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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 3543.6-2025

Replacing GB/T 3543.6-1995

Rules for agricultural seed testing - Part 6: Sowing quality - Determination of moisture content

农作物种子检验规程 第6部分：播种质量 水分测定

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 6 of GB/T 3543 "Regulations for the inspection of crop seeds". GB/T 3543 has been published in the following parts.

- Part 1: General;

- Part 2: Sampling;

- Part 3: Seeding quality and purity analysis;

- Part 4: Seeding quality germination test;

- Part 5: Variety quality and purity identification;

- Part 6: Determination of moisture content of sowing mass;

- Other items inspection;

- Part 8: Determination of sowing quality and thousand-grain weight;

- Part 9: Determination of sowing quality and viability;

- Part 10.Determination of seeding quality and vitality;

- Part 11.Variety quality and authenticity identification;

- Part 12.Determination of variety quality of genetically modified seeds.

This document replaces GB/T 3543.6-1995 "Testing Procedure for Crop Seeds - Determination of Moisture Content" and is consistent with GB/T 3543.6-1995.

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Added a chapter "General Principles" (see Chapter 4);

- Added sample exposure time requirements for sample mixing, crushing, slicing and sub-sampling (see 6.1.3, 6.2.2, 6.2.3, 7.1.1);

- Changed the preparation requirements for samples that do not require preparation, need to be crushed, need to be sliced, and need to be pre-baked (see 6.2, Chapter 5 of the 1995 edition);

- Added provisions for samples, secondary samples and repetitions (see 6.2.3.2, 6.2.4.2, 7.1);

- Changed the applicable types, drying preparation, drying temperature and drying time of low constant temperature and high constant temperature oven methods (see 7.2, 1995 edition Chapter 5), deleted the relative humidity requirement of the measurement environment (see 5.1 of the 1995 edition);

- Updated the provisions for allowable errors (see 8.2, 6.2 of the 1995 edition), and added additional information on result reporting (see Chapter 9);

- Added calibration monitoring and moisture determination methods for moisture meters (see Appendix A).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was 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 Technical Committee on Standardization of Crop Seeds (SAC/TC37).

This document was drafted by: National Agricultural Technology Extension Service Center, Hebei Provincial Seed Station, Heilongjiang Provincial Seed Industry Technology Service Center, Henan Provincial Seed Industry Development Center, Zhangye Agricultural and Rural Bureau, Jiangsu Seed Management Station, Jilin Seed Management Station, Changchun Vocational and Technical College, Gansu Provincial Seed Station.

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

- First issued in 1983 as GB 3543-1983;

- First revised in 1995 to GB/T 3543.6-1995;

- This is the second revision.

Introduction

Seed quality has many verifiable cultivation values, forming the currently recognized sowing quality, variety quality, and health quality.

Among them, sowing quality mainly reflects the impact of seed appearance quality on seed sowing, and is divided into physical Quality and physiological quality. The most commonly used physical quality is cleanliness, dryness, fullness, uniformity and other characteristics, such as water Physiological quality mainly reflects the vitality of seeds, especially under suitable environmental control conditions.

The structural function and developmental capacity of seedlings under most conditions, that is, the ability to normally germinate and grow into plants under most conditions. The main indicators of physiological quality are germination Seed variety quality (varietal quality) is also called genetic quality (genetic quality), which mainly reflects The genetic background characteristics and genetic background consistency of crop seeds. At present, the indicators for measuring seed variety quality include variety authenticity The health quality mainly reflects the health status of seeds, whether there are any Pathogens, such as fungi, bacteria and viruses, and animal pests, including nematodes and insects, may also be involved in physiological conditions, such as trace element deficiencies.

GB/T 3543 "Inspection Procedures for Crop Seeds" is the basic standard for seed inspection methods. It consists of general principles, sampling, sowing quality, variety quality It is composed of the following 12 parts. part.

- Part 1: General. The purpose is to establish the general and overall requirements for each part of the inspection procedures for crop seeds and to govern the inspection procedures. Each part of the program.

- Part 2: Sampling. The purpose is to clarify the methods of sampling from seed batches, sub-sampling for testing and preservation of samples. program.

- Part 3: Seeding quality purity analysis. The purpose is to clarify the method for determining the net seed content in crop seed samples program.

- Part 4: Seeding quality germination test. The purpose is to clarify the test method and procedures for the germination of crop seed samples.

- Part 5: Variety quality and purity identification. The purpose is to determine the percentage of seeds of this variety in a seed sample. Methods and procedures.

- Part 6: Determination of moisture content in seeding mass. The purpose is to clarify the method and procedure for moisture content of crop seed samples.

- Part 7: Other items of inspection. The purpose is to clarify the method and procedures for seed sample health.

- Part 8: Determination of 1000-seed weight of sowing quality. The purpose is to clarify the method and procedure for determining the weight of 1000 seeds per seed sample.

- Part 9: Determination of sowing quality viability. The purpose is to clarify the method and procedure for determining the viability of seed samples.

- Part 10.Determination of seed quality vitality. The purpose is to clarify the method and procedure for determining the vitality of seed samples.

- Part 11.Variety quality and authenticity identification. The purpose is to clarify the identification methods and procedures for variety authenticity.

- Part 12.Determination of genetically modified seeds for variety quality. The purpose is to clarify the composition, genetic purity and gene authenticity of genetically modified seeds.

Procedure for determination of authenticity.

This document is the "moisture determination" part of seed quality. Seed moisture determination can be done in a variety of ways to meet the needs of the modern seed industry.

In order to meet the development needs, this document includes the oven test method and moisture meter test method based on the international seed inspection procedures.

The dryness of seeds is an indicator of the quality of seed processing. Seed moisture is related to seed maturity, the best time for seed harvesting, seed thousand-grain weight, seed processing Drying rationality is closely related to seed storage life, and is one of the important indicators of seed quality control, which affects seed safety packaging and Moisture determination is an important factor for safe storage and transportation. Moisture determination has many applications in the seed industry chain, especially for seeds in sealed packages.

The moisture content of the seeds must be controlled below the safe moisture content for storage and transportation.

Crop Seed Inspection Procedures Part 6: Determination of moisture content in seeding mass

1 Scope

This document describes the oven and moisture meter methods for the determination of moisture in crop seeds.