

ICS 65.020.01

CCS B 15



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

GB/T 15799-2026

Replacing GB/T 15799-2011

**Technical specification for the monitoring and forecasting of
the cotton aphid**

棉蚜测报技术规范

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
- 5 System Survey
 - 5.1 Systematic Survey of Seedling Aphids
 - 5.2 Systematic Investigation of Aphids
- 6 Grand Field Census
- 7 Enemy Survey
 - 7.2 Survey Methodology Same as
- 8 Forecasting
- 9 Data collection, summarization, and reporting

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 15799-2011 "Technical Specification for Cotton Aphid Monitoring and Forecasting". Compared with GB/T 15799-2011, the main differences are structural adjustments and... Aside from editorial changes, the main technical changes are as follows:

- a) The definition of "oil-spotted strain" has been removed (see section 2.2 of the.2011 edition);
- b) Added a severity grading index (see Chapter 4);
- c) The early spring insect population survey has been removed (see Chapter 3 of the.2011 edition);
- d) Statistics on the extent of occurrence and damage/loss have been removed (see Chapter 8 of the.2011 edition);
- e) Changes were made to data collection, summarization, and reporting (see Chapter 9, Chapter 9 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, Institute of Plant Protection, Chinese Academy of Agricultural Sciences, and Xinjiang Uygur Autonomous Region.

District Plant Protection and Quarantine Station, Xinjiang Production and Construction Corps Agricultural Technology Extension Station, Hebei Provincial Plant Protection and Quarantine Station. The main drafters of this document are. Liu Jie, Lu Yanhui, Meng Zehua, Lu Yi, Wei Xinzheng, Ren Chenrong, Zhang Yiyang, Ma Jiangfeng, and Liu Li. The release history of this document and the document it replaces is as follows:

---First published in.1995 as GB/T 15799-1995, and revised for the first time in.2011;

---This is the second revision. Technical Specifications for Cotton Aphid Monitoring

1 Scope

GB/T 15799-2026 is the Chinese national standard covering monitoring cotton aphids - the counts on marked plants, the winged migrants that arrive from the overwintering hosts and the natural enemies that decide whether an outbreak develops. It replaces GB/T 15799-2011 and has been in force since 1 September 2026, with the cotton bollworm and spider mite forecasting standards of the same batch. It was issued on 27 February 2026 and has been in force since 1 September 2026, replacing GB/T 15799-2011. 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 grading indicators for cotton aphid occurrence, systematic surveys, field surveys, natural enemy surveys, forecasting and prediction, and data collection and summarization. Reporting requirements. This document applies to cotton aphid monitoring, surveys, and forecasts.

4.Occurrence severity grading indicators The severity of seedling aphid and summer aphid infestations is classified into five levels. light infestation (Level 1), slightly light infestation (Level 2), moderate infestation (Level 3), and slightly heavy infestation. (Level 4), Outbreak (Level 5). The average percentage of plants with rolled leaves is the primary indicator, with the average number of aphids on the upper, middle, and lower leaves per 100 plants serving as a reference indicator. The grade indicators are shown in Table 1.

5.1 Systematic Survey of Seedling Aphids

5.1.1 Survey period From the emergence of cotton seedlings to the early budding stage, surveys were conducted every 7 days.

5.1.2 Survey Fields Based on the previous cotton crop, select three representative cotton fields and apply no or very little pesticide during the outbreak period.

5.1.3 Survey Methodology A five-point sampling method was used for each field, with 20 plants continuously sampled at each point along the row. The aphid count was investigated

on the entire plant before the three-leaf stage, and on the upper, middle, and lower parts of the plant after the three-leaf stage. The number of aphids on 3 leaves was recorded, and the aphid-infested plant rate and the number of aphids per 100 plants were calculated. When leaf-rolling plants were observed, the number of leaf-rolling plants was also investigated, and the leaf-rolling plant rate was calculated. (Investigation) The results are recorded in Appendix A, Table A.1 and Appendix B, Table B.1.

5.2 Systematic Investigation of Aphids

5.2.1 Survey Time From the budding stage to the boll-opening stage.

5.2.2 Survey Fields Three representative cotton fields were selected, and no or very little pesticide was applied during the outbreak period.

5.2.3 Survey Methodology Five sampling points were taken from each field, with 10 plants at each point, and the survey was conducted every 7 days. For each plant, the number of aphids and leaf curling were checked on the top, middle, and bottom three leaves of the main stem. The number of plants was counted, and the aphid rate, the number of aphids per 100 plants, and the rate of leaf curling were calculated. The results were recorded in Tables A.2 and B.2.

6 Grand Field Census

6.1 Survey period Two to three general screenings are conducted throughout the reproductive period, with one screening each in June and July.

6.2 Survey Fields Based on local planting conditions, select more than 10 representative cotton fields.

6.3 Survey Methodology Random sampling was conducted, with 100 plants surveyed in each field for both seedling aphids and summer aphids. The number of plants with aphids, the number of plants with rolled leaves, and the number of aphids per 100 plants were investigated. The aphid rate and leaf rolling rate were calculated. Leaf-to-plant ratio and average aphid count per 100 plants. Results are recorded in Tables A.3 and A.4.

7 Enemy Survey

7.1 Survey period While conducting a systematic survey of cotton aphids, a survey of the types and numbers of their natural enemies was also carried out.

7.2 Survey Methodology Same as

5.1.3 and 5.2.3. Calculate the benefit-harm ratio per unit area and record the results in Table A.5.

8 Forecasting

8.1 Seedling Aphid Prediction Based on field surveys during the seedling stage, the ratio of beneficial to harmful organisms, the total number of natural enemies, and the peak effective life stages of representative natural enemies (such as ladybugs) in cotton fields were analyzed. The timing of the occurrence and its coincidence with the peak period of aphid infestation, combined with weather forecasts for May-June, and historical statistical summaries of cotton aphid occurrences. Data is analyzed, and various forecasting methods are applied to make forecasts.

8.2 Aphid Prediction Based on the occurrence of seedling aphids, the weather forecast for July-August, and comparison with historical data, a variety of forecasting methods are used to make a forecast.

9 Data collection, summarization, and reporting

9.1 Data Collection Collect and organize local cotton planting area, main varieties, sowing period and local meteorological data.

9.2 Data Summary Compile statistics on the occurrence and control of cotton aphids, summarize the characteristics of the occurrence, analyze the causes, and fill in the basic information on cotton aphid occurrence and control according to Table A.6. Status table.

9.3 Data Reporting Every year after the emergence of seedling aphids and summer aphids, regional monitoring stations across the country shall complete the cotton aphid-related pattern report according to Appendix B and submit it to the superior monitoring station. department. GB/T 15799-2026. Technical Specification for Cotton Aphid Monitoring and Forecasting ICS

15 National Standards of the People's Republic of China Replaces GB/T 15799-2011 Technical Specifications for Cotton Aphid Monitoring Published on 2026-02-

27 Implemented on 2026-09-

01 State Administration for Market Regulation The State Administration for Standardization issued a statement.