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

GB/T 15796-2026

Replacing GB/T 15796-2011

**Technical specification for the monitoring and forecasting of
wheat head blight**

小麦赤霉病测报技术规范

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Table of Contents

- 1 Scope
- 4 Classification or calculation methods for survey items
- 4.4 Disease incidence rate
- 5 Investigation of the initial bacterial count
- 5.3 Survey Methodology
- 6 Disease progression survey
- 8 Forecasting and Prediction
- 9 Collection, compilation and reporting of monitoring and forecasting data
- 9.1 Data Collection

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 15796-2011 "Technical Specification for Monitoring and Forecasting of Wheat Fusarium Head Blight". Compared with GB/T 15796-2011, except for the structure... Aside from adjustments and editorial changes, the main technical changes are as follows:

- a) Added classification or calculation methods for survey items (see Chapter 4);
- b) The relevant content and reporting forms for the bacterial source baseline survey have been revised (see Chapter 5 and Table A.1, Chapter 4 and Table A.1 of the.2011 edition). Table A.2);
- c) The content related to aerial ascospore capture has been deleted (see 4.3 in the.2011 edition);
- d) The relevant content of the disease survey has been modified, merging "Systematic Disease Survey" and "General Disease Survey" into "Dynamic Disease Survey" and streamlining it. Related content (see Chapter 6, Chapters 5 and 6 of the.2011 edition);
- e) The grading index for the severity of wheat scab occurrence has been changed, and the upper limits for levels 1, 2, and 3 have been lowered (see Chapter 7,.2011 edition). Chapter 3);
- f) Added content related to using smart devices for disease prediction (see 8.4);

g) Added relevant content regarding the reporting of wheat scab monitoring information (see 9.3);

h) The wheat scab model report and damage estimation model have been removed (see Appendix D of the 2011 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the Ministry of Agriculture and Rural Affairs of the People's Republic of China. This document was drafted by: National Agricultural Technology Extension Service Center, Jiangsu Provincial Plant Protection and Quarantine Station, and Henan Provincial Plant Protection and Quarantine Station, Hubei Provincial Plant Protection Station, Shaanxi Provincial Plant Protection Station. The main drafters of this document are: Zeng Juan, Bian Yue, Jiang Yuying, Liu Jie, Zhang Haibo, Peng Hong, Yang Junjie, and Xie Feizhou. The release history of this document and the document it replaces is as follows:

---First published in 1995 as GB/T 15796-1995, and revised for the first time in 2011;

---This is the second revision. Technical Specifications for Monitoring and Forecasting of Wheat Fusarium Head Blight

1 Scope

GB/T 15796-2026 is the Chinese national standard covering forecasting fusarium head blight - a disease that infects wheat during flowering if it rains, and that leaves mycotoxins in the grain, so the forecast has to be made from the weather in a window of a few days. The forecast decides whether a province sprays millions of hectares. It replaces GB/T 15796-2011 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 15796-2011. 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 specifies the requirements for the investigation, forecasting, data recording, summarization, and reporting of wheat scab, and describes the corresponding verification methods. This document is applicable to the investigation and prediction of wheat scab disease.

4 Classification or calculation methods for survey items

4.1 Carrier rate of diseased and disabled individuals The bacterial carriage rate of diseased plant debris is expressed as the percentage of diseased plant debris clusters (strains) producing ascocarps to the total number of clusters (strains) surveyed, and is calculated according to formula (1). Calculate the weighted average bacterial carriage rate of ascocarp

in diseased and damaged tissues.

4.2 Ascocarp maturity Indoor microscopic examination of diseased perithecia was used to grade the specimens based on the maturity of most spores within the microscope's field of view, resulting in four grades.

0.Periothecia are formed, but no asci or ascospores are present;

1.Ascocarp stage, when crushed, only club-shaped and chrysanthemum-shaped clusters of asci are visible, and no ascospores are seen;

2.Ascospore stage, with clear septa of ascospores, or distinctly identifiable ascospores within the asci;

3.Ascospore release stage. The ascocarps are large and fragile, containing a large number of ascospores. The surface of the ascocarps is often gray or pink. Colored powder.

4.3 Ascocarp Maturity Index Calculate according to formula (2).

4.4 Disease incidence rate

4.4.1 Disease incidence rate in a single field Calculate according to formula (3).

4.4.2 Regional average disease incidence rate Calculate according to formula (4).

4.5 Severity The severity of wheat disease is classified into 5 levels based on the disease presence in the wheat ear (including whitehead symptoms caused by stalk rot).

0.No disease;

1.Diseased spikelets account for less than 1/4 of all spikelets;

2.Diseased spikelets account for less than 1/4 to 1/2 of all spikelets;

3.Diseased spikelets account for less than 1/2 to 3/4 of all spikelets;

4.Diseased spikelets account for 3/4 or more of all spikelets.

4.6 Disease Index Calculate according to formula (5).

4.7 Infected Area The area of fields with a disease incidence rate greater than 0.1% is considered the area affected by Fusarium head blight.

5 Investigation of the initial bacterial count

5.1 Survey period The survey should be conducted once each during the wheat jointing and booting stages, and the survey time should be roughly the same for each year in the same region.

5.2 Survey Fields In rice-wheat rotation areas, three areas with remaining rice stubble were selected, and three plots were surveyed at each location; in dryland farming areas, areas

with remaining corn and wheat straw were selected. Three areas with diseased or damaged ears of wheat were selected, and three plots were surveyed at each location. The selected plots should be representative, and the area of this type of field in the local wheat fields should be estimated. Product ratio.

5.3 Survey Methodology

5.3.1 Survey of bacterial carrier rate in diseased and disabled individuals Select the main overwintering sites of Fusarium head blight, and check the presence of the pathogen on rice stubble, corn or wheat straw, etc., and conduct random surveys in each field. Calculate the bacterial carriage rate of diseased and damaged body parts in an area of 5m² to 10m².

5.3.2 Ascocarp Maturity Survey Take one ascocarp that produces the most perithecia from the diseased plant debris. The total number of samples taken from each type of field should be more than 10, and bring them back to the laboratory for microscopic examination. Each perithecia (including inner and outer perithecia) was selected from different parts and placed on a glass slide with water droplets. A coverslip was then placed on top, and the slide was crushed. Microscopic examination of the perithecia was performed to determine their maturity level, and the perithecia maturity index was calculated. The survey results were recorded according to Table A.1 in Appendix A.

6 Disease progression survey

6.1 Survey period Surveys were conducted every 7 days from the beginning of the heading stage until the waxy ripening stage. The waxy ripening stage survey was a fixed-location survey.

6.2 Survey Fields Based on the type of previous crop (rice or dryland), wheat variety, and growth period, select no fewer than 10 plots of various types. Main types A control field should be set up in the field, and no fungicide should be sprayed during the growing season.

6.3 Survey Methodology Five random sampling points were taken from each field, with 100-200 ears of grain surveyed at each point. The number of diseased ears was counted, and the diseased ear rate and diseased field rate were calculated. The survey was conducted strictly at the time of field determination. For severe cases, calculate the disease index and estimate the granulation rate based on the severity. Record the data according to Table A.2.

7. Occurrence severity grading index The severity of wheat scab is classified into five levels. mild (Level 1), moderately mild (Level 2), moderately severe (Level 3), and severely severe (Level 4). (Level 4) and (Level 5) outbreaks are determined primarily by the average diseased ear rate from local surveys and by referencing the percentage of diseased area.