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

GB/T 45211.8-2025

**Technical code of practice for evaluation of resistance to
diseases and insect pests in wheat - Part 8: Blossom midges**

小麦抗病虫性评价技术规程 第8部分：吸浆虫

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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 is required.

This document is part 8 of GB/T 45211 Technical Specification for Evaluation of Disease and Pest 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 head blight; --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 methods of wheat disease and insect resistance.

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

This 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 for the 8 major pests and diseases that cause great harm. --Part 1: Stripe rust; --Part 2: Leaf rust; --Part 3: Stem rust;

--Part 4: Fusarium head blight; --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 8: Midges

1 Scope

This document defines the terms and definitions of wheat resistance evaluation technology, establishes the evaluation procedures, and specifies the content of field resistance identification.

The verification method is described.

This document applies to the field characterization and evaluation of resistance of wheat plants to midges.

2 Normative references

GB/T 24501.2

NY/T 616

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 wheat midge wheat blossom midge

It belongs to the family Diptera. It uses its larvae to rip the pericarp of wheat fruit that is still filling with grain and suck the sap, causing the grains to become thin or even empty. Pests.

Note. In China, the main species is the red wheat midge (*Sitodiplosis mosellana*), while in mountainous areas and some special ecological areas, there is the yellow wheat midge (*Contarinia tritici*).

3.2 Insect pest resistance

Plants have heritable traits that make them resistant to insect infestation.

3.3 estimated loss rate of insect pests

Based on the number of insects in each ear of wheat kernels, the yield loss caused by insect pests is estimated as a percentage of the receivable yield.

3.4 quadrat sampling and number of insects per quadrat

The number of each effective insect stage contained in a sample plot is the insect population of a sample, which is used to indicate the insect population density of larvae, pupae and other insect stages in the soil.

Note. Sampling is carried out according to the sampling method specified in NY/T 616.A soil sample square (10 cm x 10 cm x 20 cm) taken by a soil sampler is a sample square.

4 Evaluation Procedure

The evaluation procedure of wheat resistance to midge includes identification of nursery site selection and setting, natural insect susceptibility, resistance classification at adult stage, estimated loss rate from insect pests, and