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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 3242-2026

Replacing GB/T 3242-2012

**Technical code of practice for the production of cotton basic
seed**

棉花原种生产技术规程

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 3242-2012 "Technical Operating Procedures for Cotton Seed Production". Compared with GB/T 3242-2012, except for the structure... Aside from adjustments and editorial changes, the main technical changes are as follows:

- a) The scope of the document has been changed (see Chapter 1, Chapter 1 of the 2012 edition);
- b) Added terms and definitions for "three-field method," "two-field method," "self-pollination and crossbreeding method," and "direct propagation method" (see 3.3, 3.4, 3.5, and 3.6);
- c) The "Basic Requirements" (see Chapter 4, Chapter 4 of the 2012 edition) have been revised, adding "limited generation propagation of original seeds" and "safety of genetically modified organisms". Full technical requirements (see 4.3, 4.4);
- d) A basic program flowchart has been added (see Chapter 5);

- e) The "three-field production method" has been added (see Chapter 6);
- f) Increased requirements for field assessment of lodging resistance in row-planted and strain-planted nurseries (see 6.1, 6.2);
- g) The cotton fiber quality testing methods have been revised (see 6.1.6, 6.2.3, 6.3.4; 4.3.1.6, 4.3.2.3, 4.3.3.4 in the 2012 edition);
- h) The "two-field production method" has been added (see Chapter 7);
- i) The "self-cross breeding method" has been amended (see Chapter 8, 4.4 of the 2012 edition);
- j) Added "Breeder's Direct Seed Propagation Method" (see Chapter 9);

1 Scope

GB/T 3242-2026 is the Chinese national standard covering producing basic seed cotton - the isolation from other varieties, the selection and roguing, the ginning kept separate, and the purity that the whole seed multiplication downstream depends on. It replaces GB/T 3242-2012 and has been in force since 1 October 2026. It was issued on 31 March 2026 and takes effect on 1 October 2026, replacing GB/T 3242-2012. The document is under the responsibility of the Ministry of Agriculture and Rural Affairs. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document establishes the procedures for cotton seed production, and stipulates the basic requirements for cotton seed production, including the three-field method, the two-field method, and self-sufficiency. The technical requirements for crossbreeding production, direct seed propagation by breeders, identification of original seed quality, authenticity and purity, and seed storage are described. Quality traceability methods such as process recording were implemented. This document applies to the production of cotton seed (including hybrid cotton parent seeds).

4 Basic Requirements

4.1 Site Selection and Isolation Conditions The original seed production base should be located on a flat, fertile site with convenient irrigation and drainage. In the absence of physical barriers, the surrounding area should be at least [distance missing]. Yida.2000m.

4.2 Original Seed Production Method The original seed production adopts the three-nursery method, the two-nursery method, the self-pollination and cross-propagation method, and the direct propagation method of breeder's seeds.

4.3 Limited propagation of original species Using breeder's seeds as the source, one generation is propagated to become the parent primordial species, and the parent primordial species propagates one generation to become the parent primordial species. The parent primordial species does not... They should be reproduced.

4.4 Biosafety of Genetically Modified Organisms If the seeds of a breeder are genetically modified varieties, the production of the original seeds must comply with the requirements of the "Regulations on the Safety Management of Agricultural Genetically Modified Organisms".

5. Basic Procedures The basic processes of the three-field method and the self-pollination method are shown in Figure 1 and Figure 2, respectively.

6.1 Selection of individual plants

6.1.1 Materials selected for individual plant Individual plant selection can be carried out in the field, in the final selection nursery, or a special selection nursery can be set up.

6.1.2 Examination of characteristics Including key characteristics such as plant shape, leaf shape, bell shape, growth period, and stress resistance, as well as boll-setting ability, high yield, disease resistance, insect resistance, and fiber content. Its quality and other traits are consistent with those of the original species.

6.1.3 Timing of Single Plant Selection The first observation is during the peak boll-forming period, observing the morphological characteristics such as leaf shape, plant shape, and boll shape, and marking them accordingly; the second observation is after the bolls open and before the flowers close. Observe the boll formation and fluffing, and remove any atypical individual plants.

6.1.4 Number of individual plants selected The number of individual plants selected should be determined based on the planned area of the nursery for the following year. Select 80 to 100 individual plants per 666.7 m² of nursery. It is advisable to select at least 200 individual plants per 666.7 m² row.

6.1.5 Harvesting flowers from a single plant Select individual plants, harvest flowers from one plant, one bag per plant. Harvest at least 5 normally opening bolls (8 for Sea Island cotton) from the lower middle part of each plant, then dry and store. For indoor seed testing. Cotton seeds harvested after frost are not used for seed.

6.1.6 Indoor Selection of Single Plants The evaluation of single-plant materials includes five items. single boll weight, lint percentage, seed index, percentage of seeds with different shapes and colors, and fiber quality (including fiber content). Half-length average, breaking strength, micronaire value, fiber uniformity, and elongation. The ginning percentage of the cotton harvested from a single plant is calculated after ginning; after ginning... Randomly select 100 cottonseeds (excluding insect-infested and broken seeds) and determine the

seed index and the rate of off-type and off-color seeds. The rate of off-type and off-color seeds should not exceed 2%. Individual plants meeting all the varietal characteristics criteria are selected for final selection, with a selection rate of 50% being ideal. Fiber quality testing methods shall conform to GB/T 20392. implement.

6.2.1 Field Design and Management

6.2.1.1 Field Design The selected individual seedlings from the previous year are planted in rows in the nursery. Rows are 5-10 meters long, arranged sequentially, with a seedling density 5% lower than in the field. Ideally, one row of the original variety should be placed as a control every nine rows. The row length and number of rows in each section should be consistent, and observation channels should be left between sections. Plant 4 to 6 rows of the original seed of this variety around the perimeter as a protective row, at a height of 1.0m to 1.2m. Design a field planting plan before sowing and sow according to the plan.

6.2.1.2 Field Management Chemical regulation of cotton plants and rows should be light. Other aspects are the same as in field production.

6.2.2 Field observation and identification

6.2.2.1 Record Book Prepare two field observation record books, one original and one copy. The copy should be taken to the field for recording, while the original should be kept indoors. Each observation record should be kept afterward. The original should be copied promptly, or a backup should be made through photocopying, scanning, or photography to establish a system archive. The recorded content should be entered into calculations in a timely manner. Machine, establish database.

6.2.2.2 Observation and Recording Time and Content The survey recorded the dates of seedling emergence, budding, flowering, and boll opening, and observed and recorded the following items.

---Observe uniformity, growth vigor, disease resistance, and insect resistance during the seedling and budding stages; seedlings with a shortage of more than 20% will be initially culled.

---During the flowering and boll-forming stage, observe the typicality, uniformity, disease resistance, insect resistance, and lodging resistance of each row; rows with poor or moderate lodging resistance should be... disuse;

---During the boll-opening stage, its high yield and early maturity can be assessed based on its growth vigor, boll-setting ability, and the degree of concentrated boll opening.

6.2.2.3 Field purity assessment The field purity assessment was conducted in two stages.

---The first examination of plant shape and leaf shape was conducted during the peak budding stage;