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**Prepared By:** FAS China Staff

**Approved By:** Adam Branson

**Report Highlights:**

On January 4, 2024, the Ministry of Agriculture and Rural Affairs (MARA) published a revised “General Directive for Labeling of Agricultural Seeds (Draft for Comments).” The revised draft directive expands label content, requires a description of cultivation, and uses, and clarifies label requirements for genetically modified (GM) seeds and imported seeds. The directive serves as a mandatory national standard and applies to all crop seeds sold in the People's Republic of China (PRC). The deadline for submitting public comments on the revised draft is March 5, 2024. This report provides an unofficial translation of the revised draft directive.

## Summary

On January 4, 2024 MARA published a revised [General Directive for Labeling of Agricultural Seeds \(Draft for Comments\)](#) (link in Chinese). This mandatory national standard specifies labeling content and label making requirements for seed labels of all crop seeds sold in China. Once finalized, this standard will replace the original [GB 20464-2006 General Directive for Labeling of Agricultural Seeds](#) (link in Chinese), which was notified World Trade Organization (WTO) in October 2005 and came into effect on November 1, 2006. Please note that the revised directive has not been WTO notified and relevant stakeholders should conduct their own review of the directive. Comments can be provided either via email to: [jinfang@agri.gov.cn](mailto:jinfang@agri.gov.cn) or fax to: (86 10) 59194511.

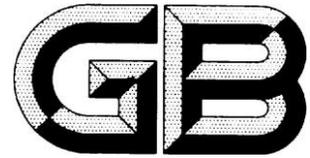
Significant changes in the draft directive include:

1. Modifications to the content of seed labels. Added content includes the testing date, quality assurance period, suitable planting area of the variety, planting season, information code, variety registration number, and plant variety right number.
2. Added definitions of the description of cultivation and uses. Both the seed label and description of cultivation and uses are required to be attached to seed packages. The labeling content of description of cultivation and uses include main characteristics of varieties and main cultivation measures, variety adaptability, and risk warning;
3. For GM seeds, the new draft requires that the seed label include event information stated in the biosafety certificate and a description of cultivation and uses, including the performance of the target trait and recipient variety information of backcross-breeding variety. The current standard does not require labeling of such information.
4. For imported seeds, the new draft requires that in addition to the original label, a Chinese label and a description of cultivation and uses should be attached.
5. Modified label size requirements to no smaller than 110mm × 70mm from 120mm × 80mm and added requirements for a QR code that enables traceability to the characteristic attributes for the production and processing batch, the logistics or sales flow, and the relevant web site, among other information of the seed sold.

This report provides an UNOFFICIAL translation of the draft directive.

BEGIN UNOFFICIAL TRANSLATION

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## National Standards of People's Republic of China

GB 20464—  
Replace GB 20464-2006

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### **General Directive for Labeling of Agricultural Seeds**

(Draft for Comments)

October 10, 2023

Issued on XXXX-XX-XX (date)

Implemented on XXXX-XX-XX (date)

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Released by the State Administration for Market Regulation and China's National Standardization Administration Committee

## Foreword

This document is drafted in accordance with the provisions of GB/T1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

This document replaces GB 20464-2006 "General Directive for Labeling of Agricultural Seeds". Compared with GB 20464-2006, in addition to structural adjustments and editorial changes, the main changes are as follows:

- Modified the order of terms and definitions; added eight terms including description of cultivation and uses(see3.2), specified marking content(see3.3), quality requirement (see3.4), quality assurance period(see3.5), seed category(see3.6), suitable planting area for variety(see3.7), variety adaptability (see3.8) and information code (see3.9); modified six terms including seed labeling(see 3.1) and packaging material(see 3.13); adjusted three terms including breeder seeds to be included in the seed category note (see 3.6), five terms including main crop seeds to be included in the specified marking content (see Note 3 of 3.3), three terms including test value to be included in the quality requirement (See Note 3 of 3.4), and two terms including producer to be included in the notes for seed packager (see 3.10); deleted four terms including commercial seeds, mixed seeds, place of origin and contents(see GB 20464-2006, 3.2, 3.5, 3.12.3, 3.16);
- Decomposed and refined the general provisions into basic requirements for labeling content (see 4.1) and basic requirements for production specifications (see 5.1);
- Modified the marking content of seed labels, which added content including the testing date, quality assurance period, suitable planting area of the variety, planting season, information code, variety registration number, plant variety right number, etc., modified the description of variety names, quality indicators, and names of seed producers and operators, and deleted the place of origin and production license number;
- Modified the marking content of the description of cultivation and uses, which added variety adaptability, risk warnings, etc., modified the description of the main characteristics and main cultivation measures of the variety;
- Modified the producing format of seed labels and description of cultivation and uses, which added the QR code format and generation requirements, exemption regulations, etc.;
- Modified the judgment rules for use of supervision and the expression of allowable error;
- Deleted Appendix A, Appendix B and Appendix C of GB 20464-2006, and added new Appendix A and Appendix B.

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

This document is under the jurisdiction of the National Crop Seed Standardization Technical Committee (SAC/TC37).

The main drafting units of this document are: National Agricultural Technology Extension Service Center, Shaanxi Provincial Seed Station, Henan Provincial Seed Industry Development Center, Shanxi Provincial Seed Industry Development Center, Hebei Provincial Seed Station, Fujian Provincial Seed Station, Anhui Provincial Seed Management Station, Zhejiang Provincial Seed Management Station, Ningxia Hui Autonomous Region Seed Station.

The previous versions of the standard replaced by this document are as follows:

- GB 20464—2006

## **Introduction**

The system of commitment to the truthfulness of crop seed labels and description of cultivation and uses is a basic system commonly implemented in global seed laws. The system establishes three basic principles: the implementation of uniform labeling and production specifications by the State to avoid the triggering of technical barriers to trade; self-declaration by seed producers and operators to implement the most cost-effective model; and market supervision and inspection organized by the Government to ensure mandatory and truthful disclosure of information.

This document is based on the "Seed Law of the People's Republic of China" (amended for the third time at the 32nd Meeting of the Standing Committee of the 13th National People's Congress on December 24, 2021) and the "Administrative Measures for Crop Seed Labeling and Use Instructions" (issued by Ministry of Agriculture Order No. 6 issued on July 8, 2016) and other relevant laws and regulations, develop guiding, targeted and operational technical specifications for the principle provisions on the labeling content, making requirements and use supervision of crop seed labels and description of cultivation and uses, which guide seed producers and operators to strengthen their main responsibilities, correctly mark seed labels and description of cultivation and uses, clearly mark label information, and standardize production behaviors; at the same time, the technical support for the scope, content and manner of supervision and inspection are clarified to ensure that the information on seed labeling and instructions for use is disclosed in a true and complete manner, so as to guarantee the effective implementation of the legal system.

This document governs seed quality standards, and for important crop seeds, mandatory national seed quality standards are formulated as a supplement.

# **General Directive for Labeling of Agricultural Seeds**

## **1. Scope**

This document specifies the seed labeling content and production requirements of crop seed labels and description of cultivation and uses, and establishes the inspection scope and content of its use supervision as well as the rules for quality determination.

This document applies to crop seeds sold in the People's Republic of China.

## **2. Normative reference documents**

The provisions in the following documents constitute indispensable provisions of this document through normative references in the text. For referenced documents with date, only the version corresponding to that date is applicable to this document; for referenced documents without date, the latest version (including all amendments) is applicable to this document.

GB/T 3543 Crop Seed Inspection Procedures

## **3. Terms and definitions**

The following terms and definitions apply to this document.

### **3.1 Seed labeling**

Text instructions and specific patterns printed, pasted, fixed or attached to the surface of seeds and seed packaging.

Note: Text description refers to the specific description of the labeled content, and specific patterns refer to warning signs, certification marks, etc.

### **3.2 Description of cultivation and uses**

Instructions printed, pasted, fixed or attached to the surface of seeds and seed packaging to describe the main characteristics, main cultivation measures, adaptability and other usage conditions of the varieties sold, as well as risk warnings, technical services and other related information.

### **3.3 Specified marking content**

Matters that must be labeled according to laws and regulations.

Note 1: The stipulated labeling content is divided into labeling content of seed labeling and labeling content of description of cultivation and uses.

Note 2: The labeling content consists of general labeling content and annotation labeling content. The general labeling content is what each type of seed should be labeled in accordance with legal provisions; the annotation labeling content is the labeling content that is added to the general labeling content based on different variety management, seed characteristics and usage requirements.

Note 3: The annotation labeling content is based on common types of seeds, which can be classified as variety registered seeds, variety recorded seeds, genetically modified (GM) seeds, authorized variety seeds, chemically treated seeds, imported seeds, subpackaged seeds, mixed seeds, certified seeds, etc.

### **3.4 Quality requirement**

Reflects the quality characteristics and characteristic values of sold seeds such as sowing, variety, and health.

Note 1: Quality characteristics vary according to different types of seed. Attention should be paid to the distinction between mandatory and recommended provisions.

Note 2: The performance of the characteristic value is either qualitative or quantitative, or involves qualitative and quantitative.

Note 3: In the actual process, characteristic values, especially quantitative characteristic values, can be divided into specified value of national standards, estimated value of seed inspection, and stated value of seed labels.

### **3.5 Quality assurance period**

The period during which seed quality characteristic values are guaranteed under the storage conditions indicated on the seed label or description of cultivation and uses.

### **3.6 Seed category**

The name of the generation in which seeds are propagated according to a pedigree.

Note 1: According to the mandatory national standards for seed quality, seed categories are divided into breeder seeds, basic seeds, and qualified seeds.

Note 2: Seed categories vary according to the parental propagation of conventional and hybrid seeds.

### **3.7 Suitable planting area for variety**

Based on the crop planting zoning and considering factors such as climate type, ecological conditions, farming system, variety characteristics and actual production of the planting area, determine the planting areas suitable for varieties with high yield, stable yield, adaptability, disease resistance, stress resistance, high quality and other agronomic traits.

Note 1: The suitable ecological areas for registered and recorded varieties should be consistent with the approval announcement. Seeds of registered and recorded varieties cannot be promoted or sold outside the suitable ecological areas determined in the announcement.

Note 2: For registered varieties, if they are promoted and sold outside the ecological area where the approval is announced, they must be filed with the agricultural and rural administrative department of the people's government of the province, autonomous region, or municipality directly under the Central Government in accordance with legal provisions.

### **3.8 Variety adaptability**

Within the suitable planting area (3.7), variety performance of the stability, high yield, disease resistance, stress resistance and other characteristics in different years.

### **3.9 Information code**

A QR code that enables traceability to the characteristic attributes the production and processing batch, the logistics or sales flow, and the relevant web site, among other information of the seed sold.

### **3.10 Seed packager**

Original supplier of seeds for sale.

Note 1: According to the "Seed Law of the People's Republic of China", seed producers and operators are required to apply for a seed production and operation license.

Note 2: Those who specialize in seeds that are no longer subpackaged, branches of seed producers and operators, or seed retailers entrusted by them to sell seeds on a consignment basis do not need to apply for a seed production and operation license but must be filed with the local agricultural and rural authorities.

Note 3: Seed subpackaging units and seed importers are seed producers and operators.

### **3.11 Pack-marketing crop seed**

Seeds that must be packaged before they can be sold, including kernel seeds and fruits (caryopsis, legume, capsule, drupe, etc.) of sexually reproduced crops, as well as miniature virus free seed potatoes.

Note: This article is quoted from the provisions of the Administrative Measures for the Crop Seed Production and Management Licenses.

### **3.12 Bulk-marketing crop seed**

Seeds that may be sold without packaging include organs and tissues, and the seedlings of the vegetative propagation crops and their non-kernel seeds unsuitable for package.

Note: This article is quoted from the provisions of the Administrative Measures for the Crop Seed Production and Management Licenses.

### **3.13 Packaging material**

Any packaging material or container used to package a quantity of seed as a delivery unit.

### **3.14 Marketing package**

Minimum packages that are no longer detached and are delivered to the seed user by sale together with the seeds inside.

### **3.15 Net content**

The actual mass or quantity of seed in the contents after removing the packaging.

## **4. Marking Content**

### **4.1 Basic requirements**

4.1.1 The marking content should be true, valid and consistent with the crop seeds sold.

4.1.2 The prescribed marking content shall be fully descriptive.

4.1.3 The marking content should be expressed accurately, scientifically, standardized, in line with the provisions of national laws and regulations, in line with the requirements of mandatory national standards, and shall not make false or misleading publicity.

### **4.2 General labeling content of seed label**

#### **4.2.1 Name of commodity**

##### **4.2.1.1 Crop species**

The marking of crop species names shall conform to the following provisions:

-- Labeled in accordance with the species or subspecies or varieties identified in plant taxonomy, and it is appropriate to adopt the crop species names identified in GB/T 3543.2 and other national standards for crop species names;

-- The "common name" may be used for individual crop species, provided that it does not cause misunderstanding or confusion. Example 1: "Balled cabbage" may be labeled as "Chinese cabbage".

-- Where a special description of use or other status is required, the name of the crop species shall be preceded by a descriptive term for the corresponding use.

Example 2: "Sugar beet for feeding" and "Sugar beet for sugar".

##### **4.2.1.2 Seed categories**

4.2.1.2.1 Seed categories are labeled according to conventional and hybrid seeds, and the labeling shall also comply with the following provisions:

-- Conventional seeds shall be labeled as breeder's seeds, basic seeds, or qualified seeds; for seeds belonging to hybrid parents, label the type of hybrid parent seed;

Example 1: Some need to be specified to the type of parental combination (e.g. sterile or maintained or restored lines, e.g. hybrid rice parental sterile lines);

Example 2: Some can be directly labeled as hybrid parental seed, e.g.: watermelon parental basic seed.  
-- For hybrid seeds, qualified seeds can be omitted and directly labeled as hybrid; if there are existing quality standards for single kernel planting seed, single kernel planting seeding or non-single kernel planting seeding shall be added.

4.2.1.2.2 Crop species and seed categories may be labeled jointly.

Example 3: Basic rice seeds, rice hybrids, basic seed of rice sterile lines, rice sterile lines; maize hybrids, maize inbred lines.

#### **4.2.1.3 Variety name**

A variety can only be labeled with one variety name, and no decorative words can be added before or after the variety name, and multiple variety names other than the approved variety name are not allowed to be labeled.

The approved variety name should be used for varieties registered, recorded, or authorized.

The variety name determined by the variety holder (or breeder) should be used for varieties that do not need to be registered, recorded, or varieties that have not applied for variety protection, and the variety name should comply with the "Regulations on the Naming of Agricultural Plant Varieties".

#### **4.2.2 Information on seed packager**

4.2.2.1 Name of seed packager, seed production and operation license number

The name of the seed packager and the seed production and operation license number shall be labelled according to the "enterprise name" and "license number" stated in the issued Crop Seed Production and Operation License.

4.2.2.2 Address and contact information of seed producers and operators

Seed packager address should be labeled with the enterprise's registered address, and consistent with the "residence" stated in the issued Crop Seed Production and Operation License.

The contact information should mark the telephone number and fax number of the seed producer and operator, and online contact information can be added.

#### **4.2.3 Quality requirement information**

##### **4.2.3.1 Quality requirements**

4.2.3.1.1 Quality characteristics shall be labeled in accordance with the following provisions:

- a) For kernel seeds and fruits of sexually propagated crops, the genetic purity, physical purity, germination rate, and moisture of the variety shall be labeled. National standards that require other quality characteristics should be noted;

- b) For organs or tissues (mainly including tuberous roots, tubers) of asexually reproduced crops, the genetic purity, physical purity and size shall be labeled. For organs or tissues that are reproduced virus-free, its viruses and diseases and other harmful biological conditions should also be labeled according to relevant quality standards;
- c) For seedling or nursery category, information such as seedling age, seedling height, seedling authenticity (variety purity), robust condition, etc., shall be labeled; the nursery should also be labeled with ground diameter, main root length, root width, etc.;
- d) For genetically modified (GM) seeds, the GM purity of the variety should be noted.

Note: For GM purity of the variety, it should be expressed separately according to the type of event trait. For example, herbicide tolerance trait purity, insect resistance trait purity.

4.2.3.1.2 The quality characteristic values indicate the quality indicators committed by the seed producers and operators, but shall not be lower than the published mandatory national seed quality standards. The quality characteristic values should be labeled with specific numerical values, among which the genetic purity of the variety, GM purity of the variety, physical purity, and moisture percentage should retain one decimal place, and the germination rate should retain an integer.

4.2.3.1.3 If agricultural production requires the use of seeds that are lower than the national mandatory seed quality standards and approved by the people's government at or above the county level, the actual tested quality characteristic values shall be labeled and the corresponding measures for safe use shall be described.

#### **4.2.3.2 Net content**

4.2.3.2.1 Net content refers to the actual quality or quantity of seeds. The label content of the net content should be composed of three parts: the word "net content" (Chinese), numbers, and legal measurement units (kg or g) or quantity units (kernels or plants).

4.2.3.2.2 Based on legal units of measurement, if the net content is less than 1000g, it should be expressed in g (grams), and if it is greater than or equal to 1000g, it should be expressed in kg (kilograms).

4.2.3.2.3 For single kernel planting seeds, the number of grains should be used as the unit of quantity for the net content.

#### **4.2.3.3 Quarantine certificate number**

The quarantine certificate number is marked with the certificate number stated in the "Quarantine Certificate of Origin" or the "Plant Quarantine Certificate".

#### **4.2.4 Year and month of production**

The year and month of production indicate the date when the seeds were harvested or when the seeds were released from the nursery.

Example: "Year and month of production: September 2023".

#### **4.2.5 Testing date and quality assurance period**

4.2.5.1 The test date should be labeled with the date when the seed packager tested the seed quality, and the date should be fully expressed as "XXXX year XX month".

Example: "Test date: May 2023".

4.2.5.1.1 The quality assurance period refers to the promised quality assurance period for seed germination rate and moisture, which shall be expressed as "quality assurance period of XX months", or "quality assurance period (until)..." etc. The quality assurance period shall be no less than eight months and no longer than twelve months from the date of testing.

Example: "Quality assurance period 10 months".

#### **4.2.6 Suitable planting area of variety and planting season**

4.2.6 Suitable planting areas and planting seasons of varieties

##### **4.2.6.1 Planting area**

4.2.6.1.1 The suitable planting areas of varieties should be labeled in accordance with the nationally suitable areas or the same ecological region within the provincial administrative region, or according to the administrative region.

4.2.6.1.2 For registered or recorded varieties, the suitable planting area of the variety shall be labeled in accordance with the areas stated in the registration and record announcement.

4.2.6.1.3 For crops that do not require registration or record, the suitable area for their varieties shall be determined by seed producers and operators based on variety tests.

##### **4.2.6.2 Planting season**

Label the suitable planting season determined by seed producers and operators based on variety trials. The planting season should be expressed as a period of time, and the planting seasons in different suitable planting areas may be expressed separately.

#### **4.2.7 Information code**

Information code is labeled with QR codes.

The QR code information should at least include the variety name, the name of the seed packager or seed importer, the unit identification code, and the traceability website information. For GM varieties, relevant information such as event should be included.

### **4.3 Additional Marking Content of Seed Labeling**

#### **4.3.1 Seeds of registered varieties**

4.3.1.1 For major crops, the variety registration number should be labeled.

4.3.1.2 For those that have passed more than two provincial registration, at least the provincial variety registration number of the place where the seeds are sold should be labeled.

4.3.1.3 For the introduction of seeds, the introduction registration number and the planting area allowed by the introduction record shall be labeled.

#### **4.3.2 Seeds of recorded varieties**

For recorded crop varieties, the variety record number should be labeled.

#### **4.3.3 Genetically modified seeds**

For GM seeds, the following content shall be labeled:

- (a) The words "genetically modified" or "genetically modified seed";
- (b) The number of the agricultural genetically modified organism (GMO) biosafety certificate;
- (c) Information on the events that stated in the biosafety certificate.

#### **4.3.4 Seeds of authorized varieties**

For seeds of authorized varieties, the variety right number shall be labeled.

#### **4.3.5 Treated seeds**

Treated seeds shall be annotated with:

- (a) Name of the agent, active ingredient and content;
- (b) Labeling according to the toxicity of the agent (expressed in terms of the oral median lethal dose of rats, abbreviated as LD50):

——If  $LD_{50} < 50\text{mg/kg}$ , indicate "highly toxic" and attach a skull warning sign;

——If  $LD_{50} = 50\text{mg/kg} \sim 500\text{mg/kg}$ , mark "moderately toxic" with a crossbones warning logo;

——If  $LD_{50} > 500\text{mg/kg}$ , indicate "low toxicity";

- (c) Notes on the symptoms caused by poisoning by the agent, advice on antidotes that can be used, etc.

#### **4.3.6 Imported seeds**

Imported seeds should be labeled with the following:

- a) Import approval number;

- b) Seed packager information (4.2.2) shall indicate the name of the importer, registered address and contact information, such information shall be labeled in accordance with the Crop Seed Production and Operation License;
- (c) Quarantine certificate number (4.2.3.3) shall indicate quarantine approval number of the imported seeds and seedlings.

#### **4.3.7 Subpackaged seeds**

For large packages or imported seed for subpackaging, the seed shall be labeled:

- The name and address of the subpackaging unit, which shall be indicated in accordance with the Crop Seed Production and Operation License (see 4.2.2.1);
- date of subpackaging, the date expression method is the same as 4.2.4.1.

#### **4.3.8 Mixed seeds**

Where seed mixes are required for reasons such as the adoption of resistance management for the planting of GM seeds, they shall be labeled with the words " mixed seed ", the composition of the mixed seed and its proportion in terms of quality or quantity, type and quality fraction.

#### **4.3.9 Certified seeds**

If certified seeds are sold, their seed labels should include specific content such as the certification mark and the name of the certification agency in accordance with relevant regulations.

### **4.4 General labeling content of the description of cultivation and uses**

#### **4.4.1 Main characteristics of varieties and main cultivation measures**

4.4.1.1 The labeling content of main characteristics of varieties shall include at least species, use, fertility period, morphological characteristics, disease resistance, stress resistance, yield, quality and other major characteristics; the labeling content of main cultivation measures shall include at least the sowing period, sowing amount, fertilizer application methods, irrigation, disease and pest control.

4.4.1.2 The main characteristics and main cultivation measures of the variety should truthfully reflect the true status of the variety, and the main content of the label should be consistent with the registration or record announcement. For major crop varieties that have been approved by more than two provincial levels, the labeling content must be at least consistent with the provincial variety approval announcement where the sales place is located; for filed introduced varieties, the labeling content should be consistent with the introduction and filing information.

4.4.1.3 The labeled main characteristics and main cultivation measures of the varieties shall adequately describe the description of cultivation and uses, and should not only extract some of the advantages of the varieties in the variety registration and record announcements, but delete the shortcomings of the varieties that are not resistant to diseases, insects or stress. The description of cultivation and uses shall not analyze, predict, or make guaranteed promises about the economic benefits generated by planting varieties.

#### **4.4.2 Variety adaptability and risk warning**

4.4.2.1 Variety adaptability shall label yield stability, productivity, disease resistance, stress resistance, etc. between different years in suitable planting areas. The labeled values shall not be higher than those stated in the variety registration and record announcements. For crops not subject to registration or record, the variety adaptability shall be implemented with reference to the relevant requirements for recorded crops.

4.4.2.2 Risk warnings should indicate reminders or cautions to potential risks that may arise from the following factors:

- a) The risk of serious yield loss of the variety due to major pests and diseases in the sales area;
- b) The planting season and abnormal weather in the sales area may trigger the risk of varieties fall, not fruit;
- c) The risk of reduced germination rate and vigor due to unfavorable seed storage conditions or improper seed treatment and seedling raising.

#### **4.4.3 Consulting service information**

Label the phone number, web site, or technician information provided by the variety and cultivation advisory service.

#### **4.5 Additional labeling content of the description of cultivation and uses**

##### **4.5.1 Genetically modified seeds**

GM seeds shall be labeled with the following contents:

- (a) the performance of the target traits such as tolerance to the recommended dosage of herbicides and effectiveness of insect resistance. Backcross-breeding varieties should also be labeled with recipient variety information.
- (b) Tips on safety control measures when using.

4.5.2 The description of cultivation and uses printed separately

Printed separately from the label, the description of cultivation and uses should label the name of the variety and the information of the seed packager.

### **5. Making requirements**

#### **5.2 Basic Requirements**

5.1.1 Seeds sold should attach with seed labels and the description of cultivation and uses. Attaching means seed labels and the description of cultivation and uses shall be attached to the seeds or the surface of seed packaging by printing, pasting, fixing or attaching.

**5.2.1** The text used in seed labels and the description of cultivation and uses should be in Chinese. Except for registered trademarks, standard Chinese characters published by the National Language and Writing Committee should be used. Chinese pinyin or other characters with close correspondence can be used at the same time, but the font size should be smaller than the corresponding Chinese. Imported seeds should be appended with Chinese labels and the description of cultivation and uses that comply with the provisions of this document in addition to the original seed labels.

5.1.3 Where the content of seed label and the description of cultivation and uses are printed together, separate description of cultivation and uses may not be attached. Where the content of the seed label and the description of cultivation and uses are printed separately, the description of cultivation and uses shall be printed separately. It is also necessary to pay attention to the connection between the seed label and the description of cultivation and uses.

## **5.2 Forms of Making**

### **5.2.1 Pack-marketing crop seed**

Printing may take one or more of the following forms:

- (a) The labeling content is printed directly on the surface of the seed packages;
- (b) labeling content is printed into self-adhesive labels and pasted on the surface of the seed packages;
- (c) labeling content is printed into a printed matter and fixed or attached to the surface of the seed packages using sewing, hanging and other ways.

### **5.2.2 Bulk-marketing crop seed**

It should be provided to seed users when selling seeds, and the content of seed labels and the description of cultivation and uses can be printed together.

Printing may take one or more of the following forms:

- a) Print into the printed matter and attach to the seeds using mesh bags, wrapping, etc.;
- b) Where seeds cannot be attached with labels or seed package size is too small, printed materials are allowed to be provided to seed users when selling seeds.

### **5.2.3 Imported seeds**

For imported seeds, in addition to the original label, a Chinese label and the description of cultivation and uses that comply with the provisions of this document should be attached.

The Chinese name and English name of the variety and the seed packager in the Chinese label should be consistent with those approved by the import (export) approval form.

## **5.3 Making Requirements**

### **5.3.1 Printing layout requirements**

Crop type and seed category, variety name, variety registration or record number, net content, name of seed packager, seed production and operation license number, registration address and contact information, "GMO" words, warning signs and other information should be labeled on the same page. Among them, the variety name should be placed in a prominent position, and the font size should not be smaller than other words on the label.

### 5.3.2 Printing requirements

Printed content should be clear, durable, easy to recognize and read, and warning signs should be eye-catching. The label font, background and background color should form a clear contrast with the substrate and be easy to identify. Warning signs and instructions for "highly toxic", "moderately toxic" or "lowly toxic" should be conspicuous, among which "highly toxic" should be printed in red fonts.

The font height of labeled words, symbols, and numbers shall not be less than 1.8mm. If the Chinese pinyin or foreign language is also labeled, the font should be smaller than or equal to the corresponding Chinese character font. The character height of the net content label of quantitatively packaged seeds should comply with the requirements of Table 1.

Table 1 The character height of the net content label of quantitatively packaged seeds

Labeled Net Content (Qn)	Minimum height of a character /mm
$Qn \leq 50g$	2
$50g < Qn \leq 200g$	3
$200g < Qn \leq 1kg$	4
$Qn > 1kg$	6

## 5.4 Making Specific Provisions

### 5.4.1 QR code generation requirements

5.4.1.1 The generated QR code is unique, and one QR code corresponds to a unique minimum sales unit seed. Once a QR code is assigned to a certain commodity seed, it cannot be re-assigned to other seeds again.

5.4.1.2 The format of generated QR code shall comply with the following requirements:

5.4.1.2.1 Adopt QR code standard;

5.4.1.2.2 The size of the image may depend on the size of the package, and shall not be less than  $2cm^2$ ;

5.4.1.2.3 The module color and background color should have obvious contrast, and the background area should be at least 2mm larger than the edge of the graphic.

5.4.1.3 The information specified in the QR code (see 4.2.6, 4.3.3c) should be arranged in sequential order, with each item of information in a separate line, and conform to the following requirements:

a. The name of the variety, the name of the seed packager or importer shall be labeled complying with the requirements of this document;

b. The unit identification code is generated by the seed packager or importer and is used to distinguish each minimum sales unit as a unique code. The code consists of Arabic numerals or a combination of numerals and English letters, and cannot exceed 20 characters in length. The unit identification code can be consistent with the original product bar code, or it can be designed separately;

c. The product traceability website is provided by the seed packager or importer, which can trace the seed processing batches as well as logistics or sales information. The web page should have strong compatibility to be browsed on PC and mobile phones;

d. The event information is consistent with the information stated in the agricultural GMO biosafety certificate.

## **5.4.2 Requirements for Printed Matters**

Printed matters used as labels and the description of cultivation and uses should be rectangular, with the length and width not less than 110mm × 70mm; the materials used for printing should have sufficient strength to ensure that they are not easily damaged, or the handwriting will not be blurred or peeled off during the trade circulation process.

## **5.4.3 Exemptions**

For the printing of quarantine certificate number, test date, and quality assurance period, it is allowed to use spray printing, embossing, etc., but they should be clear, legible, and not easy to fall off.

# **6 Supervision on usage**

## **6.1 Application scope of supervision and inspection**

6.1.1 The label and the description of cultivation and uses of seed packages directly sold to seed users or no longer subpackaged shall comply with the provisions of Chapter 4 and Chapter 5 of this document.

6.1.2 For seed packages supplied by seed packager but not for final sale, the labels and description of cultivation and uses may only be labeled in line with the provisions of Chapter 4 of this document, indicating the crop type, variety name, name of the seed packager, quality indicators, test date, quality assurance period, net content, Crop Seed Production and Operation License number, and other contents should be specified in the contract.

6.1.3 For seed packaging that is required for purposes of transportation and processing but not directly for sale, the labeling and the description of cultivation and uses are not subject to this document.

## **6.2 Compliance inspection on label making**

6.2.1 The supervision and inspection content of seed labels and the description of cultivation and uses should be based on the actual situation and may include one or more of the following:

- a) The authenticity, legality, completeness and standardization of the content of seed label;
- b) The completeness, standardization and honesty of the content of description of cultivation and uses;
- c) The making form and printing requirements for seed labels and the description of cultivation and uses

6.2.2 For supervision and inspection content, please refer to Appendix A (Checklist for labeling content and making requirements).

## **6.3 Seed quality compliance inspection**

### **6.3.1 Determination rules**

When the content of quality indicators on seed labels needs to be tested for quality judgment, the following rules should be followed:

- a) For crop types, seed categories, variety names, GM events and other quality characteristics that are inconsistent with the content marked on seed labels or standard samples after testing, the seeds will be judged to be inconsistent with the label content or standard samples;
- b) If any of the seed quality test values fails to reach the corresponding labeled value, or if any of the quality labeled values fails to reach the corresponding specified value defined in the national standards, the seed quality will be judged to be unqualified;
- c) If seeds are found to carry state-regulated seed-borne quarantine pests or regulated non-quarantine pests, the seeds will be judged to contain state-prohibited pests.

### **6.3.2 Test methods**

The test method for quality indicators shall adopt the method specified in GB/T 3543. The following principles should be implemented if there are any following provisions,:

- Methods for normative reference of mandatory national standards;
- Methods stipulated in relevant technical specifications for seeds;
- Methods specified by administrative agencies, judicial agencies or agreed upon in contracts.

### **6.3.3 Allowable error**

For the conformity test of quality characteristic values, when using the rules of 6.3.1 b) for quality judgment, unless agreed in the contract, the following tolerances are allowed between the test value and the labeled value:

- Tolerance for genetic purity, see B.1 of Appendix B;
- Tolerance of germination rate, see B.2 of Appendix B;
- Tolerance of variety purity, see B.3 of Appendix B;
- For unsealed seed bags, a tolerance of 0.5% is allowed for seed moisture; for sealed seed bags, no tolerance for moisture is allowed.

### Appendix A (Informative)

#### Checklist of Label Content and Making Requirements

The content of supervision and inspection of seed labels and the description of cultivation and uses should be determined based on the actual situation. In order to facilitate the organization and implementation of supervision and inspection, the main requirements for authenticity, legality, completeness, standardization and honesty of the labeling and making of this document are listed in Table A. 1. for reference during the inspection.

**Table A.1 Checklist of Labeling and Making Requirements for Seed Label and the Description of Cultivation and Uses**

Label Item		Labeling norms and prohibited acts	Notes
Category 1: General Labeling Items (seed label)	1.Product Name	Crop Type	Plant taxonomy species name
		Seed Category	Label as conventional seeds and hybrids; The conventional seeds shall indicate the generation; if there are already a quality standards for single kernel planting seeds, label single kernel planting or non-single kernel planting.
		Variety Name	Use approved variety names; Label only one variety name, and no decorative text is allowed; the absence of a variety name is considered to have no seed label.
	2. Seed packager Information	Seed Packager Name	The information shall be consistent with the content stated in the Crop Seed Production and Operation License, and other unit names other than the seed
		Number of Seed Production and	

		Operation License	packager name are not allowed to be labeled.	
		Registered Address		
		Contact Information	Telephone/fax, online contact information can be added.	
	3. Quality Indicators	Quality Characteristics and Characteristic Values	Label genetic purity, physical purity, germination rate, and moisture; GM seeds shall also label trait purity of the event; quality characteristics value shall not be lower than the national standard provisions, the number of significant figures is correct.	
		Net Content	Net content: XX g (kg) or number of kernels (plants).	
		Quarantine Certificate Number	The quarantine certificate number of "Quarantine Certificate of Origin" or the "Plant Quarantine Certificate"	
	4. Use-by Date	Month and Year of Production	Month and Year of Production: YYYY year MM month	
		Test Date	Test Date: YYYY year MM month	
		Quality Assurance Period	Quality Assurance Period: XX months	
	5. Use Conditions	Suitable Planting Area for Variety	Determine normatively based on suitable ecological zones	
		Planting Seasons	Planting Seasons: XX Month-XX Month or XX Day XX Month – XX Day XX Month	
	6. Information Code	QR	Traceability to variety name, seed packager, product identification code, product traceability web site information.	

Category 2: Additional Labeling Items (seed label)	1. Registered Variety Seeds	Registration number or introduction file announcement number	The registered variety shall label variety registration number or the provincial variety registration number where the seeds are sold. The introduced variety shall label the introduction file announcement number.		
	2. Recorded Variety Seeds	Variety record number	The recorded variety shall label variety record number.		
	3. GM Seeds	Logo	“GM” words		
		Biosafety Certificate Number	Agricultural GMO Biosafety Certificate Number		
		Information Code	Add information such as events		
	4. Authorized Variety Seeds	Variety Right Number	Authorized varieties shall label their variety rights number.		
	5. Pharmacologically Treated Seeds	Name and Ingredient of Treatment Agent	Label the name of the agent, active ingredient and content		
		Warning Statement	Solutions after accidental ingestion by humans and animals.		
		Toxicity Symbols	Highly toxic: "Highly toxic" + skull symbol; Medium toxicity: "Medium toxicity" + crossbones symbol; Low toxicity: "low toxicity".		
	6. Imported Seeds	Import Approval Number	Shall be consistent with the import (export) approval form.		
		Name of Importer	Shall be consistent with the information on Crop Seed Production and Operation License		
		Registered Address			
		Contact Information	Telephone/fax, online contact information can be added.		

		Other	Use the Chinese and English names of the varieties and seed packager approved by the import (export) form.	
Category 3: General Labeling Items (the description of cultivation and uses)	1. Main characteristics of variety		Consistent with the registration announcement. For major crop varieties that have been approved by more than two provincial levels, the labeling content shall be consistent with the provincial variety approval announcement where the sales place is located; for filed introduced varieties, the labeling content should be consistent with the introduction and filing information.	Descriptions that do not comply with the provisions of laws and regulations such as the Advertising Law and Trademark Law;
	2. Main cultivation measures			
	3. Variety Adaptability		For characteristics such as yield stability, productivity, disease resistance, stress resistance, etc. between different years in suitable planting areas, the labeled values shall not be higher than those stated in the variety registration and record announcements. For crops not subject to registration or record, the variety adaptability shall be implemented with reference to the relevant requirements for recorded crops.	Other information containing exaggerated propaganda, misleading or false words and graphics;
	4. Risk Warning		Seed storage conditions as well as cautions on the risks to varieties caused by factors such as major diseases and insect pests, abnormal climate, lodging and other factors in the sales area.	If the description of cultivation and uses lack the main characteristic, adaptability or risk warnings of the variety, they will be deemed to have no description of cultivation and uses.
	5. Consulting service information			

Category 4: Additional Labeling Items (the description of cultivation and uses))	1.GM Seeds	1. The performance of the target traits such as tolerance to the recommended dosage of herbicides and effectiveness of insect resistance. Backcross-breeding varieties should also be labeled with recipient variety information. 2. Tips on safety control measures when using.	
	2. The description of cultivation and uses are printed separately from the seed label	Label the name of the variety and the information of the seed packager.	
1. Making Forms	Seed Label	1. There are three forms for pack-marketing seeds: directly printed, pasted, fixed or attached (sewing, hanging, etc.)	If the label content is modified or supplemented by cutting, pasting, etc., it will be investigated and dealt with as altered labels.
		2. There are two forms for bulk-marketing seed: print into the printed matter and past, fix or attach to the seeds; printed materials are allowed to be provided to seed users when selling seeds.	
	The Description of Cultivation and Uses	Printed together with the seed label, those printed separately must be attached.	
	Specific Requirements for Imported Seeds	A Chinese label and the description of cultivation and uses should be attached in addition to the original label,	
2. Making and Printing Requirements	Standard Chinese Characters	Except for registered trademarks, labeling words should use standard Chinese characters published by the National Language and Writing Committee	

Font Height	The font height of labeled words, symbols, and numbers shall not be less than 1.8mm. If the Chinese pinyin or foreign language is also labeled, the font should be smaller than or equal to the corresponding Chinese character font. The size of QR code image shall not be smaller than 2cm <sup>2</sup> .	
Layout Requirements	Crop type and seed category, variety name, variety registration or record number, net content, name of seed packager, seed production and operation license number, registration address and contact information, "GMO" words, warning signs and other information should be labeled on the same page. Among them, the variety name should be placed in a prominent position, and the font size should not be smaller than other words on the label.	
Print Quality	Printed content should be clear, eye-catching, durable, easy to recognize and read. The label font, background and background color should form a clear contrast with the substrate and be easy to identify. Warning signs and instructions should be conspicuous, among which "highly toxic" should be printed in red fonts.	
Printing Exemption	The printing of quarantine certificate number, test date, and quality assurance period is allowed to use spray printing, embossing, etc., but they should be clear, legible, and not easy to fall off.	

	Requirements for Printed Matters	Printed matters should be rectangular, with the length and width not less than 110mm × 70mm; the materials used for printing should have sufficient strength to ensure that they are not easily damaged, or the handwriting will not be blurred or peeled off.	
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## Appendix B (Informative)

### Tolerable Error for Comparison with Specified Value of Seed Quality

#### B.1 General Provisions

The conformity of the measured value with the minimum characteristic value of the quality standard specified by laws, regulations, standards or contracts can be evaluated by one-tailed test for tolerable error. If it exceeds the tolerance error, it indicates that there is a significant difference between the two.

#### B.2 Variety Genetic Purity

##### B.2.1 General Provisions

There are various testing methods for variety genetic purity in practice, and the applicable tolerable errors of different methods are also different. This document lists the tolerable errors of plot planting and laboratory testing methods.

##### B.2.2 Plot Planting Identification Method

B.2.2.1 For field seeds, the tolerable error can be calculated using the following formula:

$$T = 1.65 \sqrt{\frac{pq}{N}}$$

where:

T - Tolerable error;

p - The specified value of varietal purity;

q - The numerical value of (100-p)

N - The number of plant seedlings.

Example: The specified value of purity standard is 96.0%, and there are 400 plants planted, then p is 96, q is 4, N is 400, and the tolerable error calculated by the formula is 1.6.

B.2.2.2 For parental seeds used for reproduction, the tolerable error is expressed by the elimination value calculated by the following formula

$$R = X + 1.65\sqrt{X} + 0.8 + 1$$

where:

R - Elimination value;

X - Variation number converted from the standard value.

The calculation result should discard all decimal places without rounding or similar rounding rules.

Example 1: The purity is 99.9%, then the number of variation plants in 4000 plants is  $4000 \times (100\% - 99.9\%) = 4$ ,  $R = 4 + 1.65\sqrt{4} + 0.8 + 1 = 9.1$ , discard all decimals, and its elimination value is 9.

Example 2: The purity is 99.7%, then the number of variation plants in 2000 plants is 6,  $R = 4 + 1.65 \times \sqrt{6} + 0.8 + 1 = 11.84$ , discard all decimals, and its elimination value is 11.

The elimination value can also be obtained by referring to the table. Table B.1 gives the elimination values under different sample sizes and purity standards based on Poisson distribution.

Table B.1 Elimination values under different sample sizes and purity standards ( $\alpha < 0.05$ )

Sample size (plants/ears)	Variety Genetic Purity Standard				
	99.9%	99.7%	99.5%	99.0%	98.0%
	Elimination Value				
200	--	--	4	6	9
300	--	--	5	7	11
400	--	4	6	9	14
1,000	4	7	10	16	29
1,400	5	9	13	21	38
2,000	6	11	16	29	52
4,000	9	19	28	52	96

Note: First determine the population of sample plots in the table, then count the number of variation plants within the sample plots. If the total number of variation plants in the sample plots is close to or greater than the "elimination value", it is necessary to accurately estimate the population of the sample plots. The table marked with "--" indicates that this sample size is too small to conduct an effective test.

### B.2.3 Laboratory Method

B.2.3.1 When determining varietal purity in the laboratory using molecular testing methods, the tolerable error given in Table B.2 (one-tailed test at a significance level of 5%) can be used for comparison with the specified value.

Table B.2 Tolerable gap when comparing the measured value with the specified value

Specified Value	Tolerable Gap							
	n=40	n=60	n=80	n=100	n=140	n=200	n=400	n=1000
100	0	0	0	0	0	0	0	0
99	2.6	2.1	1.8	1.6	1.4	1.1	0.8	0.5
98	3.6	2.9	2.6	2.3	1.9	1.6	1.1	0.7
97	4.4	3.6	3.1	2.8	2.3	2.0	1.4	0.9
96	5.1	4.1	3.6	3.2	2.7	2.3	1.6	1.0
95	5.6	4.6	4.0	3.6	3.0	2.5	1.8	1.1
94	6.2	5.0	4.3	3.9	3.3	2.7	1.9	1.2

92	7.0	5.7	5.0	4.4	3.7	3.1	2.2	1.4
90	7.8	6.3	5.5	4.9	4.1	3.5	2.4	1.5
88	8.4	6.9	6.0	5.3	4.5	3.8	2.6	1.7
85	9.3	7.6	6.5	5.8	4.9	4.1	2.9	1.8
80	10.4	8.5	7.3	6.6	5.5	4.6	3.3	2.1
75	11.2	9.2	7.9	7.1	6.0	5.0	3.5	2.2
70	11.9	9.7	8.4	7.5	6.3	5.3	3.7	2.4
65	12.4	10.1	8.7	7.8	6.6	5.5	3.9	2.5
60	12.7	10.4	9.0	8.0	6.8	5.7	4.0	2.5
55	12.9	10.5	9.1	8.2	6.9	5.8	4.1	2.6
50	13.0	10.6	9.2	8.2	6.9	5.8	4.1	2.6

Note: n refers to the number of sample plants, seedlings, or seed grains.

B.2.3.2 For determining the transgenic purity of varieties, judgment should be made according to relevant elimination/acceptance indicators for transgenic seed testing schemes in "Testing Rules for Crop Seeds- Variety Quality - Testing for Transgenic Seeds".

### B.3 Germination Test

The results of germination tests can be compared with specified values using the tolerable error given in Table B.3 (one-tailed test at a significance level of 5%).

**Table B.3 Tolerable error when comparing germination tests with specified values**

Specified Value		Tolerable Error
Greater than 50%	Lower than 50%	
99	2	1
96~98	3~5	2
92~95	6~9	3
87~91	10~14	4
80~86	15~21	5
71~79	22~30	6
58~70	31~43	7
51~57	44~50	8

### B.4 Physical Purity Analysis

When comparing the results of physical purity analysis with specified values, the tolerable error given in Table B.4 (one-tailed test at a significance level of 5%) can be used.

Table B.4 Tolerable error for comparison of physical purity analysis with specified value

Specified Value		Tolerable Error	
Greater than 50%	Lower than 50%	Seed without husk	Seed with husk
99.95 ~ 100.00	0.00 ~ 0.04	0.10	0.11
99.90 ~ 99.94	0.05 ~ 0.09	0.14	0.16
99.85 ~ 99.89	0.10 ~ 0.14	0.18	0.21
99.80 ~ 99.84	0.15 ~ 0.19	1.21*	0.24
99.75 ~ 99.79	0.20 ~ 0.24	0.23	0.27
99.70 ~ 99.74	0.25 ~ 0.29	0.25	0.30
99.65 ~ 99.69	0.30 ~ 0.34	0.27	0.32
99.60 ~ 99.64	0.35 ~ 0.39	0.29	0.34
99.55 ~ 99.59	0.40 ~ 0.44	0.30	0.35
99.50 ~ 99.54	0.45 ~ 0.49	0.32	0.38
99.40 ~ 99.49	0.50 ~ 0.59	0.34	0.41
99.30 ~ 99.39	0.60 ~ 0.69	0.37	0.44
99.20 ~ 99.29	0.70 ~ 0.79	0.40	0.47
99.10 ~ 99.19	0.80 ~ 0.89	0.42	0.50
99.00 ~ 99.09	0.90 ~ 0.99	0.44	0.52
98.75 ~ 98.99	1.00 ~ 1.24	0.48	0.57
98.50 ~ 98.74	1.25 ~ 1.49	0.52	0.62
98.25 ~ 98.49	1.50 ~ 1.74	0.57	0.67
98.00 ~ 98.24	1.75 ~ 1.99	0.61	0.72
97.75 ~ 97.99	2.00 ~ 2.24	0.63	0.75
97.50 ~ 97.74	2.25 ~ 2.49	0.67	0.79
97.25 ~ 98.49	2.50 ~ 2.74	0.70	0.83
97.00 ~ 97.24	2.75 ~ 2.99	0.73	0.86
96.50 ~ 96.99	3.00 ~ 3.49	0.77	0.91
96.00 ~ 96.49	3.50 ~ 3.99	0.82	0.97
95.50 ~ 95.99	4.00 ~ 4.49	0.87	1.02
95.00 ~ 95.49	4.50 ~ 4.99	0.90	1.07
94.00 ~ 94.99	5.00 ~ 5.99	0.97	1.15
93.00 ~ 93.99	6.00 ~ 6.99	1.05	1.23
92.00 ~ 92.99	7.00 ~ 7.99	1.12	1.31

91.00 ~ 91.99	8.00 ~ 8.99	1.18	1.39
90.00 ~ 90.99	9.00 ~ 9.99	1.24	1.46
88.00 ~ 89.99	10.00 ~ 11.99	1.33	1.56
96.00 ~ 87.99	12.00 ~ 13.99	1.43	1.67
84.00 ~ 85.99	14.00 ~ 15.99	1.51	1.78
82.00 ~ 83.99	16.00 ~ 17.99	1.59	1.87
80.00 ~ 81.99	18.00 ~ 19.99	1.66	1.95
78.00 ~ 79.99	20.00 ~ 21.99	1.73	2.03
76.00 ~ 77.99	22.00 ~ 23.99	1.78	2.10
74.00 ~ 75.99	24.00 ~ 25.99	1.84	2.16
72.00 ~ 73.99	26.00 ~ 27.99	1.83	2.21
70.00 ~ 71.99	28.00 ~ 29.99	1.92	2.26
65.00 ~ 69.99	30.00 ~ 34.99	1.99	2.33
60.00 ~ 64.99	35.00 ~ 39.99	2.05	2.41
50.00 ~ 59.99	40.00 ~ 49.99	2.11	2.48

(\*FAS China Note: This number appears to be an anomaly for this tolerance range)

## B.5 Moisture

A tolerance of 0.5% is allowed for moisture test for unsealed seed containers; no tolerance is allowed for sealed seed containers.

END UNOFFICIAL TRANSLATION

## Attachments:

No Attachments.