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Report Highlights:

On October 28, 2024, the State Administration for Market Regulation (SAMR) published the revised mandatory national standard “General Directive for the Labeling of Agricultural Seeds”, which will come into effect on October 1, 2025. The revised labeling directive, which was notified to the WTO on February 12, 2024, requires significantly more information on the seed label, including identifying information, a description of cultivation and uses, and a QR code which links to traceability data. The directive also clarifies label requirements for genetically engineered (GE) seeds and imported seeds. This report provides an unofficial translation of the revised directive which will replace the national standard (GB 20464) which dates back to 2006.

Summary

On October 28, 2024, the State Administration for Market Regulation (SAMR) published the revised mandatory national standard [General Directive for Labeling of Agricultural Seeds](#) (link in Chinese), which will come into effect on October 1, 2025. This standard will replace the original [GB 20464-2006 General Directive for Labeling of Agricultural Seeds](#) (link in Chinese), which was notified to the World Trade Organization (WTO) in October 2005 and came into effect on November 1, 2006. Please note that the revised directive has not been notified to the WTO and affected stakeholders should conduct their own review of the directive.

On January 4, 2024, the Ministry of Agriculture and Rural Affairs (MARA) published a draft version of the directive for public comment. On February 12, 2024, the draft version was notified to the WTO under [G/TBT/N/CHN/1818](#). There are no major changes in the final version compared to the draft. For an unofficial translation of the draft directive, please see [GAIN Report CH2024-0010](#).

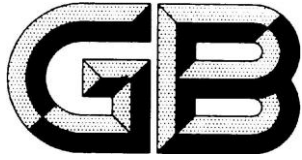
Notable changes in the revised directive include:

1. *Additional required content for seed labels:* Added content includes the testing date, quality assurance period, suitable planting area for the variety, planting season, information codes, 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 label content for the description of cultivation and uses includes the main characteristics of varieties and main cultivation measures, variety adaptability, and a risk warning highlighting the likelihood of yield loss or other failure under likely and extreme environmental stress.
3. *Special labeling for GE Seeds:* For GE seeds, the new draft requires that the seed label include event information from the biosafety certificate and information on the performance of the target trait. Backcross-breeding varieties must be labeled with recipient variety information. The current standard does not require labeling of such information.
4. *Additional labeling for Imported Seeds:* 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. *Size Change and QR Code:* The directive modified label size requirements to be no smaller than 110mm × 70mm (previously 120mm × 80mm) and added requirements for a QR code that provides company information and connects to a website which allows access to traceability data including attributes such as the production and processing batch, logistics and sales information.

This report provides an UNOFFICIAL translation of the revised directive.

BEGIN UNOFFICIAL TRANSLATION

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National Standards of People's Republic of China

GB 20464—2024
Replace GB 20464-2006

General Directive for Labeling of Agricultural Seeds

Issued on October 28, 2024

Implemented on October 1, 2025

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

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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:

- Changed terms and definitions (see Chapter 3, Chapter 3 of the 2006 edition);
- Deleted general provisions (see Chapter 4 of the 2006 edition);
- Changed the labeling content of seed tags (see Chapter 4, Chapter 5 of the 2006 edition);
- Added labeling content of instructions for use (see Chapter 4);
- Changed the production requirements for seed labels and instructions for use (see Chapter 5, Chapter 6 of the 2006 edition);
- Changed in use supervision (see Chapter 6, Chapter 7 of the 2006 edition);
- Added the allowable error compared with the specified value of seed quality (see Appendix B).

Please note that some content in this document may be subject to patents. The issuing authority of this document assumes no responsibility for identifying patents.

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

The previous versions of this document and the documents it replaces are as follows:

- First released in 2006 as GB20464-2006;
- This is the first revision.

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.

GB20464 is based on the "Seed Law of the People's Republic of China" and the "Administrative Measures for Crop Seed Labeling and Use Instructions" 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 marking content and requirements for production and use supervision of crop seed labels and description of cultivation and uses.

This document applies to crop seeds for sales.

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 (all parts) 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 marking content is divided into marking content of seed labeling and marking content of description of cultivation and uses.

Note 2: The marking content consists of general marking content and annotation marking content. The general marking content is what each type of seed should be labeled in accordance with legal provisions;

the annotation I marking content is the marking content that is added to the general marking content based on different variety management, seed characteristics and usage requirements.

Note 3: The annotation marking 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.

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: 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.

Note: Pack-marketing crop seeds include 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.

Note: Bulk-marketing crop seeds include organs and tissues, the seedlings of the vegetative propagation crops and non-kernel seeds unsuitable for package.

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 marking content of seed label

4.2.1 Name of commodity

4.2.1.1 Crop species

Marked 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. Genetically modified (GM) seeds may be jointly labeled with crop species and seed categories.

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

4.2.1.3 Variety name

A variety can only be labeled with one variety name, and no decorative words shall 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) Organs or tissues (mainly including tuberous roots, tubers) of asexually reproduced crops should be labeled according to the quality characteristics specified in the corresponding mandatory standards; for those without mandatory standards, the genetic purity and virus disease status are generally labeled;
- c) For seedling or nursery category, information such as seedling age (or the date when seedlings were started), genetic purity, robust condition, etc., shall be labeled; the nursery should also be labeled with ground diameter, main root length, root width, etc.;
- d) For GM seeds, the GM purity of the variety should be labeled.

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 According to the "Seed Law of the People's Republic of China", due to force majeure reasons, if agricultural production requires the use of seeds with quality requirements approved by local governments, 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 The marking 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 should be marked with the quality assurance period of 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

For registered or filed varieties, the suitable planting area shall be labeled in accordance with the areas stated in the registration or file announcement. For varieties of crops that do not require registration or file

or un-filed varieties, the suitable planting area 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. For certified seeds, information related to seed certification should be included.

4.3 Additional Marking Content of Seed Labeling

4.3.1 Seeds of registered varieties

For seeds of registered varieties, labeling should meet the following requirements:

- a) For major crops, the variety registration number should be labeled;
- b) For those that have passed more than two provincial registrations, at least the provincial variety registration number of the place where the seeds are sold should be labeled;
- c) 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 $LD50 < 50\text{mg/kg}$, mark "seed treatment agent highly toxic" and attach a skull warning sign;

——If $LD50 = 50\text{mg/kg} \sim 500\text{mg/kg}$, mark "seed treatment agent moderately toxic" with a crossbones warning sign;

——If $LD50 > 500\text{mg/kg}$, indicate "seed treatment agent 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.

4.3.9 Certified seeds

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

4.4 General marking content of the description of cultivation and uses

4.4.1 Main characteristics of varieties and main cultivation measures

4.4.1.1 The marking 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 marking 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 marking content must be at least consistent with the provincial variety approval announcement where the sales place is located; for filed introduced varieties, the marking 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 file, the variety adaptability shall be implemented with reference to the relevant requirements for filed 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

The consulting service information should indicate the telephone number, website or technician information required for varieties and planting consulting services.

4.5 Additional marking 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) Risk tips and safety for using GM seeds and control measures.

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

5.1 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.

5.1.2 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.

5.2 Forms of Making

5.2.1 Pack-marketing crop seed

Printing may take one or more of the following forms:

- (a) The marking content is printed directly on the surface of the seed packages;
- (b) marking content is printed into self-adhesive labels and pasted on the surface of the seed packages;
- (c) marking 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 label should indicate the Chinese name and English name of the variety and the seed packager that are consistent with the approval.

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 "seed treatment agent highly toxic", "seed treatment agent moderately toxic" or "seed treatment agent lowly toxic" should be conspicuous, among which "seed treatment agent 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 2cm²;

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 4.2.7) 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;

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. If self-adhesive labels are used, only one self-adhesive label is allowed on each page and should not be altered.

5.4.3 Exemptions

For the printing of quarantine certificate number, year and month of production, 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 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 species, variety name, name of the seed packager, 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

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 and standardization 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

For details, please refer to the marking content and making requirements checklist, see Appendix A.

6.3 Seed Quality Compliance Inspection

6.3.1 Determination rules

When judging the content of quality indicators on seed labels, the following rules should be followed:

- a) For information such as crop species, seed categories, variety names, and GM events 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 (all parts). In special circumstances, the following methods can be used:

- 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 of genetic purity is in accordance with the provisions of B.2 in Appendix B;
- Tolerance of germination rate is in accordance with the provisions of B.3;
- Tolerance of physical purity is in accordance with the provisions of B.4;
- 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 Marking Content and Making Requirements

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	
General Marking Content of 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 standard 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 packager name shall not be labeled.	
		Number of Seed Production and Operation License		
		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.		
Additional Marking Content of 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		The words "GMO" or "GMO seed" can be jointly labeled with the crop species and seed category.	
		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: " Seed treatment agent highly toxic" + skull symbol; Medium toxicity: " Seed treatment agent medium toxicity" + crossbones symbol; Low toxicity: " Seed treatment agent 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.	
7. Subpackaged seeds	The name and address of the subpackaging unit	Shall be consistent with the information on Crop Seed Production and Operation License	
	Subpackaging date	Subpackaging date: YYYY year MM month	
8.Mixed seeds	Composition and proportion	GM seeds that need to be mixed for resistance management and other reasons should be labeled	
9.Certified seeds	Logo	Consistent with the certificate; the certification logo and the name or logo of the certification agency shall be marked at the same time.	
	Name or logo of certified agency		
	Information code	Add certification related information	
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 marking content shall be consistent with the provincial		Descriptions that do not comply with the provisions of laws and regulations such

General Marking Content of the Description of Cultivation and Uses		variety approval announcement where the sales place is located; for filed introduced varieties, the marking content should be consistent with the introduction and filing information.	as the Advertising Law and Trademark Law;
	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; 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.
	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.	
	5. Consulting service information		
Additional Marking Content of 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. Risk tips and safety control measures when using GM seeds.	
	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.	

Making Forms	Seed label	<p>1. There are three forms for pack-marketing seeds: directly printed, pasted, fixed or attached (sewing, hanging, etc.);</p> <p>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.</p>	If the label content is modified or supplemented by cutting, pasting, etc., it will be investigated and dealt with as altered labels.
	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.	
Making and	1. Standard Chinese Characters	Except for registered trademarks, labeling words should use standard Chinese characters published by the National Language and Writing Committee	
	2. 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 ² .	
	3. 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	

Printing Requirements		other words on the label.	
	4.Printing 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 "seed treatment agent highly toxic" should be printed in red fonts.	
	5.Printing Exemption Rules	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.	
	6.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. If self-adhesive labels are used, only one self-adhesive label is allowed on each page and should not be altered.	

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

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.

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 shall be calculated using formula (B.1):

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

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 shall be calculated using formula (B.2):

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

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.

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 GB/T3543.12".

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 70.00 ~ 71.99 65.00 ~ 69.99 60.00 ~ 64.99 50.00 ~ 59.99	26.00 ~ 27.99 28.00 ~ 29.99 30.00 ~ 34.99 35.00 ~ 39.99 40.00 ~ 49.99	1.83 1.92 1.99 2.05 2.11	2.21 2.26 2.33 2.41 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.

References

- [1] Regulations on Naming of Agricultural Plant Varieties (Ministry of Agriculture Order No. 2)
- [2] Seed Law of the People's Republic of China (Order of the President of the People's Republic of China No. 105)
- [3] Administration Measures for Crop Seed Labels and Instructions for Use (Ministry of Agriculture Order No. 6)

END UNOFFICIAL TRANSLATION

Attachments:

No Attachments.