003). Selección palmas tipo dura en plantaciones comerciales de Colombia. Congreso Nacional de la Asociación de Fitomejoramiento y Producción de cultivos. Bogotá.

Rey L.; Ayala I.; Ruiz,R: Gómez,P.l (2.003) Evaluación y selección de materiales dura en plantaciones comerciales de palma de aceite E*laeis guineensis* jack. Conferencia Internacional Palma de Aceite. Cartagena.2003.

Rey, L.; Gômez, P.; Cardoso, C.; Rajanaidu, N. 2.002. Colecta material genetico de *Elaeis guineensis* Jacq en la Republica de Angola. Informe Interno Cenipalma-Inca. 6p.

Sharma,M. Exploitation of Elaeis oleifera germplasm in improving the quality of oil palm. 2000. Proceedings of the International Symposium on Oil Palm Genetic Resources and Their Utilization. MPOB. P 322- 340.

Torres.V.M.; Rey, L.; Gelves, F., Santacruz, L. 2004 Evaluación del comportamiento de los híbridos Elaeis oleífera x Elaeis guineensis en la plantación Guaicaramo en la zona oriental de Colombia. Revista Palmas Vol 25-2.

Amblard, P.; Billote, N.; Cochard, B.; Durand-Gasselin, T.; Jacquemard, J.C.; Louise, C.; Nouy, B.; Potier, F. 2004. El mejoramiento de la palma de aceite Elaeis guineensis y Elaeis oleifera por el Cirad –CP. Revista Palmas Vol 25 No. Especial.