

ICS 65.020.01

CCS B 15



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

GB/T 45211.4-2025

**Technical code of practice for evaluation of resistance to
diseases and insect pests in wheat - Part 4: Fusarium head
blight**

小麦抗病虫性评价技术规程 第4部分：赤霉病

Issued on: January 24, 2025

Implemented on: August 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

3.1 Fusarium head blight

3.2 disease resistance

3.3

3.4 Pathogenicity

3.5

3.6 Diseaserating scale

3.7 isolate

3.8 culture medium

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 4 of GB/T 45211 Technical Specification for Evaluation of Disease and Insect Resistance of Wheat. GB/T 45211 has been published as follows part.

- Part 1: Stripe rust;
- Part 2: Leaf rust;
- Part 3: Stem rust;
- Part 4: Fusarium fusarium;
- Part 5: Sheath blight;
- Part 6: Yellow dwarf disease;
- Part 7: Aphids;
- Part 8: Midges.

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

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Introduction

GB/T 45211 "Technical Procedures for Evaluation of Wheat Disease and Insect Resistance" aims to standardize the technical methods, operating procedures and identification of wheat disease and insect resistance.

Evaluation principles provide standardized technical methods for breeding material screening, hybrid offspring selection, disease resistance gene discovery and variety evaluation and approval.

The method plays an important role in guiding and promoting disease-resistant breeding, variety layout and plant quarantine of wheat in China.

GB/T 45211 is divided into the following 8 parts.

- Part 1: Stripe rust;
- Part 2: Leaf rust;
- Part 3: Stem rust;
- Part 4: Fusarium fusarium;
- Part 5: Sheath blight;
- Part 6: Yellow dwarf disease;
- Part 7: Aphids;
- Part 8: Midges.

Technical regulations for evaluating wheat disease and insect resistance Part 4: Fusarium head blight

1 Scope

This document defines the terms and definitions of wheat resistance evaluation technology, establishes the evaluation procedures, and specifies the preparation of inoculum, identification of nursery stock, and the Field setup, resistance evaluation, etc., and

verification methods are described.

This document applies to the field identification and evaluation of resistance to Fusarium head blight in wheat plants.

2 Normative references

This document has no normative references.

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Fusarium head blight

Wheat diseases.

3.2 disease resistance

A heritable trait in plants that can reduce or overcome the pathogenic effects of pathogens.

3.3

A description of the degree of response and level of resistance of a host plant to a specific pest or disease based on the adopted technical standards.

3.4 Pathogenicity

The ability of pathogens to interfere with host growth and cause disease.

3.5

The process of placing the inoculum into the diseased part of the plant through artificial operation under suitable conditions and causing it to become diseased.

3.6 Diseaserating scale

An artificial numerical quantitative description of the degree of disease in individual plants or groups.

Note. Includes disease index and severity.

3.7 isolate

A culture of pathogenic bacteria obtained from the diseased site through artificial cultivation, purification, re-inoculation and isolation.

3.8 culture medium

A substrate that enables pathogens to grow.

Note. Includes natural preparation and artificial preparation.

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