

ICS 65.100
CCS B 17



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

GB/T 17980.42-2026

Replacing GB/T 17980.42-2000

**Pesticides - Guidelines for field efficacy trials - Part 42:
Herbicides against weeds in maize**

农药 田间药效试验准则 第42部分：除草剂防治玉米田杂草

Issued on: February 27, 2026

Implemented on: September 1, 2026

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

Table of Contents

- 1 Scope
- 2 Equivalent to 0.1%~2.5% of the blank control area; - Level
- 3 Equivalent to 2.6%~5% of the blank control area; - Level
- 4 Test conditions
- 5 Experimental Design and Arrangement
- 5.2 Reagents
- 5.3 Community Arrangement
- 6 Applying pesticides
- 7 Survey
 - 7.1 Weed Survey
 - 7.2 Crop pesticide damage survey
 - 7.5 Other investigations and records
- 8 Equivalent to 35.1%~67.5% of the blank control area; - Level

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 42 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;
- 42.Herbicides for Weed Control in Corn Fields;

---Part 149: Insecticides for the Control of Red Imported Fire Ants. This document supersedes GB/T 17980.42-2000 "Guidelines for Field Efficacy Tests of Pesticides (I) Herbicides for the Control of Weeds in Corn Fields", and is consistent with... Compared with GB/T 17980.42-2000, apart from structural adjustments and editorial changes, the main technical changes are as follows:

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

- b) The requirements for selecting the test weeds have been changed (see 4.2, 2.2 of the 2000 edition);
- c) Added provisions for test treatment (see 5.1);
- d) The requirements for test and control reagents have been changed (see 5.2, 3.1 of the 2000 edition);
- e) The requirements for dosage and water consumption have been changed (see 6.4,

1 Scope

GB/T 17980.42-2026 is the Chinese national standard covering the trial protocol for maize herbicides - the pre- and post-emergence timings, the weed assessment by species and the crop injury scoring, plus the carryover to the following crop. 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 and of the crop, and the analysis of the result. It replaces GB/T 17980.42-2000 and has been in force since 1 September 2026, one of the parts of the series revised together. It was issued on 27 February 2026 and has been in force since 1 September 2026, replacing GB/T 17980.42-2000. 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 method for field plot trials of herbicides for controlling weeds in cornfields. This document applies to field efficacy plot trials and safety evaluations for herbicides used to control weeds in cornfields.

4 Test conditions

4.1 Selection of Crops and Cultivars Use locally common cultivation methods and select widely planted varieties. Seed quality should meet the requirements for field seeds in GB 4404.1. Please record the crop species (including Chinese and Latin scientific names), cultivation type, and variety name.

4.2 Selection of weeds as test subjects The weeds in the test site should be representative, the weed density should meet the experimental requirements, and the weeds should be evenly distributed. The weed community composition should be the same as that of the test herbicide. The herbicide spectrum is consistent. Record the Chinese and Latin scientific names of various weeds.

4.3 Cultivation conditions Soil conditions (soil type, organic matter content, pH, soil moisture, fertility) and tillage practices should be uniform and consistent across all

experimental plots, and should meet the requirements of the current regulations. Agricultural practices based on geosciences. Cultivation measures for maize, such as sowing rate, sowing depth, and plant spacing, should be adapted to local production realities. Record the previous crop and the herbicides used in the previous crop, and avoid selecting plots that may affect corn growth or the effectiveness of the tested herbicides.

5 Experimental Design and Arrangement

5.1 Test Treatment Treatments such as experimental agents, control agents, manual weeding, and blank control should be set up.

5.2 Reagents

5.2.1 Test reagents The test reagent treatment includes four dosages. high, medium, low, and twice the medium dose. Additional dosages may be set according to experimental requirements in special cases. Specify the reagent dosage. The text includes the generic name or code in English, 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 action of the control agent should be specified. The formulation and herbicidal spectrum should be the same as or similar to the test agent, and the registered dosage and application method should be used. If the test agent is a mixture, it should also be... Each active ingredient, in single-dose form, serves as a control. Specific measures may be taken depending on the purpose of the experiment. Record the Chinese/English generic name, dosage form, active ingredient content, manufacturer, registration number, production date or batch number, and application rate of the control drug. Dosage, etc.

5.3 Community Arrangement

5.3.1 Layout of the community Different treatment plots in the experiment were arranged in a randomized block design. In special cases, comparative, in-between, or irregular arrangements may be used. Please provide an explanation.

5.3.2 Area of the community and duplication The area of the residential area is 20m²~30m², and the shape of the residential area is rectangular. Number of repetitions. no less than 4 repetitions.

6 Applying pesticides

6.1 Application Method Follow the test requirements and label instructions, and ensure that the application of pesticides is compatible with local scientific agricultural practices. Record the application methods and procedures.

6.2 Application equipment Use commonly used equipment, or select equipment according to the test requirements. When using the spray method for pesticide application, choose a sprayer with stable pressure and a fan-shaped nozzle. The sprayer is used to apply the pesticide, ensuring that the pesticide is evenly distributed throughout the entire test plot or accurately and directionally distributed to the target area. Record the amount used. Information such as equipment type and operating conditions (working pressure, nozzle type, nozzle diameter, flow rate, etc.).

6.3 Application time and frequency Follow the test requirements and label instructions. If the application time is not specifically specified on the label, it should be determined based on the test objective and the test reagent. The application of pesticides should be based on their specific effects. Application times are categorized according to the emergence time of weeds and corn.

- a) Before crop sowing;
- b) Post-sowing and pre-emergence stages of crop growth;
- c) After the crop emerges. Record the date and time of application, as well as the growth status of weeds and corn at the time of application (growth stage and the proportion of each type of weed, etc.).

6.4 Dosage and Water Consumption Apply the pesticide according to the test requirements and the dosage and water usage specified on the label. The dosage of the pesticide is expressed in g/hm² (grams per hectare) of active ingredient. Dosage is expressed in mL/667m² (milliliters per 667 square meters) or g/667m² (grams per 667 square meters), and water consumption is expressed in L/hm² (liters per hectare). The quantities are expressed in liters per hectare (L/667m²) and liters per 667 square meters (L/667m²). If the water volume is not specified in the agreement, it can be determined based on the method of action of the test agent and the spraying method. The type of equipment should be determined, and the water consumption should be based on local production conditions. Accurate dosage should be ensured during pesticide application; the dosage deviation should not exceed a certain limit between replicates of the same treatment. Exceeding $\pm 5\%$. Record factors affecting efficacy, duration of action, and selectivity.

6.5 Data requirements for pesticides used to control pests, diseases, and non-target weeds If other pesticides are used during the trial, those that have no effect on the test pesticide, target weeds, and corn should be selected, and all plots should be treated. Treat uniformly. It should be used separately from the test and control agents, and the name, timing of application, method of application, and dosage of the agent should be recorded. Action targets, etc.

7.1 Weed Survey

7.1.1 Survey Methodology Describe in detail the symptoms of weed damage (such as