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Report Name: National Standard for Requirements of Restricting Excessive Packaging for Fresh Edible Agricultural Products Released

Country: China - People's Republic of

Post: Beijing

Report Category: FAIRS Subject Report, Sanitary/Phytosanitary/Food Safety, Trade Policy Monitoring, WTO Notifications

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Report Highlights:

On September 22, the People's Republic of China (PRC) State Administration for Market Regulation (SAMR) released National Mandatory Standard for Requirements of Restricting Excessive Packaging for Fresh Edible Agricultural Products (GB43284-2023). China notified the standard to the WTO on February 2, 2023. The standard, which was developed by the Ministry of Agriculture and Rural Affairs (MARA), will enter into force on April 1, 2024. This report provides an unofficial translation of the finalized standard.

Summary:

On September 22, 2023, SAMR released National Mandatory Standard for Requirements of Restricting Excessive Packaging for Fresh Edible Agricultural Products (GB43284-2023). China previously notified the standard to the WTO on February 2, 2023 under G/TBT/N/CHN/1715. Please refer to FAS GAIN Report (CH2023-0024) for more information on the WTO notification of the standard.

Compared with China's WTO notification of the standard, the finalized standard listed examples of fresh edible agricultural products such as vegetables (including edible fungi), fruits, livestock and poultry meat, aquatic products, and eggs. It adds references from GB 23350-2021 to the definitions of sales packaging, excessive packaging, interspace ratio, packaging layers, and necessary spatial coefficient of a commodity with different calculation methods. It also revised interspace ratio across different categories of products and added two additional tables and one appendix for the requirements of packaging layers, necessary spatial coefficient, and packaging costs for different categories of fresh edible agricultural products.

The standard is the first mandatory national standard that focuses on technical requirements and testing determination of excessive packaging for edible agricultural products. It will enter into force on April 1, 2024.

The Announcement (link in Chinese) SAMR published on September 22 stated that the purposes of the standard is to clarify the technical indicators and determination methods for the excessive packaging of the five major categories of fresh edible agricultural products including vegetables (including edible fungi), fruits, livestock and poultry meat, aquatic products and eggs. The main technical indicators include:

- Set an upper limit of 10 percent to 25 percent interspace ratio for fresh edible agricultural products of different categories based on different sales packaging weights.
- Stipulates the quantity of packaging layers. For example, the number of layers for packaging of vegetables (including edible fungi) and eggs should be no more than three layers, and fruits, livestock and poultry meat, and aquatic products should be no more than four layers.
- Clarifies that the ratio of the packaging costs to the sales price should not exceed 20 percent. For strawberries, cherries, bayberries, loquats, livestock and poultry meat, aquatic products, and eggs with a sales price of more than 100 yuan, the ratio should be no more than 15 percent.

SAMR and MARA will work with relevant departments to promote the implementation of the standard, carry out supervision and law enforcement, and provide guidance to producers and business operators handling fresh edible agricultural products to carry out self-evaluation. At the same time, consumers are encouraged to practice "green consumption" and not purchase excessively packaged fresh edible agricultural products.

In 2021, China released an updated standard for Requirements of Restricting Packaging for Foods and Cosmetics (GB 23350-2021) including mandatory technical requirements on

restricting excessive packaging to foods and cosmetics. Please refer to FAS GAIN Report (CH2023-0073) for the unofficial translation of standard GB 23350-2021.

The finalized new standard sets a six-month transition period and stipulates that "fresh edible agricultural products produced or imported before the date of implementation can be sold until the end of the shelf life." This report provides an unofficial translation of the finalized standard GB 43284-2023.

BEGIN TRANSLATION

National Standard GB 43284-2023

Requirements of Restricting Excessive Packaging for Fresh Edible Agricultural Products

Published on September 8, 2023
Enter into force on April 1, 2024

Forward
This document is drafted in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents."

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

This document was proposed and managed by the Ministry of Agriculture and Rural Affairs of the People's Republic of China.

1 Scope
This document specifies the requirements and determination rules for restricting excessive packaging of fresh edible agricultural products, describes the testing methods corresponding to the above requirements, and gives the determination rules.

This document applies to the sales packaging of fresh edible agricultural products such as vegetables (including edible fungi), fruits, livestock and poultry meat, aquatic products, and eggs.

2 Normative References
This document has no normative references.

3 Terms and Definitions
The following terms and definitions apply to this document.

3.1 Excessive packaging
Packages with interspace ratio, layers, and costs exceeding the requirements.
[source: 3.1 of GB 23350-2021]

3.2 Sales packaging
The packaging that reaches consumers together with fresh edible agricultural products for the main purpose of sales.

Note: It does not include logistics protective packaging and functional products for cooling, air adjustments, and moisture proof for freshness and preservation purposes.
[source: 3.2 of GB 23350-2021]

3.3 Interspace ratio
The ratio of the volume after removing necessary space occupied by the contents of the fresh agricultural products to the total volume of the package.
[source: 3.4 of GB 23350-2021]

3.4 Packaging layers
Layers of physically detachable packaging that completely wrap fresh edible agricultural products.

Note: Complete wrapping refers to the one complete layer or combined packaging that prevents the contents from falling out.
[source: 3.7 of GB 23350-2021]

3.5 Necessary spatial coefficient of commodity
Expressed in k

A correction factor for the measurement of space required to protect fresh agricultural products.
[source: 3.8 of GB 23350-2021]

4 Requirements

4.1 Packaging interspace ratio

The packaging interspace ratio of fresh edible agricultural products shall meet the requirements in Table 1.

Table 1: Packaging interspace ratio of fresh edible agricultural products

Category	Total weight (m) of fresh edible agricultural products kg	Packaging interspace ratio [a] %
Vegetables (including edible fungi)	≤ 1	≤25
	> 1	≤20
Fruits	≤1	≤20
	1 < m ≤3	≤15
	>3	≤10
Livestock and Poultry Meat	≤1	≤20

	1 < m ≤3	≤15
	>3	≤10
Aquatic Products	≤1	≤25
	>1	≤20
Eggs	≤3	≤20
	>3	≤15

Note: the table is not applicable to the commodity that only contains one layer packaging.

[a] If there are two or more types of fresh edible agricultural products in the package, the total weight is the sum of all fresh edible agricultural products in the package, and the packaging interspace ratio should use the requirements for the category of the maximum weight of the corresponding products.

4.2 Packing layers

The packing layers of fresh edible agricultural products shall meet the requirements in Table 2.

Table 2: Requirements for the packing layers of fresh edible agricultural products

Category	Packing layers
Vegetables (including fungi)	≤3
Fruits	≤4
Livestock and Poultry Meat	≤4
Aquatic Products	≤4
Eggs	≤3

4.3 Packaging costs

The packaging costs of fresh edible agricultural products shall meet the requirements in Table 3.

Table 3: Requirements for the packaging costs of fresh edible agricultural products

Category	Sales price (P) Yuan	Ratio of packaging costs and sales price %
Vegetables (including edible fungi)	-	≤20
Fruits [a]	-	≤20
Livestock and Poultry Meat	≤100	≤20
	>100	≤15
Aquatic Products	≤100	≤20
	>100	≤15
Eggs	≤100	≤20
	>100	≤15

The packaging materials of fresh edible agricultural products should not be precious objects such as precious metals, mahogany, etc.

[a] The ratio for strawberries, cherries, bayberries, loquats, livestock and poultry meat, aquatic products, and eggs with a sales price of more than 100 yuan should be no more than 15%.

5. Testing and Calculation

5.1 Sampling amount

The sampling quantity is three pieces for the fresh edible agricultural products of the same category, the same net weight range, and the same packaging style.

5.2 Equipment and tools

5.2.1 The ruler, caliper, or its automatic equipment and tools for measuring length shall meet the measurement requirements, and accurate to 1 mm.

5.2.2 The measuring barrel, volume measuring instrument, or its automatic equipment and tools for measuring volume shall meet the measurement requirements, accurate to 0.1 L.

5.2.3 Scales, balances, or their automated equipment and tools for weight determination shall meet the measurement requirements, accurate to 0.01 kg. When items are weighed with a mass less than 100g, the measurement tools should be accurate to 0.1g.

5.3 Packaging interspace ratio

5.3.1 Total mass of fresh edible agricultural products

Open the sales package, take out the fresh edible agricultural products from the packaging, use a scale, balance, or other automated instruments to directly weigh the mass of all the fresh edible agricultural products, repeat for three times, take the arithmetic average, and record it as m.

5.3.2 Calculation of sale packaging volume

5.3.2.1 Instrumental method (arbitration method)

Under room temperature and pressure, after calibrating the volume measuring instrument according to operating procedures, place the sales package on the volume measuring instrument platform, start the measurement operation, repeat for three times, take the arithmetic average value, and record as V.

5.3.2.2 Manual method

Use a ruler, caliper, or other automated instruments, for the cuboid commodity sales package, measure directly the length, width, and height of the sales package along the outer wall of the package, for cylindrical commodity sales package, directly measure the diameter and height of the sales package along the outer wall of the package, repeat for three times, take the arithmetic average value to calculate the sales packaging volume, and record as V.

5.3.2.3 Drainage method and other similar methods

When measuring the volume of product sales packaging using the drainage method or similar methods, immerse or bury the sales packaging (unsealed products should be sealed with plastic film first) at room temperature and pressure into the measuring bucket with water (or lightweight foam particles) that has been accurately measured. The increased volume is the sales packaging volume of the product, repeat for three times. The arithmetic average is used to calculate the sales packaging volume of the product, which is recorded as V.

Note: The drainage method is only applicable to waterproof and sealed sales package and flexible sales packaging is only applicable to lightweight foam particles.

5.3.3 Calculation of volume of the fresh edible agricultural products

According to the measurement method in 5.3.1, weigh the mass of a single type of fresh edible agricultural product, every 1 kg of fresh edible agricultural product is estimated to be 1 L, then convert to the volume of the single type of fresh edible agricultural product, and record it as V_i.

5.3.4 Calculation of packaging interspace ratio

Calculate according to formula (1).

$$X= \frac{V - \sum_{i=1}^{n} kV_i}{V} *100 \qquad …………............ \quad (1)$$

In the formula:
X -- Interspace ratio of packaging, expressed in %, accurate to 1 decimal.
V -- Volume of sales packaging, in L.
k -- Necessary spatial coefficient of commodity, value is taken based on Table A.1 in Appendix A.
V_i -- Volume of single fresh edible agricultural product in the package, in L.

5.3.5 Accuracy
The relative standard deviation of three independent testing results obtained under repeatability conditions should not exceed 5%.

5.4 Packing layers

5.4.1 The packaging that directly contacts edible agricultural products is the first layer, and so on, the outermost packaging is the Nth layer, and N is the number of packaging layers.

5.4.2 Simple binding ropes, labels, logos, liners, spacers, fillers, buffers, skin packaging, and heat shrinkable films close to the outside of sales packaging are not counted as one layer. The net bags and net covers that contain the entire fresh edible agricultural products, two materials that are stacked and combined for packaging, and the drawer-type combined packaging is counted as one layer.

5.4.3 If the same sales packaging contains different fresh edible agricultural products, the number of packaging layers shall be calculated separately.

5.5 Packaging costs
Calculate according to formula (2).

$$Y= \frac{C}{P} * 100 \qquad .... \quad (2)$$

In the formula:

Y -- Ratio of packaging costs and sales price, expressed in %, accurate to 1 decimal.
C -- The total cost of sales packaging, in yuan. Sales packaging calculated in the price includes packaging materials, bags, net bags, net covers, bundles, pads, small tools, gifts of non-fresh edible agricultural products, etc., excluding functional products that are used for cooling, gas adjustment, moisture-proof, etc. The cost of sales packaging included in the sales price refers to the contract price. If no contract is signed, the actual transaction price shall be used.
P -- The sales price of the commodity, in yuan. The sales price of the commodity refers to the contract price. If no contract is signed, the actual transaction price shall be used, which is the highest price of the batch of the products.

6 Determination Rules
If there is one item of commodity packaging that does not meet the requirements stipulated in Chapter 4, the packaging of the commodity will be determined as excessive packaging.

7 Transition Requirements
Fresh edible agricultural products produced or imported before the implementation of this document can be sold until the end of their shelf life.

Appendix A
(Normative)
Table A.1: Necessary spatial coefficient for fresh edible agricultural products

Category	Necessary Spatial Coefficient for Commodities k
Vegetables (including edible fungi) [a]	10.0
Fruits [b]	8.0
Livestock and Poultry Meat	8.0
Aquatic Products	8.0
Eggs [c]	8.0
The commodity categories of fresh edible agricultural products involved in this table are not used as the basis for classifying agricultural products. The k value of products with cooling objects in the package is 1.2 times of products of the same category. The k value of inflatable packaging products is 2 times of products of the same category.	
[a] k value of Chinese cabbage, cabbage moss, seaweed moss, cabbage sprouts, brassica, celery, coriander, lettuce, spinach, basella rubra, chrysanthemum, edible fungi, scallions, chives, garlic sprouts, peppers, bean sprouts, pea sprouts, cress, cattail, and toona sinensis is 12.0. [b] k value of strawberries, cherries, bayberries, loquats, peaches, kiwis, kumquats, and pomelo is 9.0; k value of grapes is 12.0. [c] k value of pigeon eggs is 16.0.	

Attachments:

No Attachments.