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Replacing SN/T 1274-2003

Quarantine and Identification Methods of *Phaseolus vulgaris*

菜豆象检疫鉴定方法

(English Translation)

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020.

This document replaces SN/T 1274-2003 "Methods of Quarantine and Identification of *Phaseolus vulgaris*".

Compared with SN/T 1274-2003, the main technical changes of this document are as follows except for editorial changes.

- The identification characteristics of Leguminosae and Tridentate genus have been added;
- Added basic information content;
- Added Appendix A, Appendix B and Appendix C;
- Delete the table of contents;
- Delete some instruments and reagents;
- Deleted on-site and indoor inspections.

This document was proposed and managed by the General Administration of Customs of the People's Republic of China.

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The previous versions of the documents replaced by this document are as follows.

- SN/T 1274-2003.

Quarantine and Identification Methods of *Phaseolus vulgaris*

1 Scope

This document stipulates the basic information, identification methods, equipment and methods of *Acanthoscelides obtectus* (Say) in plant quarantine.

Reagents, testing, laboratory identification, as well as the method of result determination and specimen preservation.

This document is applicable to the quarantine and identification of *Phaseolus vulgaris* in plant quarantine.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

The following terms and definitions apply to this document.

Larval lower lip larval labium the lower lip of the bean weevil larva is a sheet-like structure at the bottom of the mouthparts, which is slightly triangular, concave on both sides, and the posterior edge is convex.

Asian chin composition. The chin has a shield-shaped bone plate called the lower lip plate. The front of the lower lip plate is divided into two parts. The sub-chin is long, and there are some sub-chin bones.

The type is not obvious, and some types are broken in the middle, and some types of submental bone fragments are intact.

Male antagonist side process arameres it is part of the male genitalia. Located on the back of the penis, it is made up of two leaves and is spoon-shaped with enlarged ends. In

different classes in clusters, some of the two male base scoliosis are separated at the base, some are partially healed, and some are almost completely healed.

Male phallus, endophallus and its sclerites phallus, endophallus and its sclerites the penis is a component of the male external genitalia. It is located on the ventral surface of the male base side. It is rod-shaped, and the base is enlarged and sac-shaped (called cyst Area), the end is petal-shaped (called the outer penis petal). The penis is divided into outer penis and inner penis. The outer phallus is the outer part of the phallus, the inner phallus the stem is membranous, lining the outer penis. There are a large number of ossified spines on the inner phallus, arranged in a certain pattern, with species specificity, for One of the important basis for the identification of leguminous insect species.

4 Basic information

The basic information of *Phaseolus vulgaris* is as follows.

5 Identification method

Bean weevil that harms edible beans, mainly in the genus *Bruchus*, *Callosobruchus*, and *Tridentia* *Acanthoscelides*, *Caryedon* and *Zabrotes*, which have the same host as the common bean the genus *Leptophyllum*, *Leptophyllum* genus and *Leptospira* genus, and the genus of *Leptophyllum* is only one species in the genus that has important economic significance. Three tooth beans Based on the comparison of the morphology between the genus and other genus and the inter-species of the genus *Tridentia*, the identification characteristics of the genus Bean Weevil are determined by stereo visualization.

According to microscopic observation, the external morphological characteristics of adults are the main basis for the identification of this standard. When the larvae are obtained, they are raised until the adults, and then Do further identification.

6.1 Equipment

Stereo microscope, light incubator, forceps, dissecting scissors, dissecting needle, petri dish, absorbent paper, small brush, finger tube.

6.2 Reagents

10% sodium hydroxide (NaOH), absolute ethanol, 75% ethanol, larval preservation solution (75% ethanol. glycerol=100.0.5~1).

7 Detection

All small beans carried by the ship's food warehouses and passengers and internationally mailed or delivered as samples shall be inspected. For goods the appearance of the packaging, the bedding materials, the sides of the car, ship, container, the sides, corners,

and gaps of the bag, use the naked eye to see if there are any beans. Like live adults or dead adults. Check whether there are larvae bore holes on the beans on the sieve, and whether there are "small windows" or emergence holes.

8.1 Feeding

When the insects are larvae, they need to be raised as adults. Put the host with insects in the insect breeding box, keep the temperature at 25°C~30°C, relatively the humidity is 70%~90%. The gauze gate of the insect breeding box prevents adult insects from escaping.

8.2 Distinguishing characteristics of Leguminosae adults

The head stretches like a short nose, and it closely adheres to the front chest and mid-thoracic abdomen in a static state; the concave edge in front of the compound eye, most types of concave edge are extremely deep it is horseshoe-shaped, and a few species are dimpled; the antennae are 11 knots, laterally flat, and the rest of the knots except the base are mostly expanded into serrated or comb-toothed, Born at the opening of the concave edge of the compound eye. The pronotum is conical, trapezoidal or semicircular. Each elytra has 9 to 10 longitudinal patterns, and the space between the rows Engraved dots are scattered within the lines. The buttocks are large and exposed. In some groups, in addition to the buttocks, there are 1 to 2 sections of the dorsal plate exposed. Abdomen visible in the abdomen Board 5 sections. The forefoot and midfoot have thin leg sections, and the hind leg sections are thick and flat. There are 1 to 2 longitudinal ridges on the ventral surface. The ridges usually have teeth.

Or dentition.

8.3 The distinguishing characteristics of Tridentia the prothoracic dorsal plate has no lateral ridges; the feet are thick, and the hind leg segments only have teeth on the inner ridge, generally with 1 large tooth and 2 to 3 small teeth;

The tibia of the hind foot has no distance, usually with sharp protrusions and spines; only the buttocks of the abdomen are not covered by the elytra (see Appendix B).

8.4.1 Adult

The body length is 2.0 mm~4.0 mm. The head, chest and elytra are black, densely covered with yellow hair, and dark gray on the back, similar to common bean elephants.

There is a clear difference. The abdomen and buttocks are orange-red, densely covered with white hairs, mixed with yellow hairs. The head is long and wide, densely engraved, and the forehead line Smooth without markings. Antennae 11 sections, base 4 sections and 11 sections are orange, the rest are black, base 4 sections are filamentous, sections 5~10 the knots are serrated, the end is peach-shaped, and the ends are tapered. The pronotum is conical. There are 3 teeth at the proximal end of the ventral surface of the hind leg, one is