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

GB/T 29377-2026

Replacing GB/T 29377-2012

**Code of practice for the grading and inspection of virus-free
seed potatoes**

马铃薯脱毒种薯级别与检验规程

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1 Scope

GB/T 29377-2026 is the Chinese national standard covering the grades of certified seed potato and how a lot is inspected - the field inspections during growth, the tuber inspection after harvest, the virus testing and the tolerances at each grade. It replaces GB/T 29377-2012 and has been in force since 1 November 2026, one of four potato standards revised together. It was issued on 30 April 2026 and takes effect on 1 November 2026, replacing GB/T 29377-2012. 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.

6.2 Field inspection and tuber inspection shall be based on the results of the last inspection to determine their grade.

5 Quality Requirements

5.1 Virus-free seed potato grade Virus-free potato seed potatoes are divided into original seed (G1), original seed (G2), and field seed potato (G3).

5.2 Quality Requirements

5.2.1 Quality requirements for original strain (G1) The disease rate and contamination rate during field inspection should meet the relevant requirements in Table 1, and the disease

rate and contamination rate after harvest should meet the relevant requirements in Table 2.

5.2.2 Quality requirements for the original seed (G2) The disease rate and contamination rate during field inspection should meet the relevant requirements in Table 1, and the disease rate and contamination rate after harvest should meet the relevant requirements in Table 2.

5.2.3 Quality Requirements for Field Seed Potatoes (G3) The disease rate and contamination rate during field inspection should meet the relevant requirements in Table 1, and the disease rate and contamination rate after harvest should meet the relevant requirements in Table 2. Level

6 Judgment

6.1 The determination of seed potato grade is based on a combination of visual inspection and laboratory testing results. See Figure 1 for a schematic diagram of seed potato grade determination. Figure

7.1 Visual inspection

7.1.1 Inspection Period The specific inspection period for visual inspection is as follows:

a) The original seed (G1) production involves two tests. the first test is conducted approximately 30 days after transplanting, and the second test is conducted 20 days before harvest. about.

b) The original seed (G2) production underwent three field tests. the first test at the budding stage, the second test at the full bloom stage, and the third test at... Two to three weeks before harvest, and at least 20 days before the second inspection.

c) Three field inspections were conducted for G3 seed potato production. The first inspection was conducted at the budding stage, the second at the full bloom stage, and the third... The inspection should be conducted 2 to 3 weeks before harvest, with an interval of more than 20 days between the first and second inspections.

7.1.2 Sampling The number of field inspection areas, inspection sample areas, and sample sizes shall be in accordance with Appendix A. Sampling methods shall include Z-type, S-type, and quincunx-type sampling.

7.1.3 Inspection methods and records Field inspections were conducted visually. See Appendix B for visual images of symptoms of major viral, bacterial, and fungal diseases. Complete the field inspection record form for disease incidence and contamination rate, see Appendix C.

7.2.1 Virus Detection

7.2.1.1 Sampling One hundred plants from the middle section were randomly selected from one testing area.

7.2.1.2 Test methods and records Potato spindle tuber viroid (PSTVd) was detected according to the identification method in GB/T 31790; Potato virus X (PVX) was detected according to... Identification methods according to GB/T 36833; identification methods for potato virus Y (PVY) according to GB/T 36816; and identification methods for potato virus M. (PVM) was detected according to the identification method of GB/T 36846, and the potato rolls were tested using reverse transcription polymerase chain reaction (RT-PCR). Potato Leaf Virus (PLRV), Potato Virus A (PVA), and Potato Virus S (PVS). Complete the laboratory testing record form, see Appendix D.

7.2.2 Detection of other diseases For diseases that cannot be determined visually, samples of affected tissue are taken for laboratory testing. Polymerase chain reaction (PCR) is used for bacterial and fungal diseases. Detection was performed using the (PCR) method. Complete the laboratory testing record form, see Appendix D.

7.3 Inspection Report The inspection report should be filled out according to the field visual inspection and laboratory test results, and should be completed in accordance with Appendix E.

8 Post-harvest tuber inspection

8.1 Sampling For original seed (G1) potatoes with a production run of 100,000 seeds or less, use 300 seeds per 100,000 seeds; for production runs of 100,000 seeds or more, increase the number of seeds by 100 per 100,000 seeds. Original seed (G2) and field seed potatoes... (G3) For 100t and below, take 100kg; for 100t and above, increase by 50kg/100t.

8.2 Inspection Methods and Records

8.2.1 Visually inspect varietal characteristics and symptoms to determine varietal contamination rates and disease types, and create visual diagrams of symptoms for major viral, bacterial, and fungal diseases. See Appendix B for details. Complete the tuber inspection record form, see Appendix F.

8.2.2 Indoor germination of tubers was carried out. Samples were taken from tubers with a bud length of 1 cm or more. The tubers were tested according to 7.2.1.2, and the laboratory test record form was filled out (see Appendix G).

8.2.3 For tubers where disease cannot be determined visually, laboratory testing should be performed. Bacterial and fungal diseases should be diagnosed using polymerase chain reaction (PCR). Legal testing. Fill out the laboratory testing record form, see Appendix G.

8.3 Tuber Inspection Report Complete the tuber disease inspection report based on visual inspection and laboratory test results, following Appendix H. Level

9 Labels and Certificates

9.1 The design style of the level label shall be in accordance with Appendix I.

9.2 The format of the Level Certificate shall conform to Appendix J.

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