

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of
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World Health
Organization

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DISCUSSION PAPER ON STANDARDIZATION OF DRY AND DRIED PRODUCE

(Prepared by Brazil with the assistance of the Codex Secretariat)

BACKGROUND

1. The Committee on Processed Fruits and Vegetables is a subsidiary body of the Codex Alimentarius Commission tasked with the development of worldwide standards and related texts for all types of processed fruits and vegetables such as dry and dried produce. The Committee resumed work in 1998 to review individual standards for processed fruits and vegetables to determine the need for their revision and if so whether they could be simplified and grouped into more horizontal standards to facilitate their acceptance by Codex members. Since its re-establishment, the Committee has revised a number of standards for canned fruits and vegetables and started the revision of the quick frozen vegetable standards including the conversion of some regional standards into worldwide standards. This approach follows the recommendation of the Codex Alimentarius Commission to move forward simplified horizontal rather than detailed individual commodity standards where possible.¹

2. At its 26th Session (October 2012), the Committee noted the status of the revision of Codex standards for processed fruits and vegetables and subsequent prioritization of future work on the review of the remaining standards for processed fruits and vegetables including dry and dried produce and agreed that the Delegation of Brazil would prepare a discussion paper on ways to deal with the standardization of dry and dried produce including the possibility to have a general standard for these products.²

AN OVERVIEW OF DRY AND DRIED PRODUCE IN CODEX

3. There are a few Codex standards for dry/dried produce developed by CCPFV namely: apricots, dates, raisins and pistachio nuts. All of them were developed in the early 80s and therefore a review to determine the need for their revision is necessary.

4. These standards, like Codex commodity standards in general, are end-product standards which do not differentiate among the drying processes involved in the elaboration of the product but describe the quality characteristics that the final product should have to match the definition of the product.

5. Some of these standards encompass the addition of ingredients like sugars or syrups (raisins, dates) or salt (pistachio nuts) while others refer only to the dried produce without any further processing or addition of ingredients (apricots). This could be the situation of many produce identified as “dried fruit” or “nuts” and may not present major difficulties to group them into a single standard for “dried fruits” or “nuts”.

6. These standards do not undergo further processing to develop into other related products such as crystallized / glazed / candied fruits which represent a separate category from those usually known as “dried fruits” as covered by the existing Codex standards for pistachio nuts and other dried fruits. In this regard, the *General Standard for Food Additives* (CODEX STAN 192-1995) allocates different food categories and therefore definitions to dried fruits (04.1.2.2), candied fruits (04.1.2.7) and other similar types of processed fruits listed under food category 04.1.2.

¹ ALINORM 99/27, paras 6 and 9; ALINORM 01/27, para 5; ALINORM 09/31/27, para. 106; REP 11/PFV, para 109; REP13/PFV, para 150; ALINORM 99/37, para 34.

² REP13/PFV, paras. 153-154.

7. There may however be situations where the process applied and the ingredients used may result in a final product with distinctive characteristics from the products usually associated to “dried fruits” e.g. shredded or flaked coconut, dried fruit leather/rolls, etc. Depending on their relevance to international trade, these products could be addressed separately as stand-alone standards or as a separate (sub)group standard. Although not exactly the same case, examples can be seen in the Codex standards for canned applesauce, canned citrus fruits or canned stone fruits which have unique (applesauce) or shared common characteristics (stone fruits, citrus fruits, berry fruits) that deserve a stand-alone standard or sub-group standards from other canned fruits. In this regard, the *Standard for Desiccated Coconut* (CODEX STAN 177-1991) can already be considered as a stand-alone standard if a general standard for dried fruits will encompass products similar to those described in the existing individual standards for dried fruits (dried apricots, dates, raisins, etc.).

8. It is noted that the definition of dried fruits in the *General Standard for Food Additives* (CODEX STAN 192-1995) covers a wider range of products than those usually covered by Codex standards for dried fruits, e.g. fruit rolls, but this does not imply that a standard for “dried fruits” should necessarily cover all the products defined in food category 04.1.2.2. This is the case for the *General Standard for Certain Canned Vegetables* (CODEX STAN 297-2009) which basically applies to canned vegetables in brine whereas food category 04.2.2.4 also applies to canned vegetables in packing media other than brine. The same applies to the *Standard for Desiccated Coconut* whose scope covers desiccated coconut but refers to food category 04.1.2.2 in the food additives section.

9. Other than the commodities mentioned above, dried or dry fruits and vegetables also include spices and culinary herbs. These products however fall under the field of work of the Committee on Spices and Culinary Herbs. Dried produce such as pulses and legumes belong to the area of work of the Committee on Cereals, Pulses and Legumes (currently adjourned *sine die*) hence, immediate work on pulses and legumes may not necessarily be included in the priorities for standardization of dry and dried produce in CCPFV.

10. Codex commodity standards such as those developed by CCPFV should ensure the quality and safety of the product to attain the main goals of Codex namely to protect consumers' health and ensure fair trade practices in the food trade. Relevant safety provisions such as those related to contaminants (e.g. mycotoxins), pesticides and hygiene are addressed by cross-reference to the relevant texts developed by the horizontal committees e.g. Committees on Contaminants in Foods, Pesticide Residues, Food Hygiene, etc.

11. Nutritional aspects related to e.g. sugar or salt content could be considered taking into account the WHO Global Strategy on Diet, Physical Activity and Health and may be addressed through e.g. labelling and/or any other relevant sections of the standard. To date, CCPFV has only addressed regular products, for instance the *Standard for Jams, Jellies and Marmalades* (CODEX STAN 296-2009) excludes from the scope products intended for special dietary uses or with reduced sugar products or with a very low sugar content or where foodstuffs with sweetening properties such as sugars, syrups, honey, etc. have been replaced wholly or partially by food additive sweeteners.

12. In view of the above, the Committee may wish to primarily address those dry and dried produce within its terms of reference and to focus on those essential composition / quality factors and labelling provisions that will protect consumers against misleading practices. Within this framework, the Committee may also wish to first approach those dry and dried produce commonly known or identified as “dried” fruit or “dried” vegetable e.g. nuts or dried fruits without further processing or where further processing would be limited to certain processes such as sugaring or salting but not leading to distinctive products such as those associated with dried fruits rolls/leathers and type-like products. In doing so, current policies associated with reduction of sugar and salt intake to reduce the risk of non-communicable diseases may be taken into account. This could facilitate review and updating of the existing Codex standards for dry and dried produce (i.e. pistachio nuts, apricots, dates and raisins) and allow the inclusion of other nuts and dried fruits of relevance to international trade.

RELEVANCE OF DRY AND DRIED PRODUCE IN INTERNATIONAL TRADE

13. Nuts and dried fruits and vegetables constitute a growing and diverse group of commodities with commercial appeal and relevant international trade. According to FAOSTAT, the export value of nuts and dried fruits and vegetables are as outlined in Table 1 cashew, pistachios, dried vegetables and raisins being the most relevant.

14. The majority of products listed (Table 1) showed an increase in export value from 2010 to 2011, with desiccated coconut³ (51%) the highest.

³ Codex Stan 177-1991 for Desiccated Coconut was revised in 2010 by CCPFV.

15. Three products had decreased trade from 2010 to 2011 namely: dried figs (-11%), pistachios (-4%) and dried plums (-1%), but according to Table 1 this may be regarded as season fluctuation when comparing export values changes of 2008 to 2010 and 2009 to 2011 for dried figs (4 and 8% increases, respectively) and pistachios (21 and 33% increases, respectively). Dried plums did not present this trend for one period, but like pistachios they are also considered as an alternate bearing crop⁴, having a high yield one year and a low yield the next year. Additionally, according to literature⁴, season fluctuation for dried figs may be related to pruning and the varieties used.

Table 1: Export Value of Nuts and dried fruits and vegetables worldwide (1000 \$)

World Total	Item	year				% change
		2008*	2009*	2010*	2011*	2010/2011
	Cashew nuts, shelled	2,157,530	1,980,965	2,291,823	3,034,312	24%
	Pistachios	2,070,321	1,702,390	2,629,924	2,525,773	-4%
	Vegetables, dehydrated	1,531,625	1,486,404	1,823,402	2,120,275	14%
	Raisins	1,319,394	1,298,502	1,690,194	1,887,072	10%
	Hazelnuts, shelled	1,049,411	1,001,937	1,161,068	1,450,429	20%
	Walnuts, shelled	900,029	833,569	1,062,557	1,418,177	25%
	Fruit, dried nes	833,555	793,873	892,713	1,236,713	28%
	Dates	686,096	571,343	775,596	902,201	14%
	Coconuts, desiccated	478,568	338,352	350,038	717,203	51%
	Almonds shelled	473,099	547,197	559,444	627,472	11%
	Plums dried (prunes)	527,532	469,693	485,380	478,409	-1%
	Apricots, dry	404,493	349,812	429,473	450,268	5%
	Figs dried	283,087	242,859	293,571	263,685	-11%
	Brazil nuts, shelled	133,415	114,962	153,310	242,515	37%

* = Aggregate, may include official, semi-official or estimated data

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16. Table 2 illustrates worldwide trade distribution of the seven most relevant nuts and dried fruits (export value), and overall demonstrates that those nuts and dried fruits have a scattered origin across regions and are important categories of processed fruits and vegetables to international trade.

⁴ Pruning Fruit and Nut Trees - Micke, W. *et al*, LEAFLET No. 21171, Division of Agricultural Sciences, UNIVERSITY OF CALIFORNIA

Table 2: Export Quantity of Nuts and dried fruits and vegetables worldwide (tonnes)

Almonds shelled		Cashew nuts, shelled		Pistachios		Walnuts, shelled	
country	2011	country	2011	country	2011	country	2011
USA	450,551	Viet Nam	178,500	Iran	130,137	USA	81,162
Spain	62,081	India	133,400	USA	105,890	Ukraine	27,371
China	24,496	Brazil	26,302	China	69,139	Chile	8,931
Australia	16,371	Tanzania	17,158	Syria	2,441	China	8,533
Germany	9,719	Indonesia	4,054	Greece	1,504	India	5,393
Belgium	8,932	Mozambique	3,464	Turkey	1,160	Turkey	3,702
Chile	8,800	Burquina Faso	2,797	Spain	1,155	EU(27)ex.int	3,528
Italy	6,500	Côte d'Ivoire	1,490				
Turkey	5,706						
others	46,522	others	48,947	others	49,961	others	48,141
World + (Total)	627,472	World + (Total)	416,112	World + (Total)	361,387	World + (Total)	186,761
Raisins		Dates		Apricots, dry			
country	2011	country	2011	country	2011		
Turkey	214,086	Iraq	138,437	Turkey	90,321		
USA	148,538	Pakistan	113,358	Uzbekistan	9,407		
Iran	112,577	Iran	112,030	USA	1,514		
Chile	70,245	Tunisia	86,910	France	1,441		
China	48,717	Saudi Arabia	77,795	Iran	879		
Argentina	29,287	United Arab Emirates	51,214	China	593		
Greece	29,031	Algeria	28,143	Italy	527		
Afghanistan	28,406	Egypt	23,792	Pakistan	423		
Uzbekistan	26,882	Israel	14,610	Argentina	237		
South Africa	16,823						
others	75,390	others	64,105	others	20,008		
World + (Total)	799,982	World + (Total)	710,394	World + (Total)	125,350		

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17. Drying of fresh fruits and vegetables is commonly relied on as “low-cost” promotional technology to impact poverty and promote development and a viable and relevant practice to raise farmers’ incomes, and extending shelf-life of farm commodities. Such practice is under FAO’s processing methods recommendations for small-scale farmers shortly after fruits and vegetables have been harvested^{5,6}. It is also performed by a growing industry within a complex chain from farm (e.g. almonds, dried figs) or extracting fields (e.g. Brazil nuts, some berries) to table.

18. UNECE Standards⁷ encompasses other nuts and dried fruits and vegetables of interest namely: macadamia nuts, pine nuts, dried apples, dried mangoes, dried peaches, dried pears and dried tomatoes. Other dried fruits such as dried bananas and dried berries (e.g. cranberries, strawberries) have a regional market but growing worldwide.

19. Trying to simplify the analysis and taking into consideration the Strategic Goal 1.1.1 of the Strategic Plan of the Codex Alimentarius Commission 2014-2019, to consistently apply decision-making and priority setting criteria across Committees to ensure that the standards and work areas of highest priority are progressed in a timely manner, a horizontal approach to elaborate Codex standards is presented in Table 3, dividing the above listed nuts and dried fruits and vegetables into four groups.

⁵ Fruit and vegetable processing - FAO AGRICULTURAL SERVICES BULLETIN No.119 (ISBN 92-5-103657-8).

⁶ Preparing fruits and vegetables, at <http://www.fao.org/english/newsroom/focus/2003/fruitveg4.htm>

⁷ UNECE Dry and Dried Produce Standards, at <http://www.unece.org/trade/agr/standard/dry/ddp-standards.html>

20. Dried chilli peppers and dried onions were not included in the list considering the pending decision of CCPFV whether paprika was in the work plan of the Committee⁸.

Table 3: Groups of Nuts and dried fruits and vegetables of interest

Group I - Nuts	Hazelnuts, shelled; walnuts, shelled; cashew nuts, shelled; pistachios; almonds, shelled; Brazil nuts, shelled; macadamia nuts; pine nuts
Group II - Dried Fruits	Raisins; plums dried (prunes); apricots; figs; dates; apples; mangoes; peaches; pears; bananas; cranberries; strawberries
Group III - Dried Vegetables	Tomatoes
Group IV – others	Desiccated coconuts, dried fruits rolls/leathers and type-like products

21. Table 3 presents a horizontal approach to elaborate general standards for Groups I, II and III, inserting specific annexes for the different products listed as needed, as well as incorporating others in the future based on a case-by-case analysis.

22. This table provides the Committee with an indication of the most relevant dry and dried produce traded worldwide that could be subject to standardization by CCPFV either as single or general standards namely:

- (i) if the Committee would like to work on general standards it could be appropriate to start with nuts and dried fruits followed by dried vegetables, if so, the commodities listed under Groups I and II should be given priority.
- (ii) should the Committee like to work on stand-alone standards, there is still preference for nuts and dried fruits and amongst them, based on Tables 1 and 2, cashew nuts and pistachios (nuts) and raisins and dates (dried fruits) as the most relevant in terms of value, volume and distribution worldwide.

STANDARDIZATION OF DRY AND DRIED PRODUCE IN CCPFV

CONSIDERATIONS, CONCLUSIONS AND QUESTIONS FOR CCPFV

23. The Committee may wish to consider whether work on dry and dried produce may deserve particular attention in view of the completion of work on most of the standards for canned fruits and vegetables, the finalization of the standard for quick frozen vegetables and the remaining work on a few standards for quick frozen fruits, canned berry fruits, canned fruit salads and individual standards for canned chestnuts and chestnuts puree and mango chutney.

24. If work on dry and dried produce is to proceed, the Committee may wish to consider how to approach this work namely:

- (i) to limit the revision to the existing individual standards for pistachio nuts and dried fruits (i.e. apricots, dates and raisins) and that further work would be done upon request of Codex members or observer organizations (i.e. single standards for various nuts, dried fruits, dried vegetables)

This approach may not be consistency with the current trend in Codex to develop inclusive standards where possible.

or

- (ii) to have a more comprehensive and systematic approach to the standardization of dry and dried produce; to limit the exercise to those dry and dried produce as described in paragraphs 12 and 15; and to look into the possibility to develop general standards for e.g. “nuts”, “dried fruits” and possibly “dried vegetables” identifying common provisions in the body of the standard and specific provisions in annexes similar to the approach taken for the standardization of canned fruits, canned vegetables and quick frozen vegetables.

⁸ CX/PFV 14/27/2.

This exercise could be limited to key dry and dried produce traded internationally while giving the possibility to include other “nuts”, “dried fruit” or “dried vegetable” in future upon request of a Codex member or observer organization.

This approach is consistent with the current trend in Codex to develop comprehensive standards and with work done in this regard by CCPFV on certain groups of products like canned fruits and vegetables, quick frozen vegetables.

25. If work on dry and dried produce proceeds following the 2nd approach, the Committee may also wish to consider:
- (i) whether the scope of the standard should be limited to nuts, dried fruits and possibly dried vegetables offered for direct consumption (as such or as ingredients) including for catering purposes or for repacking if required without further processing e.g. salting, sugaring, flavoring or roasting; or
 - (ii) whether the scope of the standard should be limited to nuts, dried fruits and possibly dried vegetables offered for direct consumption (as such or as ingredients) including for catering purposes or for repacking if required with further processing e.g. salting, sugaring, flavouring or roasting if such practices could (easily) be integrated into the same standard and do not lead to distinctive products such as fruits rolls/leathers; or
 - (iii) whether the scope of the standard should be limited to nuts, dried fruits and possibly dried vegetables offered for direct consumption (as such or as ingredients) including for catering purposes or for repacking if required without further processing e.g. salting, sugaring, flavoring or roasting however these processes could be accommodated for certain dry and dried produce in the specific annexes of the general standard if appropriate / necessary.
 - (iv) Regardless the decision related to points (i), (ii) and (iii), whether the nuts and fruits mentioned in paragraph 22 can be the starting point for work on standards for dry and dried produce.
26. In addition, the Committee may wish to consider whether a separate set of (group or stand-alone) standards could be developed when certain technologies applied to the same raw material led to different dried products e.g. dried fruit leathers/rolls, shredded or flaked fruits, etc. and if so whether these products should take same, less or higher priority as compared to nuts, dried fruits and dried vegetables without further processing or where further processing is limited to certain processes such as sugaring or salting.