CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

E

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

Agenda Item 13 **CX/FO17/25/13**

January 2017

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FATS AND OILS

25th Session

Kuala Lumpur, Malaysia, 27 February - 3 March 2017

DISCUSSION PAPER ON THE INCLUSION OF QUALITY PARAMETERS FOR CRUDE RICE BRAN OIL IN THE *STANDARD FOR NAMED VEGETABLE OILS* (CODEX STAN 210-1999)

(Prepared by India)

INTRODUCTION

The crude rice bran oil is obtained in the solvent extraction process and is subjected to either chemical refining or physical refining to meet the specifications of edible grade vegetable oil. Today when world's demand of oil is increasing, it is necessary to find out the alternate resources of oils and fats. Interest in rice bran oil (RBO) has been growing from the health and nutritional aspects as well as its wide application in industrial use. RBO in its natural state contains several constituents which would potentially provide benefits to health through components like tocopherols and tocotrienols, c-oryzanol, phytosterols, polyphenols and squalene etc. Moreover, RBO has a very good balance in its fatty acid composition i.e. mono-unsaturates to poly-unsaturates/saturates. Today India became one of the largest producer of RBO along with Thailand and Japan.

India contributes about 23% of total world production of paddy. As a manufacturer India is the largest producer of crude rice bran oil. The proposed standard will promote fair trade practices in accordance with the different international agreements.

The reason for proposing the work is to revise the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) to include a foot note to clarify that the fatty acid composition of rice bran oil in Table 1 of CODEX STAN 210 – 1999 is applicable to crude rice bran oil.

BACKROUND

In CCFO24, Melaka, Malaysia 9 - 13 February 2015, India presented CRD7, the Discussion Paper on Quality Parameters of Crude Rice Bran Oil for including in the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999).

The Delegation explained that it was not clear whether crude rice bran oil was covered under the specification for RBO in the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999). They pointed out that the values for the fatty acid composition ranges for RBO in the Standard were the same as those for crude rice bran oil and proposed adding a footnote reading: *"including crude rice bran oil"*.

Following is the fatty acid composition proposed by India in CRD7, after testing over 100 samples of crude rice bran oil.

Fatty acid	Rice bran oil including crude Rice bran oil
C6:0	ND
C8:0	ND
C10:0	ND
C12:0	ND-0.2
C14:0	ND-1.0
C16:0	14-23
C16:1	ND-0.5
C17:0	ND
C17:1	ND
C18:0	0.9-4.0
C18:1	38-48

C18:2	21-42
C18:3	0.1-2.9
C20:0	ND-1.0
C20:1	ND-0.8
C20:2	ND
C22:0	ND-1.0
C22:1	ND
C22:2	ND
C24:0	ND-0.9
C24:1	ND
C18:1t	ND
C18:2 t + C18:3 t	ND

A number of delegations supported new work, while others were of the view that a detailed description of the problem was necessary to take a decision on new work. It was also suggested to: clarify whether crude rice bran oil was as intended for direct human consumption; and examine the need to cover all crude oils in a general way in the description section of the standard.

The Committee agreed that India would prepare a discussion paper, including a project document, which clearly describes the problem together with an analysis of the implication of the suggested amendment with respect to crude bran rice oil to other parts of the standard, for consideration at its next session. The proposal should be based on the *Guideline for Application of the Criteria for the Establishment of Work Priorities Applicable to Commodities* and include information as required by CCFO when proposing the addition of new oils to the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999), as agreed by CCFO16.

The *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) provides specifications for crude vegetable oils. This can be understood from the fact that the Standard includes Table 2: Chemical and physical characteristics of crude vegetable oils; Table 3: Levels of desmethylsterols in crude vegetable oils; Table 4: Levels of tocopherols and tocotrienols in crude vegetable oils from authentic samples (mg/kg) – all of which are covering crude vegetable oils. Therefore it is clear that CODEX STAN 210 – 1999 is applicable for crude vegetable oils. Since there is lack of clarity on the validity of fatty acid composition of RBO provided in Table 1 of the standard for crude rice bran oil, India proposed to include a foot note in Table 1 ‘including rice bran oil’ to clarify that the fatty acid composition is also applicable to crude rice bran oil.

RECOMMENDATIONS

The Committee is invited to consider the proposal to revise Section 3.1, Table 1 of the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) by including a foot note to clarify that the fatty acid composition of RCO is also applicable to crude rice bran oil. The project document is attached as Appendix to this document.

APPENDIX

PROJECT DOCUMENT

Revision of the *Standard for Named Vegetable Oils* (Codex Stan 210-1999): Inclusion of Quality Parameters for Crude Rice Bran Oil

1. Purpose and scope of the proposed work.

To revise Section 3.1, Table 1 in the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) by inserting a footnote to clarify that the fatty acid composition of RBO is also applicable to crude rice bran oil, with a view to adopting appropriate measures which contribute to the facilitation of legitimate trade.

2. Relevance and timeliness

The proposed work is consistent with the mandate of the Codex Committee on Fats and Oils (CCFO): ***"To elaborate worldwide standards for fats and oils of animal, vegetable and marine origin, including margarine and olive oil"*.**

Rice bran oil obtained from rice bran, is a very healthy oil and the increasing consumer health consciousness from edible oils to reduce cholesterol levels is likely to support rice bran oil market growth up to 2023. It is globally promoted as premium product with anti-oxidant properties and is available at competitive prices in comparison to olive oil. It is also considered to have an optimal balance of MUFA and PUFA which is expected to increase shelf life than that of sunflower refined products.

Interest in rice bran oil (RBO) has been growing from the health and nutritional aspects as well as its wide application as an industrial use. RBO in its natural state contains several constituents which would potentially provide benefits to health through components like tocopherols and tocotrienols, c-oryzanol, phytosterols, polyphenols and squalene etc. Moreover, RBO has a very good balance in its fatty acid composition i.e. mono-unsaturates to poly-unsaturates/saturates.

India has a potential to produce 1.53 million tonnes of RBO. India was the highest producer of RBO with an output of 9.5 lakh tonnes in 2014-15. China was the second largest market with an estimated production of around 200 kilo tons in 2014. Japan and Thailand were the other major markets in 2014 with an estimated production of over 80 kilo tons and 50 kilo tons respectively. The production of rice bran oil is dominant in the Asian belt due to ample availability of paddy in this region.

The existing *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) constitutes a barrier to trade in crude rice bran oil for these countries because the fatty acid composition for crude rice bran oil is currently not included in the standard. Few countries like China, India, Thailand, Japan, which are the major producers of rice bran oil are unable to trade in crude rice bran oil due to the absence of clarity on the applicability of fatty acid composition for crude rice bran oil in CODEX STAN 210-1999. Considering that these standards are the international reference for the World Trade Organization (WTO), measures need to be adopted for the absence of clarity on the applicability of the fatty acid composition to crude rice bran oil not to become a technical barrier to trade. Therefore the standard requires review and revision for inclusion of foot note to clarify that the fatty acid composition in Table 1 of the *Standards for Named Vegetable Oils* (CODEX STAN 210 – 1999) is also applicable to crude rice bran oil. Moreover, the inclusion of the footnote will not have implication on the other sections of the Codex Stan 210-1999. The crude rice bran oil is already referenced in table 2, 3 & 4 of the Standard.

3. Main aspects to be covered

To include the footnote in Table1 of the *Standards for Named Vegetable Oil* (CODEX STAN 210-1999) to clarify that the fatty acid composition for RBO is applicable for crude rice bran oil also.

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

This proposal for new work is consistent with the following criteria applicable to the products:

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 fatty acid composition for crude rice bran oil has not been defined in the standard and therefore is a trade barrier for nations intending to trade in crude rice bran oil. The fatty acid composition values have no relevance to the safety of the oil and public health.

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

Global rice bran oil market size was estimated at over 1.2 million tons in 2015. Global edible oil market size was estimated more than 165 million tons in 2015. The abundant raw material availability in the form of rice particularly in Asian countries is the reason for higher production volumes of rice bran oil in these countries. Production is majorly concentrated in countries such as India, China, Japan, Thailand and Vietnam. As per the 2015-16 estimate, the production figures for rice bran oil for India was about 950,000 Tonne.

For the other countries, the production data is as follows-

China	200,000 Tonne
Japan	80,000 Tonne
Thailand	50,000 Tonne
Others	220,000 Tonne

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

Most of the national regulations do not have the regulation for the fatty acid composition of crude rice bran oil. In such a case, CODEX STAN 210 -1999 becomes the point of reference for this information. Since there is lack of clarity on the applicability of the fatty acid composition in Table 1 of CODEX STAN 210 -1999 for crude rice bran oil, it is becoming an impediment for international trade in crude rice bran oil.

c) International or regional market potential.

RBO is edible oil with multiple health benefits and needs to be promoted for its edible use. The consumption of RBO is expected to rise in the coming years, due to increasing awareness among consumers regarding its health benefits and beneficial composition. The proposed work will enable the nations like India, Thailand, Japan, China etc to trade in crude rice bran oil. Since the major production of rice bran oil is in the Asian region, the trade in crude rice bran oil will be boosted for this region with the proposed revision of the standard. It will also help other producing countries like Vietnam to be covered by the standard.

d) Amenability of the commodity to standardization.

The *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) is in force since 1999. RBO production and consumption has risen only recently with a gradually increasing demand in the globe. It is therefore required to include the fatty acid composition of crude rice bran oil in the standard to facilitate trade in crude rice bran oil and remove any trade barriers for the producing countries.

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

As discussed above it will help international Trade and RBO is Healthy oil and thus consumer will be benefited since Rice Bran oil will be available to consumers.

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

Rice bran oil producing countries are very limited and that way the standard is new for rice bran oil. India has first time taken this proposal.

5. Relevance in relation to Codex strategic objectives

The proposed amendment to the *Standard for Named Vegetable* (CODEX STAN 210-1999) by including the footnote in the section 3.1, table 1 of the Codex Stan is in line with the strategic objective to promote the maximum application of Codex Standards by countries in their national legislation and to facilitate international trade by protecting the health of the consumers. This proposal is relevant to STRATEGIC PLAN 2014-2019, Objective 1.1: Establish new and review existing Codex standards, based on priorities of the CAC.

6. Information on the relationship between the proposal and existing Codex documents

The purpose of the new work is the revision of the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999).

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

None

8. Identification of any Need for Technical Input to the Standard from External Bodies so that this can be Planned for

None identified

9. Proposed Timeline for Completion of the New Work, Including the Start Date, the Proposed Date for Adoption at Step 5/8, and the Proposed Date for Adoption by the Commission

- Approved as new work at CAC40 2017
- Proposed draft amendments considered at step 4 by the CCFO26 in 2019
- Adopted at Step 5/8 in the CAC42 in 2020.