

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

SN/T 1147-2019

Replacing SN/T 1147-2002

Method for quarantine identification of coconut leaf

椰心叶甲检疫鉴定方法

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces SN/T 1147-2002 "Plant Quarantine Coconut Leaf Leaf Quarantine Identification Method", compared with SN/T 1147-2002, the main technical changes are as follows.

--- Added approximate species differences and related search tables;

--- Added morphological feature map;

--- Added other relevant information about the biological characteristics, distribution and hazards of Cocoa leaf beetle.

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

Responsible for drafting this standard. Shenzhen Academy of Inspection and Quarantine, Shenzhen Customs of the People's Republic of China, Arch of the People's Republic of China North Customs.

1 Scope

This standard specifies the methods of quarantine and identification of Coccinellidae in plant quarantine.

This standard applies to the quarantine and identification of coconut palm leaf beetles carried in plants and their products.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

SN/T 2122 Sampling Methods for Entry and Exit Plants and Plant Products Quarantine

3 Terms and definitions

The following terms and definitions apply to this document.

It means that the two claws are flat, and the angle formed by the base of the two is very large, generally more than 120 ° or even close to 180 °.

4 Coconut Leaf Methyl

Taxonomic status. Coleoptera, Chrysomelidea, Hispididae, Aniso-SN/T 1144--2019 ?????
????, ?????, ??

Coconut leaf beetle spreads with the host plant over long distances, and can also spread by short distances on its own.

See Appendix A and Appendix B for additional information on Coconut leaf beetle.

5 Method principle

Based on the biological characteristics of Coccinellidae and the habit of adult colonies, the morphological characteristics of adults are used as the main reference Fixed basis.

6.1 Equipment

Magnifying glass, stereo microscope,, dissecting needle, tweezers, small writing brush, finger tube, label, scissors, white porcelain plate, insect box (specifications are 24cm x

16cm x 9cm).

6.2 Reagents

75% ethanol, glycerol, preservation solution (75% ethanol. glycerol = 101), distilled water.

7 On-site quarantine Random check the host plants at the quarantine site, see SN/T 2122.

8.1 Sampling

Use a magnifying glass to carefully search the entry and exit palm plant seedlings or plants. According to the biological characteristics of Coccinellidae, first observe the periphery of the plant.

If the old leaves have brown barred "burns" caused by feeding on the coconut leaf beetles, if it is suspicious, the unexpanded heart leaves should be checked carefully, and the hands should be tightly closed Press the heart leaf, open the joint seam, and poke the happy leaf in the homeopathy. Check whether it is harmful for feeding. Adults, larvae and pupae often hide in the unexpanded heart leaf.

In the film, adult worms have the habit of infestation, and many pairs of cocoon leaf beetle may be found on one leaf to damage and feed; eggs often adhere to adult and the larval-fed leaf-feeding mark feces are mostly scattered in single, and there are also multiple (two to six) connections arranged longitudinally along the leaf veins; according to the worm's harmfulness focuses on strengthening the quarantine of palm plants that are three to four years old. At the same time, we must also pay attention to the container and outer packaging carton.

Wait for the loading container to carry out the inspection. Collect the various pest-like pests found by inspection with tweezers or a writing brush and store them in a finger tube (75% of larvae can also be used).

Alcohol preservation solution), labeled, brought back to the laboratory for breeding and identification.

8.2 Larval rearing

Larvae of 1st to 3rd instars and 4th to 5th instars are reared separately. When replacing the host leaves, pick the larva with a writing brush and reduce the number of hands Contact, and timely pick out the dead insects with mold. Host blades are changed every 2 to 3 days. Feeding room temperature $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, relative the humidity is $75\% \pm 5\%$, and the light is 12h.

8.3 Microscope observation

In the laboratory, the worm-like specimens of the coconut leaf beetle were identified by means of dissecting microscope observation.

SN/T 1144--2019 ?????, ????, ????, ??

9.1 Identification characteristics

- Mouth behind the head, the mouth is visible on the ventral surface.
- The antennae are mostly 11 knots, generally filiform, and the two antennae are very close to each other and sometimes almost connected.
- The shape of the pronotum is square, semi-circular, etc. There are branches on the sides and back.

9.2 Identification of subfamilies

- The body is generally long, without spines on the back, and the elytra sometimes has a spine.
- The head is inserted into the chest cavity shallowly, all the mouth organs are exposed, the edge of the mouth is almost round, and the length and width are equal or the width is greater than the length.
- The front lip base is obvious, and the hind leg segments extend beyond the side edges of the coleoptera.
- Fully open claws without egg sheath.
- Larvae are parasitic, with ossifying discs at the end of the abdomen.
- The head has interphasic protrusions and the ends are not curved, and the length is more than half of the antennae stem length.
- The front side of the pronotum is round and slightly extended, the back side angle is simple or has 1 small tooth to 2 small teeth or sharp corners, and the back has engraved points.
- Elytra has a short carved shield line.

9.4.1 Adult

The body is slender and flat, with a length of 7mm to 10mm, and the width of the elytra is about 2mm.

It has villi, and the stalk section is 2 times as long as the head. The head is significantly narrower than the pronotum, and there is an angular process in front of the top of the head.