



**Economic and Social  
Council**

Distr.  
GENERAL

TRADE/WP.7/GE.2/2004/10  
19 April 2004

ENGLISH ONLY

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ECONOMIC COMMISSION FOR EUROPE

COMMITTEE FOR TRADE, INDUSTRY AND  
ENTERPRISE DEVELOPMENT

Working Party on Agricultural Quality Standards

Specialized Section on Standardization of  
Dry and Dried Produce (Fruit)

51st session, 15-18 June 2004, Geneva

Item 5(d) of the provisional agenda

**DRAFT NEW UNECE STANDARD FOR  
INSHELL PECANS**

Transmitted by the United States

**Note by the secretariat:** The following text has been transmitted by the delegation of the United States of America and is reproduced as received.

**UNECE STANDARD**  
concerning the marketing and commercial  
quality control of

**INSHELL PECANS**  
moving in international trade between and to  
UNECE member countries

**I. DEFINITION OF PRODUCE**

This standard applies to inshell pecans of varieties (cultivars) grown from *Carya illinoensis* intended for direct consumption. This standard does not apply to inshell pecans for industrial processing or for use in the food industry except when they intended to be mixed with other products for direct consumption without further processing.

The pecan shells may be:

- a) natural;
- b) natural and polished;
- c) bleached- dyed red-waxed and polished;
- d) bleached-dyed-waxed and polished;

**II. PROVISIONS CONCERNING QUALITY**

The purpose of the standard is to define the quality requirements of inshell pecans at the export control stage, after preparation and packaging.

**A. Minimum requirements**

(i) **General provisions**

In all classes subject to the special provisions for each class and the tolerances allowed inshell pecans must be:

(a) **Characteristics of the shell**

- intact; slight superficial damage is not considered as a defect;
- sound; free from defects likely to affect the natural keeping quality of the nut;
- clean; practically free of any visible foreign matter;
- dry; free from abnormal external moisture;
- free from residue of husk;
- free of damage caused by pests;
- must be fairly uniform in colour.

(b) **Characteristics of the edible part of the dry fruit in the shell.**

- sufficiently dry to ensure keeping quality;
- intact; slight superficial damage is not considered as a defect;
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- sufficiently developed;
- clean, practically free of any visible foreign matter;
- free from insects or mites whatever their stage of development;
- free of damage caused by pests;

- free from mould;
- free from rancidity;
- free of abnormal external moisture;
- free of foreign smell and/or taste;
- kernels colours are light, light amber, amber, dark amber.<sup>1</sup>

The condition of the inshell pecans must be such as to enable them:

- to withstand transport and handling, and
- to arrive in satisfactory condition at the place of destination.

(ii) **Moisture content**

The inshell pecans shall have a moisture content not exceeding 6.5% per cent.<sup>2</sup>

**B. Classification**

Inshell pecans are classified in two classes defined below:

(i) ***Class I***

Inshell pecans in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

- kernels must be free from damage by any cause

The following slight defects may be allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- superficial or slight scratches;
- cracked shells leaving practically no opening<sup>3</sup>;
- stains not covering more than 5% of the shell total surface area.

(ii) ***Class II***

Inshell pecans in this class includes those not qualifying for inclusion in the higher classes but satisfy the minimum requirements specified above.

The following defect may be allowed provided the inshell pecans retain their essential characteristics as regards the quality, keeping quality and presentation.

- optional - uniformity of shells colour

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<sup>1</sup> *Colours described in annex.*

<sup>2</sup> *The method to be used should be one of the methods tested collaboratively and shown to give satisfactory results in inter-laboratory trials and which are given in Annexes I and II for dry and dried fruit. The laboratory reference method shall be used in cases of dispute.*

<sup>3</sup> *Unless delicate pressure causes the shell to open noticeably.*

**III. PROVISIONS CONCERNING SIZING**

In all classes size of inshell pecans is determined by count and weight; the number of nuts per pound or per kilogramme.

Size Classification	Number of nuts		Minimum weight of 10 smallest nut in a 100-nut sample
	Per pound	Per Kg.	
Oversize	55 or less	121 or less	In each classification, the 10 smallest nuts per 100 must weight at least 7% of the total weight of a 100- nut sample
Extra Large	56 to 63	121 to 138	
Large	64 to 77	138 to 169	
Medium	78 to 95	169 to 209	
Small	96 to 120	209 to 264	

**IV. PROVISIONS CONCERNING TOLERANCES**

Tolerances in respect of quality and size shall be allowed in each package (or in each lot for produce presented in bulk) for produce not satisfying the requirements of the class indicated.

**A. Quality tolerances**

Defects Allowed	Tolerance allowed (percent )/ by count	
	Class I	Class II
<b>External Defects by count</b>		
Total tolerance for inshell pecans not satisfying the minimum requirements, Of which no more than	<b>5</b>	<b>10</b>
- Serious Damage	<b>2</b>	<b>3</b>
- Foreign Material	<b>0.5% by weight</b>	<b>0.5% by weight</b>
<b>Internal Defects by count</b>		
Kernels failing to meet colour classification : Of which no more than	<b>12</b>	<b>30</b>
- serious damage by: skin colour or any colour darker than the specified colour	<b>7</b>	<b>10</b>
- rancid decay, mouldy or injured by insects	<b>6</b>	<b>7</b>
- Kernels failing to meet colour requirements for the grade but not seriously damaged by dark discoloration	<b>8</b>	<b>--</b>
- Loose, foreign, extraneous material (by weight)	<b>0.5</b>	<b>0.5</b>

**B. Mineral impurities**

Ashes insoluble in acid must not exceed 1g/kg.

**C. Size tolerances**

For all classes 7 per cent, by number or weight, of products not according to the size indicated on the marking but belonging to the size range immediately above and/or below the size indicated.

**V. PROVISIONS CONCERNING PRESENTATION**

**A. Uniformity**

The contents of each package must be uniform and contain only inshell pecan of the same origin, quality and size (if sized).

The visible part of the contents of the package must be representative of the entire contents.

**B. Packaging**

Inshell pecans must be packed in such a way as to protect the produce properly.

The materials used inside the package must be new, clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications is allowed provided that the printing or labelling has been done with non-toxic ink or glue.

Packages must be free of all foreign matter.

**C. Presentation**

Inshell pecans must be presented in solid containers. All consumer packages within each master package must be of the same weight.

**VI. PROVISIONS CONCERNING MARKING**

Each package for direct sale to the consumer must bear the following particulars in letters grouped on the same side, legibly and indelibly marked and visible from the outside:

**A. Identification**

Packer	)	Name and address or
and/or	)	officially issued or
Dispatcher	)	accepted code mark <sup>4</sup>

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<sup>4</sup> The national legislation of a number of European countries requires the explicit declaration of the name and address. In the case where a code mark is used, the reference "packer and/or dispatcher" (or equivalent abbreviations) has to be indicated in close connection with the code mark.

**B. Nature of produce**

- "Inshell pecans"
- Variety or commercial type {optional}

**C. Origin of produce**

- Country of origin and, optionally, district where grown or national, regional or local place name

**D. Commercial specifications**

- Class;
- Size (if sized);
- Crop year (optional) mandatory according to the legislation of the importing country;
- Net weight, or the number of pre-packages, followed by the net unit weight in the case of packages containing such units (optional or at the request of the importing country).
- "Best before" followed by the date (optional)

**E. Official control mark (optional)**

## ANNEX I

DEFINITIONS OF TERMS AND DEFECTS  
FOR PECAN KERNELS

<i>Kernel:</i>	One of the separated halves of an entire pecan kernel with not more than One-eighth of its original volume missing, exclusive of the portion which formerly connected the two halves of the kernel.
<i>Piece:</i>	A portion of a kernel which is less than seven-eighths of a half-kernel, but which will not pass through a round opening two-sixteenths inch in diameter.
<i>Particles and dust:</i>	For all size designations except "midget pieces" and "granules," fragments of kernels which will pass through a round opening two-sixteenths inch in diameter.
<i>Well dried</i>	The portion of kernel is firm and crisp, not pliable or leathery.
<i>Fairly well developed:</i>	The kernel has at least a moderate amount of meat in proportion to its width and length.
<i>Poorly developed:</i>	The kernel has a small amount of meat in proportion to its width and length.
<i>Fairly uniform in colour:</i>	90 percent or more of the kernels in the lot have skin colour within the range of one or two colour classifications.
<i>Fairly uniform in size:</i>	In a representative sample of 100 halves, the 10 smallest halves weigh not less than one-half as much as the 10 largest halves.
<i>Damage:</i>	<p>Any specific defect described in this section; or an equally objectionable variation of any one of these defects, or any other defect, or any combination of defects, which materially detracts from the appearance or the edible or marketing quality of the individual portion of the kernel or of the lot as a whole. The following defects should be considered as damage:</p> <ul style="list-style-type: none"><li>(a) Adhering material from inside the shell when attached to more than one-fourth of the surface on one side of the half-kernel or piece;</li><li>(b) Dust or dirt adhering to the kernel when conspicuous;</li><li>(c) Kernel which is not well dried;</li><li>(d) Kernel which is "dark amber" or darker colour;</li><li>(e) Kernel having more than one dark kernel spot, or one dark kernel spot more than one-eighth inch in greatest dimension;</li><li>(f) Shrivelling when the surface of the kernel is very conspicuously wrinkled;</li></ul>

- (g) Internal flesh discoloration of a medium shade of grey or brown extending more than one-fourth the length of the half-kernel or piece, or lesser areas of dark discoloration affecting the appearance to an equal or greater extent; and,
- (h) Poorly developed kernel.

*Serious damage:*

Any specific defect described in this section; or an equally objectionable variation of any one of these defects, or any other defect, or any combination of defects, which seriously detracts from the appearance or the edible or marketing quality of the individual portion of kernel or of the lot as a whole. The following defects shall be considered as serious damage:

- (a) Any plainly visible mould;
- (b) Rancidity when the kernel is distinctly rancid to the taste. Staleness of flavour shall not be classed as rancidity;
- (c) Decay affecting any portion of the kernel;
- (d) Insects, web, or frass or any distinct evidence of insect feeding on the kernel;
- (e) Internal discoloration which is dark grey, dark brown, or black and extends more than one-third the length of the half-kernel or piece;
- (f) Adhering material from inside the shell when attached to more than one-half of the surfaces on one side of the half-kernel or piece;
- (g) Dark kernel spots when more than three are on the kernel, or when any dark kernel spot or the aggregate of two or more spots affect an area of more than 10 percent of the surface of the half-kernel or piece;
- (h) Dark skin discoloration, darker than "dark brown, when covering more than one-fourth of the surface of the half-kernel or piece;



**ANNEX II****COLOUR CLASSIFICATION FOR  
FOR INSHELL PECANS**

The skin colour of pecan kernels may be described in terms of the colour classifications provided in this section. When the colour of kernels in a lot generally conforms to the "light" or "light amber" classification, that colour classification may be used to describe the lot in connection with the grade:

*Light:* the outer surface of the kernel is mostly golden colour or lighter, with not more than 25 percent of the outer surface darker than golden, none of which is darker than light brown.

*Light amber:* more than 25 percent of the outer surface of the kernel is light brown, with not more than 25 percent of the outer surface darker than light brown, none of which is darker than medium brown.

*Amber:* more than 25 percent of the outer surface of the kernel is medium brown, with not more than 25 percent of the outer surface darker than medium brown, none of which is darker than dark brown (very dark-brown or blackish-brown discoloration).

*Dark amber:* more than 25 percent of the outer surface of the kernel is dark brown, with not more than 25 percent of the outer surface darker than dark brown (very dark-brown or blackish-brown discoloration).

### ANNEX III

#### OPTIONAL DETERMINATIONS FOR INSHELL PECANS

The determinations set forth herein are not requirements of these standards. They may be performed upon request in connection with the grade determination or as a separate determination. Samples of pecans for these determinations shall be taken at random from a composite sample drawn throughout the lot.

- Edible kernel content:* A minimum sample of at least 500 grams of in-shell pecans shall be used for determination of edible kernel content. After the sample is weighed and shelled, edible appearing half kernels and pieces of kernels shall be separated from shells, center wall, and other non-kernel material, and inedible kernels and pieces of kernels, and weighed to determine edible kernel content for the lot.
- Poorly developed Kernel content:* A minimum sample of at least 500 grams of in-shell pecans shall be used for determination of poorly developed kernel content. The amount of poorly developed kernels and pieces of kernels shall be weighed to determine poorly developed kernel content of the lot.
- Edible kernel content Colour classification:* The amount of "Light," "Light amber," "Amber" "Dark amber" and "darker shades of skin colour shall be determined according to Colour Classification. The total weight of edible kernels and pieces of kernels shall be the basis for determining colour classification content for the lot.
- Kernel moisture content:* The sample of pecans for determination of kernel moisture content shall be shelled immediately before analysis and all shells, centre wall and other non-kernel material removed. The air-oven or other methods or devices which give equivalent results shall be used for moisture content determination.