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

GB/T 17980.22-2026

Replacing GB/T 17980.22-2000

**Pesticides - Guidelines for field efficacy trials - Part 22:
Fungicides against cereal powdery mildew**

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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 is Part 22 of GB/T 17980, "Guidelines for Field Efficacy Testing of Pesticides". GB/T 17980 has published the following... part.

- 1. Insecticide control of lepidopteran borers in rice;
- 2. Insecticide Control of Rice Leaf Roller;
- 3. Pesticide Control of Rice Leafhoppers;
- 22. Fungicides for the Control of Powdery Mildew in Cereals;

---Part 149: Insecticides for the Control of Red Imported Fire Ants. This document replaces GB/T 17980.22-2000 "Guidelines for Field Efficacy Testing of Pesticides (I) - Control of Powdery Mildew on Cereals with Fungicides". Compared with GB/T 17980.22-2000, the main technical changes in the "Disease" standard, apart from structural adjustments and editorial modifications, are as follows:

- a) The scope of application has been changed (see Chapter 1, Chapter 1 of the 2000 edition);

- b) The requirements for test conditions have been changed (see Chapter 4, Chapter 2 of the.2000 edition);
- c) Added requirements for experimental treatments and blank controls (see 5.1);
- d) The requirements for test and control reagents have been changed (see 5.2, 3.1 of the.2000 edition);
- e) Changes were made to cell arrangement, cell size, and duplication requirements (see 5.3, 3.2 of the.2000 edition);

1 Scope

GB/T 17980.22-2026 is the Chinese national standard covering the trial protocol for powdery mildew in cereals - a disease that is easy to see and easy to control, and where the question is usually whether the treatment paid for itself. The GB/T 17980 series is what a pesticide registration in China rests on: it fixes the plot design and replication, the application rate and timing, the assessment of the pest, disease or weed and of the crop, and the analysis of the result. It replaces GB/T 17980.22-2000 and has been in force since 1 September 2026. It was issued on 27 February 2026 and has been in force since 1 September 2026, replacing GB/T 17980.22-2000. 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 describes the methods for field efficacy plot trials of fungicides for controlling powdery mildew (*Blumeriagraminis*) in cereals. This document applies to field efficacy plot trials and efficacy evaluations of fungicides for the control of powdery mildew in cereal crops, and is applicable to other field efficacy trials. The verification shall be carried out in accordance with the reference.

4 Test conditions

4.1 Selection of test subjects, crops and varieties The test subject was powdery mildew in cereal crops. The experimental crops were winter (spring) wheat, barley, rye, and other cereal crops, using susceptible varieties or locally grown varieties. The variety names were recorded.

4.2 Environmental Conditions Field trials should be conducted in disease-prone areas. Cultivation conditions (soil type, fertilization, variety, row spacing, sowing density) should be considered for all trial plots. The degree should be uniform and consistent, and conform to local scientific agricultural practices.

5 Experimental Design and Arrangement

5.1 Test Treatment The following treatments should be set up. test reagent, control reagent, and blank control.

5.2 Reagents

5.2.1 Test reagents The test reagent should be applied at least three times; in special cases, the dosage should be set according to experimental requirements. Specify the Chinese/English common name or code of the reagent. Dosage form, active ingredient content, manufacturer, production date or batch number, etc.

5.2.2 Control reagent The control agent should be a registered, locally commonly used product with good efficacy and safety in actual use. The type and function of the control agent should be clearly defined. The method should be the same as or similar to that of the test drug, and the registered dosage should be used. If the test drug is a compound formulation, a single dose of each active ingredient should also be included. Control drug. Special cases may vary depending on the purpose of the experiment. Record the Chinese/English common name, dosage form, active ingredient content, and manufacturer of the control drug. The product name, registration number, production date or batch number, and dosage are required.

5.3 Community Arrangement

5.3.1 Layout of the community The experimental, control, and blank control plots were randomly assigned to blocks, and the plot arrangement was recorded. Special circumstances should be noted. illustrate.

5.3.2 Area of the community and duplication Community area. 15m²~50m². Number of repetitions. at least 4 repetitions.

6 Applying pesticides

6.1 Application Method Follow the test requirements and label instructions. Application methods should be adapted to local scientific agricultural practices. Record the application methods and procedures. process.

6.2 Application equipment Select commonly used equipment in production, or choose equipment according to experimental requirements. Record the type of equipment used and its operating conditions (e.g., working pressure, etc.). All information regarding nozzle type and nozzle diameter.

6.3 Application time and frequency Conduct the experiment according to the test requirements and label instructions. Record the number of applications, the date of each application, and the crop growth stage. The first application should be made at the site of

the disease. Before or at the initial stage of an outbreak, the decision to apply pesticide again depends on the development of the disease during crop growth.

6.4 Dosage Administer the medication according to the test requirements and the dosage specified on the label, and record the prepared dosage and the amount of active ingredient. The prepared dosage is usually expressed in mL/667m² (milliliters). The dosage is expressed as per 667 square meters (g/667m²) or g/667m² (grams per 667 square meters), while the effective ingredient dosage is expressed as g/hm² (grams per hectare). **Spray application.** When applying pesticides, record the amount of pesticide solution used per hectare, expressed in L/hm² (liters per hectare). The pesticide application should be evenly distributed; deviations in application should be minimized. If the value exceeds $\pm 10\%$, its impact should be recorded and assessed.

6.5 Data Requirements for Pesticides for Controlling Other Pests and Diseases If other agents are used, those that have no effect on the test agent and the test subjects should be selected, and all plots should be treated uniformly. Furthermore, it should be used separately from the test and control agents to minimize interference from these agents. Accurate records of the application of this type of agent should be kept. Data such as the generic name of the drug, dosage form, content of active ingredient, manufacturer, dosage, application method, application time, and target pests.

7.1 Drug Efficacy Survey

7.1.1 Survey Methodology Five sampling points were taken along the diagonal of the residential area, with 50 plants surveyed at each point. Four leaves were examined on each plant, with the fourth leaf being the topmost unfolded leaf, and so on. Number them downwards as leaf 3, leaf 2, leaf 1, for a total of 4 leaves. The classification of powdery mildew is as follows (by plant).

0.No disease;

1.The area of lesions on the first leaf accounts for $\leq 25\%$ of the total leaf area;

2.The area of lesions on the first leaf accounts for more than 25% of the total leaf area;

3.The area of lesions on the second leaf $\leq 25\%$ of the leaf area;

4.The area of lesions on the second leaf exceeds 25% of the leaf area;

5.The area of lesions on the third leaf $\leq 25\%$ of the leaf area;

6.The area of lesions on the third leaf exceeds 25% of the leaf area;

7.The area of lesions on the 4th leaf accounts for $\leq 25\%$ of the total leaf area;

8.The lesion area on the 4th leaf accounts for more than 25% of the total leaf area, and the lesion area on leaves below the 4th leaf accounts for more than 50%;