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

GB/T 23391.3-2026

Replacing GB/T 23391.3-2009

**Technical specification for the control of major corn diseases
and insect pests - Part 3: Asian corn borer**

玉米主要病虫害防治技术规范 第3部分：亚洲玉米螟

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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 3 of GB/T 23391, "Technical Specifications for the Control of Major Diseases and Pests of Maize". GB/T 23391 has been published as follows: Part 2.

1. Maize Leaf Spot;

2. Corn Leaf Spot Disease;

3. Asian Corn Borer. This document replaces GB/T 23391.3-2009 "Technical Specifications for the Control of Large and Small Leaf Spots and Corn Borers in Maize - Part

3. Corn Borer", and is consistent with... Compared with GB/T 23391.3-2009, apart from structural adjustments and editorial changes, the main technical changes are as follows:

a) The definition of the Asian corn borer has been changed (see 3.1, 2009 edition), and the pupation schedule has been changed to the pupation stage (see 3.4, 2009 edition). Version 3.8);

b) The following terms have been removed. optimal control period, permissible level of economic damage, control indicators, yield loss rate, granular agents, insect sex pheromones, and sex pheromones. Common-sense terms and definitions related to

prevention and control (see sections 3.5-

3.12 of the.2009 edition);

c) The number of sampling points, the number of plants dissected at each point, and the number of samples examined in the overwintering generation population survey of the insect infestation survey have been changed (see 4.1,

4.1 in the.2009 edition). Frequency of examination and number of live worms examined (see 4.2,.2009 edition 4.2);

d) The timing of adult insect population surveys, and the specific procedures for light trapping and pheromone trapping have been modified (see 4.3,.2009 version 4.3);

e) The techniques for surveying egg quantity and hatching status have been changed (see 4.4,

4.3 in the.2009 edition);

1 Scope

GB/T 23391.3-2026 is the Chinese national standard covering controlling the Asian corn borer - the overwintering survey that predicts the pressure, the timing of treatment against the egg hatch, the biological control with trichogramma and the destruction of stubble. It replaces GB/T 23391.3-2009 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 23391.3-2009. 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 establishes the principles for the control of the Asian corn borer, and describes the pest survey, determination of the appropriate control period, and indicators for its control. Prevention and control techniques are described, along with methods for verification such as archival records. This document applies to the control of the Asian corn borer.

3 Asian Corn Borer Published on 2026-02-

27 Implemented on 2026-09-

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

4 Insect Infestation Survey

4.1 Survey of overwintering generation insect population The survey was conducted before

pupation in spring, specifically in mid-May for the first generation, early May for the second generation, mid-April for the third generation, and mid-March for the fourth generation. Ten days later, investigations were conducted at locations where corn stalks were stored in concentrated areas. Five samples were randomly taken from each storage location, and 20 plants were dissected at each location. Straw was collected to investigate the number of live and dead overwintering larvae, and to calculate the mortality rate and the number of larvae per 100 plants. See Appendix A for generational divisions of the Asian corn borer.

4.2 Investigation on the pupation and emergence progress of each generation of stem borer

4.2.1 Overwintering Generation Starting with the initial population survey after winter, checks were conducted every 5 days to monitor the progress of pupation and emergence, stopping when the emergence rate reached 90%. Each dissection... The number of live insects checked shall not be less than

30. Check the live insects or pupae (shells) and their quantity, and calculate the pupation rate and emergence rate according to formula (1) and formula (2) respectively. The calculation result is accurate to one decimal place.

4.2.2 Generations during the growth period Except in areas where the first generation of Asian corn borer is present, corn is susceptible to damage from two generations of Asian corn borer during the whorl and tassel stages. These damages occur at different generations of the Asian corn borer. When the larvae are nearly mature, investigate the pupation and development progress of the larvae on the plants in the field every 5 days, removing 50 live larvae each time, until the emergence rate reaches 100%. Stop when it reaches 50%.

4.3 Adult insect population survey

4.3.1 Survey period The first generation occurs in mid-May, the second generation in early May, the third generation in late April, and the fourth generation begins in mid-March, continuing until the final appearance of adults.

4.3.2 Light Lure Near a cornfield with healthy growth, install one automatic insect monitoring light (or a regular black light). There should be no tall buildings or other structures nearby. If obstructed by trees, the area should be kept away from streetlights and other light sources, with the bottom of the light tube at a vertical distance of

1.5 meters from the ground. Daily checks and statistics on Asian corn borers under the lights are necessary. Record the number of male and female moths, and note the meteorological data for that night. Record the initial, peak, and final stages of the emergence of each generation of moths. Based on the number and height of moths emerging. Peak period, predict the number of eggs and the occurrence of larvae in the field.

4.3.3 Sexual seduction Sex pheromone traps should be placed in weed beds or low-growing crop fields near cornfields, where the Asian corn borer inhabits and mates. Three bell-shaped funnel-type traps were placed on the field ridges for easy access. The traps were positioned at the bottom of the corn plant during the jointing stage. The traps should be placed 20cm above the crop canopy and 1.5m above the ground after the jointing stage; each trap should be at least 50m apart and arranged in a straight line along the field ridge. Its direction is perpendicular to the local monsoon wind direction.

4.4 Investigation of egg quantity and hatching status

4.4.1 Survey period Starting 5 days after the first appearance of adults in each generation, the number of eggs was investigated every 3 days until the last appearance of adults or eggs.

4.4.2 Survey Location Select two representative cornfields in the local area, each with an area of no less than

0.33 hm², and designate them as systematic survey fields.

4.4.3 Survey Methodology Five samples were taken from each field diagonally, with 20 plants sampled at each point. During the initial survey, samples were taken every 3 days, recording the presence of corn borers on the underside of the leaves. The number of egg masses was recorded and marked for observation of parasitism, predation, and hatching during the next survey. Special attention was paid to the fully expanded upper and middle parts of the plant. blade.

5 Optimal timing and indicators for prevention and control

5.1 Optimal Time for Prevention and Control The optimal time for prevention and control is the late stage of the heart leaf and the peak stage of silking. The confirmation method shall be carried out in accordance with the provisions of Appendix B.

5.2 Prevention and control indicators At the late stage of the heart leaf stage, the cumulative number of eggs per 100 plants should be 12 (susceptible varieties) or 20 (moderately resistant varieties), or the rate of mosaic plants should exceed 10%; at the peak of silking stage, the cumulative number of eggs per 100 plants should be... Control measures should be taken when there are 12 eggs, 50 larvae in the first 3rd instar of 100 spikelets, or 10% of the spikelets are infested.

6.Prevention and Control Principles Adhering to the plant protection policy of "prevention first, comprehensive control", with agricultural control as the foundation, priority is given to physical and chemical induction and biological control, combined with chemical... Prevention and control should be carried out by implementing precise and integrated pest management based on pest monitoring.