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

GB/T 17980.50-2026

Replacing GB/T 17980.50-2000

**Pesticides - Guidelines for field efficacy trials - Part 50:
Herbicides against weeds in sugar beet**

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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 50 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;

50. Herbicides for Weed Control in Sugar Beet Fields;

---Part 149: Insecticides for the Control of Red Imported Fire Ants. This document supersedes GB/T 17980.50-2000 "Guidelines for Field Efficacy Testing of Pesticides (I) Herbicides for the Control of Weeds in Sugar Beet Fields", and is consistent with... Compared with GB/T 17980.50-2000, apart from structural adjustments and editorial changes, the main technical changes are as follows:

a) A new chapter on "Terms and Definitions" has been added (see Chapter 3);

- b) The requirements for selecting the test weeds have been changed (see 4.2, 2.2 of the 2000 edition);
- c) The requirements for cultivation conditions have been changed (see 4.3, 2.3 of the 2000 edition);
- d) Added provisions for test treatment (see 5.1);
- e) The requirements for test and control reagents have been changed (see 5.2,

1 Scope

GB/T 17980.50-2026 is the Chinese national standard covering the trial protocol for sugar beet herbicides - a crop that is slow to cover the ground and that is closely related to some of its worst weeds, which is why beet herbicide programmes are built from repeated low doses. 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 or disease and of the crop, and the analysis of the result. It replaces GB/T 17980.50-2000 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 17980.50-2000. 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 specifies the methods and basic requirements for field plot trials of herbicides for controlling weeds in sugar beet fields. This document applies to field efficacy plot trials and safety evaluations of herbicides for the control of weeds in sugar beet, feed, and edible sugar beet fields for registration.

4 Test conditions

4.1 Selection of Crops and Cultivars Locally common cultivation methods were used, and widely planted varieties were selected. Beet varieties (including Chinese and Latin scientific names) and cultivated types were recorded. 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 in geosciences. The tested sugar beet cultivation types, as well as cultivation measures such as sowing date, sowing rate, sowing depth, plant spacing, and row spacing, should conform to local production conditions. actual. Record the previous crop and the herbicides used in the previous crop, and avoid selecting plots that may affect the growth of sugar beets 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. Text/English generic name or code, 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 information 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. List them and explain them.

5.3.2 Area of the community and duplication The area of the residential area is 20m²–30m² (with no less than 4 rows of beets), and the shape of the residential area is rectangular. Number of repetitions. at least 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 Choose 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 characteristics. Application times are categorized according to the emergence time of weeds and sugar beets.

- a) Before beet planting;
- b) Post-sowing and pre-emergence stages of sugar beet;
- c) After the beet sprouts. Record the date and time of application, as well as the growth status of weeds and sugar beets 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 volume is expressed in liters per hectare (L/667m²) and liters per 667 square meters (L/667m²). When the water volume is not specified in the experiment, it can be determined based on the mode of action of the test agent and the type of sprayer. The water consumption should be determined based on the type of pesticide and local production conditions. Accurate dosage should be ensured during pesticide application; the dosage deviation between replicates of the same treatment should not exceed [a certain value]. $\pm 5\%$. 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 tested sugar beets should be selected, and all plots should be treated accordingly. Perform homogenization treatment. It should be used separately from the test and control agents, and the name of the agent, application time, application method, and dosage should be recorded. Quantity, target of action, etc.