

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of
the United Nations



World Health
Organization

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Agenda Item 5

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

Twenty-second Session
Penang, Malaysia, 21-25 February 2011

PROPOSED DRAFT AMENDMENT TO THE STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS: LINOLENIC ACID LEVEL

COMMENTS AT STEP 3

ARGENTINA

Argentina appreciates the opportunity to provide comments on this matter of concern for both the production and governmental sectors.

Our country has recently become a member of the International Olive Oil Council, driven, among other reasons, by the need to show, through all the composition studies that are conducted, that Argentine olive oils are authentic, even when certain parameters do not observe the present IOC standard, which was basically established based on the characteristics of Mediterranean olive oils.

Argentina's exponential growth of olive production is recent. Most plantations are from the 90s. However, through monitoring and studies being conducted, it can be seen that in some cases the fatty acid profile of certain varieties in different agro-climatic conditions does not meet the parameters established by the IOC even when the oils are authentic.

The IOC has invited all producing countries to submit information on oils not meeting the parameters in the standard to find a solution to incorporate these traits, while ensuring oil authenticity. Argentina trusts that IOC expert meetings will find a solution so that all genuine oils may be included without discrimination in its standards.

In view of the above, considering that several items of work will be undertaken at the IOC throughout 2010, Argentina reserves its position on this document until the next session of the Codex Committee on Fats and Oils, due to be held in February 2011, trusting that an appropriate solution will be found at the IOC to prevent fraud without discrimination of authentic oils and thus progress negotiations on the Codex standard.

AUSTRALIA

General Comments

Australia believes that if the *Codex Standard for Olive Oils and Olive Pomace Oils* (CXS 33-1981) is to be truly representative of global olive oil production, then it must allow for international compositional variance.

Australia understands that the purpose of a footnote to a proposed level of 1.0% for linolenic acid in the *Codex Standard for Olive Oils and Olive Pomace Oils* is to recognise that authentic virgin olive oils produced around the world regularly exceed this limit which, therefore, has the potential to establish a technical barrier to trade for several countries, as was demonstrated in the results of the International Olive Council (IOC) survey presented at the 20th Session of the Codex Committee on Fats and Oils (CCFO, 2007).

Australia submitted data to the IOC survey that showed that a significant proportion of Australian olive oil samples do not meet the 1.0% limit for linolenic acid. Furthermore, data in the literature and in the IOC survey results suggest that a proportion of olive oil production in many other countries including member countries of the EC, the largest producer and exporter, is consistently above the 1% level for linolenic acid.

Australia acknowledges that compositional limits established in the Codex standard are important in ensuring authenticity of product entering international trade. Australia recognises that the linolenic acid level is one parameter that can be considered in assessing authenticity. Australia therefore supports the proposal to incorporate a footnote allowing trade in oils exceeding the 1.0% limit where other parameters indicate oil integrity. Australia's approach seeks to ensure that the proposed footnote enables trade in such oils while also ensuring fair practices in trade.

Specific Comments

Support for the 2nd version of the footnote

Australia supports the second footnote:

"It is recognized that authentic virgin olive oils may exceed the level for linolenic acid (C18:3) due to climatic, geographic and varietal influences. Virgin olive oil that exceeds the limit for linolenic acid, up to a maximum of 1.2%, are considered to be in compliance with the Standard if stigmastadiene $\leq 0.05\text{mg/kg}$ and $\Delta\text{ECN}42 \leq 0.1$."

This version of the footnote, proposed by Australia during the 21st session of the CCFO (2009), represents a significant compromise from our preferred position, advocated since 18CCFO (2003), of retaining the 1.5% level for linolenic acid that was allowed in the standard prior to its most recent revision. It represents a balance between the Codex strategic goal of developing standards that

"reflect global variations and focus on essential characteristics so as to avoid being overly prescriptive and not more trade restrictive than necessary, while respecting the basic objectives of the CAC, taking into consideration the technical and economic implications for all members".¹

and the basic Codex objective of protecting consumers from fraudulent trade practices.

Problems with the 1st version of the footnote

Australia believes that the first version of the footnote does not adequately address the trade - restrictive nature of the proposed 1.0% limit for linolenic acid in the standard. The derogation proposed for oils up to 1.1% linolenic acid does not reflect global variability in this compositional parameter, and the consequential tighter limit of 3.5% proposed for campesterol effectively eliminates the small trade-enabling effect of the slight relaxation of the limit for linolenic acid.

Upper Limit for Linolenic Acid in Proposed Footnote:

Australia considers that the proposal to allow virgin olive oil to "exceed the level for linolenic acid (C18:3) up to [1.1%]" is unacceptable as these levels still do not reflect the natural variation in oils in world trade. The 2002-2006 Australian data submitted to the IOC survey showed that up to 4% of authentic Australian olive oils naturally exceed 1.1%. Other countries reported up to 27% of oils exceeded the 1.0% level for this component.

Failure of the Codex standard to acknowledge this variation will result in an unjustifiable technical barrier to trade being established which could significantly affect Australia's and other countries' growing exports in authentic olive oil. Australia therefore considers that an upper limit of 1.2% is more acceptable.

Upper Limit for Campesterol in Proposed Footnote:

Australia has serious concerns regarding the proposed maximum level for campesterol in the first footnote. Australia believes that an upper limit of 3.5% of total sterols for campesterol is unrealistic and will constitute a technical barrier to trade. Data from 1,751 virgin olive oils tested in Australia show that there is no significant difference between campesterol levels for oils with linolenic acid levels either above or below 1%.

Campesterol levels are consistently high in a significant proportion of authentic Australian olive oils. For example, an analysis of campesterol levels in Australian olive oils produced during the 2004 season showed campesterol levels ranging from 3.27% to 5.49%. The campesterol levels in 71.4% of these samples exceeded 3.5% and 40% of samples exceeded 4.0%.

¹ Codex Strategic Plan 2008-2013

As with linolenic acid, these variances are mainly attributable to olive variety, although geo/climatic conditions also play a role. A significant proportion of Australia's oil production uses *Barnea* and *Koroneiki* olive varieties, which have naturally occurring high campesterol levels. Tests have shown that these varieties have average campesterol levels of 4.5% and 4.0% respectively².

High campesterol levels are not limited to Australia. Data available in the scientific literature reveal that authentic oils produced from the Cornicabra olive variety, which accounts for more than 14% of total Spanish production, routinely exceed 4.5% campesterol^{3,4}. Similar situations also exist in particular varieties grown in Argentina and Israel.

Australia questions the justification for using a maximum campesterol level of 3.5% as a means of ensuring authenticity of oils with linolenic acid levels above 1.0%, given the demonstrated incidence, as noted above, of naturally occurring high campesterol levels in a number of varieties of olives. Australia considers that setting a limit of 3.5% in the footnote would inhibit free trade in authentic olive oil products and thus would be counter to Codex General Principles that

*"...the Codex Alimentarius is intended to guide and promote the elaboration and establishment of definitions and requirements for foods to assist in their harmonisation and in doing so to facilitate international trade."*⁵.

For the reasons stated above, Australia does not support the first footnote in the proposed draft amendment. Australia believes that should this footnote be adopted, the *Standard for Olive Oils and Olive Pomace Oils* will not be sufficiently flexible to account for well-documented, consistent, natural variations in the minor components of olive oils. The second footnote allows a little more flexibility, and presents less barriers to global trade in authentic olive oils.

BRAZIL

Brazil does not agree with the proposed footnotes considering that no scientific justification was presented to support the levels of stigmastadiene, ΔECN42 and campesterol lower than that of the current olive oil standard.

INTERNATIONAL OLIVE COUNCIL (IOC)

Report of the IOC Executive Secretariat

The International Olive Council (IOC) gave an undertaking to its Council of Members to conduct a survey of olive oil producing countries in order to gain a greater insight into the chemical composition of genuine oils obtained from various varieties.

It is a known fact that numerous factors can lead to variations in the composition of vegetable oils, particularly olive oil. Virgin olive oils are particularly sensitive to the following factors: variety, climatic conditions (temperature and rainfall), soil and geographical conditions (soil type, altitude, latitude), cultural practices (irrigation, fertilisation, phytosanitary treatment), degree of fruit ripeness at harvest and method of oil production.

The international identity standards for virgin olive oils, specifically the Codex Alimentarius standard and the IOC trade standard, have to take into account the realities of world production while

² The natural chemistry of Australian extra virgin olive oil. Mailer RJ. Rural Industries and Research Development Corporation. 2007.

³ Cornicabra virgin olive oil: a study of five crop seasons. Composition, quality and oxidative stability. Salvador M.D.; Aranda F.; Gómez-Alonso S.; Fregapane, G. : [Food Chemistry](#), August 2001, vol. 74, no. 3, pp. 267-274

⁴ Sterol and alcohol composition of Cornicabra virgin olive oil: the campesterol content exceeds the upper limit of 4% established by EU regulations. Rivera del Alamo R.M.; Fregapane G.; Aranda F.; Gomez-Alonso S.; Salvador M.D.1 : [Food Chemistry](#), March 2004, vol. 84, no. 4, pp. 533-537

⁵ General Principles of the Codex Alimentarius Commission, Purpose of the Codex Alimentarius – 16th edition, Codex Procedural Manual, page 30

disregarding accidental peculiarities and volumes of production representing an insignificant share of inter-country trading.

However, true to its objectives and long-standing work to improve the quality and authenticity of olive oils and table olives, to combat fraud and protect consumers and to safeguard trade, the IOC decided to broach the issue of compositional variation identified by some countries.

The purpose of the survey conducted by the IOC Executive Secretariat is to ascertain the composition of the genuine virgin olive oils produced in the world that record anomalous parameters, with a view to determining the realities of world production and possible exceptions to the established standards.

The pertinent working group held its first meeting in November 2008. At the beginning of 2009 the IOC Executive Secretariat sent information about the survey under cover of a Note Verbale addressed to the competent authorities of the olive oil producing countries which were requested to indicate whether they were interested in participating in the survey and to identify potential oils with anomalous parameters.

The Note Verbale was sent to the following countries:

IOC MEMBER PRODUCING COUNTRIES

Albania, Algeria, Argentina, Croatia, Egypt, European Union (Cyprus, France, Greece, Italy, Malta, Portugal, Slovenia, Spain), Iran, Iraq, Israel, Jordan, Lebanon, Libya, Morocco, Montenegro, Serbia, Syria, Tunisia, Turkey

NON-IOC MEMBER PRODUCING COUNTRIES

Australia, Brazil, Chile, Mexico, New Zealand, Palestine, Peru, Saudi Arabia, South Africa, United States

A reply with the requested data was received from no more than seven of the countries consulted (Argentina, Cyprus, Spain, France, Greece, Morocco and Syria). Consequently, following the meeting of the working group held in November 2009 it was decided to simplify the survey protocol in order to attract a higher rate of participation.

In 2010 the producing countries received a further Note Verbale attaching a two-part questionnaire:

Part 1. Description of each olive growing area of the country

The term olive growing area was defined as a uniform producing area lying within demarcated geographical boundaries, with similar characteristics in terms of olive varieties, cultural practices, soil and climatic conditions and oil production methods. The information requested was designed to evaluate the factors that might affect the analytical composition of the olive oils produced.

Part 2. Identity and contact details of the sampling body

The particulars of the contact person were needed to facilitate the compilation of the replies and any requests for additional information.

A representative sample of the virgin olive oils produced, by olive growing area, had to be analysed to make sure the test results were representative; there was no limit as to the maximum number. To mitigate any analytical discrepancies that might arise for a variety of reasons, samples were to be tested by three IOC-recognised laboratories.

Request for samples: In addition, the competent authorities were invited to send the Executive Secretariat a minimum of three (3) samples of virgin olive oils representative of each producing area, each containing at least 250 ml. This was designed to allow better assessment of the test results and to assist those countries that were unable to supply sufficient test results for various reasons. Each sample had to be labelled, indicating the particulars of the person who performed the sampling, the source area of the oil, the variety or varieties of olives and the year produced.

The IOC Executive Secretariat received replies from 12 countries: Argentina, Australia, Cyprus, Greece, Iran, Israel, Lebanon, Morocco, Portugal, Spain, Syria and Turkey. However, only eight submitted samples; of these only three sent the samples complete with the test certificate and full sample documentation requested. Hence, 26 samples from five countries were tested.

The results obtained were then examined by the IOC restricted expert group.

State of play with regard to linolenic acid (C18:3)

Certain aspects of this parameter should be emphasised in the light of the data supplied by countries in reply to the request made by the IOC Executive Secretariat:

- Only four samples (1 from Australia and 3 from Morocco) were submitted for study of C18:3:
 - o The sample from Australia was from the *Arbequina* variety and had a linolenic acid value of 0.69 %. It was analysed by two IOC-recognised laboratories from two different countries. It should be emphasised that the *Pendolino* variety included in the survey (RIRDC Pub. No 08/167) released by Australia, which is the only variety for which the mean C18:3 values might be borderline, is a polliniser variety.
 - o One of the three samples from Morocco was of unknown origin. The other two were from the *Picholine marocaine* variety and recorded respective values of 1.14%–1.2% and 1.18%–1.2%.

CONCLUSION: After carrying out an exhaustive review of the results of the study of the composition of olive oils displaying anomalous parameters outside the established international standards, the expert group concluded that the data supplied were very sparse and did not indicate the need to raise the limit fixed for linolenic acid. The samples submitted by Australia were not sufficient to request a change of limit. Consequently, more samples will be requested for investigation. Given the existence of anomalous parameters in several countries, the most suitable answer will be found to resolve this problem through the use of decision trees or small adjustments to the limits.